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# Ageing in Turkey

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# International Journal on Ageing in Developing Countries


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# *Contents*

# Editorial

**Marvin Formosa[1] and Yeşim Gökçe Kutsal[2]**

## Introduction

For many years, even throughout the post-Millennium years when the United Nations launched the *Madrid International Action Plan on Ageing* (1), Turkey kept promoted itself as a young population. However, recent demographic data and future projections, which highlight decreasing fertility rates and increasing life expectancies, demonstrate clearly that Turkey has a rapidly ageing population.

In 2014, as much as 6,192,962 people in Turkey were aged 65 years and older. According to the latest statements of Turkish Statistical Institute, persons aged over 65 have registered a 16% increase and rose to 7,186,204. The ratio of citizens aged 65 years and over to the general population in 2014 was 8% and latest data showed that, in 2018, it had risen to 8.8%. While 44.1% of the older population were men, 55.9% were women. Projections showed that, in 2023/2030/2080 as much as 10.2%/12.9%/25.6% of Turkey's population will be composed of people aged 65 years and over. The average life expectancy in Turkey reached 78 years, 75.3 years for men and 80.8 years for women.

These above demographic trends lend legitimacy to increasing number of gerontologists and geriatricians in Turkey who advocate that Turkey is undeniably part of global ageing trends and cannot hide behind the assumption that its population. Undeniably, such policy projects also mean that Turkey, similar to all other ageing countries, will be facing robust challenges in three key spheres of ageing policy - namely, productive, active and healthy ageing. First, the increase in the average number of years that people spend in retirement warrants the introduction of policies that delay labour market exit through active through preventive measures such as training and reskilling, third age guidance and counselling, job search assistance, and training. In turn, such policies will indirectly function to ascertain adequate income, as well as improved social protection against poverty and social exclusion. Possible strategies may include reversal of the economic incentives so as to prolong working life,

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externalising child-rearing and care-giving from the family, and investment in sustainable employability for older workers. At the same time, there is no doubt that older adults can continue to make valuable contributions to society even after they withdraw from the labour force. They not only take care of themselves and enjoy life, but also perform caring tasks by caring for and assisting their family members, friends, and relatives. Moreover, the help they provide allows their children to continue working. It follows that there is an urgent need for setting up a searchable online database of volunteer opportunities to match retirees with local volunteer opportunities, as well as second careers in teaching, public service and non-profit service. This platform will combine a volunteer management system, enabling organisations to communicate and manage their volunteers, whilst also providing older persons with information on how to get involved with local community and voluntary organisations.

Second, for Turkish older persons to really experience active ageing it is imperative that public policy on ageing follows the advice of the World Health Organization (2002) to provide learning opportunities throughout the life course, especially health literacy sessions, and especially, pre-retirement planning. Older persons should be provided with better prospects to develop new skills, particularly in information and communication technologies. Moreover, polices should encourage people to participate fully in family and community life as they grow older, even if they experience a range of physical and cognitive issues, or feel compelled to seek residence in a care home. The following measures arise as key objectives for the achievement of active ageing lifestyles: financial support as Turkey should find out what a reasonable level of pension is through a programme of discussion, education, and research amongst pensioners themselves; age-friendly transportation in both rural and urban areas since this is an essential requirement for the mobility of older people (especially frail elders and those with compromised mobility) to participate fully in family and community life; leadership as is imperative that older persons to be involved in the decision-making and political processes that affect their rights; positive images of ageing in that the governments should work with advocacy groups representing older people, as well as the media, to provide realistic and positive images of active ageing, and non-stereotypical information on ageing that confront prejudices towards older persons; and finally, non-governmental organisations working in the field of ageing should be afforded both in-kind and financial support, including training for their members, so that they can successfully engage in advocacy pursuits.

Finally, as in other international contexts, the healthy ageing of older persons in Turkey will only be achieved if the government optimises opportunities for people to achieve physical, social and mental wellbeing throughout their whole life course. Undoubtedly, reducing the incidence of preventable diseases, delaying the onset of conditions associated with ageing, and effectively managing those illnesses which do occur, are all important for minimising the length and impact of ill health on our lives. Achieving strong levels of healthy ageing presents a series of strong challenges for governments, businesses, care professionals, communities and individuals. This goal requires action on a wide range of fronts, from social and economic policy, through to coordinated and strategic chronic disease prevention and control, as well as changes in individual dietary and other lifestyle factors. Moreover, it requires action across

a person's lifespan, since early life factors and the accumulation of health risks throughout an individual's life combine to affect the risk of experiencing ill health in later life. In short, healthy ageing rests on the following objectives:

*Health prevention*. Specific measures are required to address the conservation of health and the prevention of diseases. There are three basic levels of prevention: primary - which aims to prevent people getting a disease or disorder by using measures such as vaccination; secondary - which attempts to detect a condition in its early stages such as screening of women with known risk factors of osteoporosis; and tertiary - which consists of active treatment of a particular condition or illness in order to reduce its effects.

*Informal care*. Contributions made by family carers of older persons are likely to change over the coming decades. This is due to the fact that many areas of Turkish life are currently in flux - such as demography, family economic circumstances and social and work preference - all of which could affect the supply of informal care. In such respects, the state together with non-government organisations and private companies must draw up a plan for improved and more efficient services in community care.

*Community care*. The increasing numbers and percentage of older persons necessitates more modern models of community care services, so as to address the key shortcomings of the current trends in the community care sector and improve its efficiency. Key areas for improvement include addressing gaps and overlaps in service delivery, providing easier access to services, enhancing service management, streamlining community programmes, as well as facilitating co-ordination across different programmes.

*Intermediate care*. When fully developed, this comprises networks of local health and social care services, which deliver targeted, short term support to individual patients or clients, in order to prevent inappropriate admission to acute hospital care or long-term residential care, facilitate earlier discharge from hospital and, maximise people's ability to live independently. Intermediate care refers to services that provide rehabilitation between acute hospital settings and specialised rehabilitation settings on one hand, and home on the other.

*Long-term care*. Although Turkish family members are relatively reluctant to admit frail relatives in care homes for older persons, the trends are somewhat changing due to migratory occupational trajectories and women entering the professional cadres. Therefore, the improvement of the quality of life of older people in need of care and assistance is crucial. Policies should ensure a common analysis and vision on long-term care, an increase in the participation of older people in the identification of their needs and the health and social care services they require, the growth of fair and sustainable solutions to improve the wellbeing and dignity of residents, and the promotion of better co-ordination and exchange of information between the different stakeholders - amongst others.

This special edition of the *International Journal on Ageing in Developing Countries* adds to the recent publication *Population ageing in Turkey: Health and social care services for older persons* (2)

for the entrenchment of Turkish trends in population ageing in the above tenets, as well a manifesto advocating the need for multi-disciplinary standpoints when researching ageing welfare. Five chapters for this book have been chosen by the International Institute on Ageing United Nations Malta to be published in its open access journal so as to guarantee a wider and more freely dissemination of its contents. At the same time, this issue contains two book reviews - namely *Dementia and human rights* (Suzanne Cahill, 2018) reviewed by Alexandre Sidorenko and *Aging and diversity: An active learning experience* (Chandra Mehotra & Lisa Smith Wagner, 2018) reviewed by Andrea Zammit.

The first article, 'Ageing in Turkey' (Marvin Formosa & Yesim Gökçe Kutsal) demonstrates that although in comparison to many European countries, Turkey is still characterised by a relatively young population, two demographic factors are noteworthy. First, the fast transformation in family structure from large extended families to smaller nuclear households and the increasing occupational careerism of women in the labour market, the total fertility rate is expected to decrease sharply in the foreseeable years. This means that the demographic transition towards an aged society will be faster than in other low- and middle-income countries. Second, as a by-product of in socio-economic and medicinal advancement, the life expectancy in Turkey is also projected to increase sharply by the end of the next decade.

The second article, 'Social aspects of ageing' (H. Sibel Kalaycıoğlu), looks at the social concerns and implications of ageing and later life in Turkey, arguing that longevity is especially marked by socio-cultural foundations. The authors note how despite the fact that experiences related to ageing and old age are attributed different meanings in different societies, the consideration of old age as a 'research problem' covered by research and included in the discussions of various approaches is quite recent. Indeed, the perception of the ageing process of human beings in different societies is shaped in the context of the lived experiences and culture of respective societies. It is the given structural and cultural formations of a society that determine whether ageing is perceived as 'negative' or 'positive' or as a 'problem' *per se*.

The third article, 'Preventive medicine' (Cihan Fidan and Altuğ Kut), highlights how it is never too late to commence a healthy lifestyle. Herein, preventive medicine services are evaluated in three categories. *Primary prevention* averts the onset of the disease in asymptomatic individuals. It contains services like vaccination, diet and cessation of smoking to prevent illnesses before they actually occur. *Secondary prevention* aims at early detection of the disease before the disease becomes symptomatic. Screening methods include early diagnosis, follow-up, and treatment to prevent complications of existing systemic diseases. *Tertiary prevention* includes measures to prevent further worsening of illnesses and complications, rehabilitation work, and to provide the advanced counselling services for family.

The fourth article, 'Geriatric syndromes' (Yeşim Gökçe Kutsal), focuses on how ageing is characterized by the progressive accumulation of damage at the molecular level caused by environmental and metabolically generated free radicals, by spontaneous errors in biochemical reactions, and by nutritional components. The authors highlight how the

maintenance of wellbeing and quality of life in an ageing population is often accompanied by significant social and economic difficulties. Hence, the growing need to create new policies and strategies aimed at increasing the level of welfare, especially considering that; there is a very significant difference in terms of life expectancy at birth between developed and developing nations in the current century.

The fifth and final article, 'Home care' (Zahide Tunçbilek and Sevilay Senol Çelik), highlights the importance of innovative community care services as a vehicle to aid age-in-place. Due to rapid growth of the ageing population, growth in healthcare expenditures, advances in medicine and technology, shorter hospital stays and an increase in outpatient surgery and minimally invasive procedures, home care services have become very important. Factors such as increases in the incidence of chronic diseases and disabilities due to functional and physical impairments of older persons, difficulty in carrying out activities of daily living, older persons become dependent on their family and others to receive home care. This chapter aims to give an overview about home care services given to older persons in Turkey.

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# Ageing in Turkey

**Marvin Formosa[1] and Yeşim Gökçe Kutsal[2]**

***Abstract.*** Although in comparison to many European countries, Turkey is still characterised by a relatively young population, two demographic factors are noteworthy. First, the fact that due to the fast transformation in family structure from large extended families to smaller nuclear households and the increasing occupational careerism of women in the labour market the total fertility rate is expected to decrease sharply in the foreseeable years. Second, as a by-product of in socio-economic and medicinal advancement, the life expectancy in Turkey is also projected to increase sharply by the end of the next decade. The government is conscious of the Turkey's impending scenario and the past decade witnessed many ageing-related policy developments. The article concludes that there is an urgent need for advanced research on individual and population ageing in Turkey, but especially on the need to interconnect the field of population ageing across a range of disciplines ranging from the biological, behavioural and social sciences.

***Keywords***: ageing; older persons in Turkey; community services; social care; health care

## The background context

A comprehensive gerontological and geriatric analysis of Turkey's population could not have come at a more opportune moment. The demographic transition, which, until recently, was mostly viewed as a phenomenon of the more developed countries, has started becoming a feature of many developing countries like Turkey (1, 2). From 1960 to 2013, the population of Turkey increased almost threefold, with older adults aged 65 and older increasing almost sevenfold.

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Although in comparison to many European countries, Turkey is still characterised by a relatively young population, two demographic factors are noteworthy. First, the fast transformation in family structure from large extended families to smaller nuclear households and the increasing occupational careerism of women in the labour market, the total fertility rate is expected to decrease sharply in the foreseeable years. This means that the demographic transition towards an aged society will be faster than in other low- and middle-income countries. Second, as a by-product of in socio-economic and medicinal advancement, the life expectancy in Turkey is also projected to increase sharply by the end of the next decade.

**National plan of action on ageing**

The government is conscious of the Turkey's impending scenario and the past decade witnessed many ageing-related policy developments. The first consisted in the adoption of a National Plan of Action on Ageing, as a vehicle towards the implementation of the United Nation's (2002) *Madrid International Plan of Action on Ageing*.

According to the *National Plan of Action on Ageing of Turkey*, the efforts of the public institutions, non-governmental organizations and the private sector in this regard are detached from each other. Coordinated and all comprehensive efforts are required in this context (3). The plan was composed of 3 parts:

*Part 1. Older people and development.*

- Active participation in the society and the development process (Goal 1: Provision of older people's social, cultural, economic and political participation; Goal 2: Provision of older people's participation in all stages of the decision making process).

- Work and the ageing workforce (Goal: Employment opportunities for all older people who wish to work).

- Rural development, migration and urbanization (Goal 1: Improvement of rural living conditions and infrastructure, Goal 2: Prevention of exclusion of older people from the society in rural areas, Goal 3: Inclusion of older immigrants in contemporary society).

- Access to information, education and training (Goal 1: Lifelong equal opportunities both for education and training and innovations in education and for vocational guidance and placement services; Goal 2: Benefiting from the capabilities and consultancy of individuals from all age groups taking into consideration the advantages of experience gained through ageing).

- Solidarity between generations (Goal: Reinforcing of equal opportunity and solidarity between generations).

- Elimination of poverty (Goal: Reducing poverty among older people).

- Social protection/social security, income security and prevention of poverty (Goal 1: Developing programmes for provision of primary social protection/social security for all employees where applicable to include retirement pay, disability assistance and social insurance; Goal 2: Adequate minimum wage for older people, particularly those who are socially and economically underprivileged).

- Emergency Situations (Goal 1: Equal opportunities for older people in terms of food, accommodation, health care and other services in case of natural disasters and other emergency situations; Goal 2: Increasing the contributions of older people upon reestablishment and restructuring of societies and reorganization of the social configuration following emergency situations).

*Part 2. Increasing health and wellbeing in later life.*

- Lifelong improvement of health and wellbeing (Goal 1: Decreasing the cumulative effects of risk increasing factors for diseases and dependence; Goal 2: Developing policies to prevent old age diseases; Goal 3: Provision of access to alimentary products and adequate nutrition for all older people).

- Provision of full access to health care and nursing services (Goal 1: Elimination of all kinds of social and economic disparities based on age, gender or any other factor to include language differences with the purpose of providing universal and equal opportunities for older people in accessing to health care and nursing services; Goal 2: Developing and strengthening the primary health care services in order to meet the needs of older people and promote their participation in this process; Goal 3: Ensuring sustainability of health care and nursing services in order to meet the needs of older people; Goal 4: Strengthening of primary health care and long term care services for older people and ensuring their participation in the development process).

- Older people and HIV/AIDS.

- Training of health care providers and health care personnel (Goal: Providing information and training opportunities to health care personnel and other health care providers that serve older people).

- Mental health care needs of older people (Goal: Development of various and multipurpose mental health care services to include protection, early diagnosis and treatment; resolving mental health problems of older people and treatment services).

- Older people with disability (Goal: Lifelong sustainability of functional capabilities at optimum level and ensuring full participation of disabled older people).

*Part 3. Provision of a supportive environment with adequate facilities.*

- Dwellings and living quarters (Goal 1: Encouraging individuals to "age in their own environments" within the society, also taking into consideration their personal preferences; Goal 2: Developing dwellings and environmental concepts in order to promote living independently taking into consideration the needs of older people and particularly older persons with disability; Goal 3: Existence and improvement of accessible public transportation systems affordable by older people).

- Support for care services and care providers (Goal 1: Ensuring sustainability of services offered to older people and supporting of care providers; Goal 2: Supporting of the roles of older people and especially women in care services).

- Negligence, abuse and violence (Goal 1: Elimination of all kinds of negligence, abuse and violence against older people; Goal 2: Provision of support services against abuse of older people).

- Perspective of ageing (Goal: Ensuring the society's awareness of older people's authoritative, wise and productive qualities and other contributions)

To this effect the *National Plan of Action on Ageing* put forward the following strategic recommendations and actions (3):

(a) Cooperation of the state, politicians, local governments, non-governmental organisations, universities and private sector organizations to ensure that Turkish older people undergo a "proud, esteemed and health ageing process", and to develop new models for increasing their quality of life; for example, experts with different disciplines of specialisation in healthcare (geriatrists, clinical psychologists, psychiatrists, physiotherapists, dieticians, nurses, home economists, health officers, etc.) should cooperate and share their knowledge and skills, and offer these to the older Turkish people in the framework of new approaches, whereupon the state and the politicians assume their responsibilities.

(b) Widening the content of the perspective on ageing of the society and conducting comprehensive research on the general views and attitudes of the society so as to make plans for future rapid ageing tendency, with the contribution of all segments.

(c) Emphasising the importance of demographic ageing and conducting research in this field with the participation of all relevant segments, and in particular universities, and disseminating the results thereof to large masses through publications and broadcasting,

(d) Reaching large masses through publications aiming at preserving our traditional values and supporting care providers in order to prevent our country from suffering from the problems developed countries suffered.

(e) Pursuing efforts on the part of the media with the purpose of maximizing the benefits acquired from the knowledge, skills and experiences of older people, taking into consideration their age periods.

(f) Pursuing educational efforts aiming at young people to develop intergenerational solidarity and raising the awareness concerning respect for older people, including the issue of ageing and older people as a subject in the curricula of primary and secondary education institutions.

(g) Preparing preparatory programmes for retirees in order to increase knowledge and skills of individuals to enable them to pursue their activities and productive efforts following their active professional life and to ensure their adaptation to the retirement period.

(h) Organising recreational activities whereby older people and other age groups would be able to come together and spend their leisure time feeling as a portion of a whole,

(i) Taking all kinds of measures by central governments and local governments to ensure active participation of older people to daily life and offering them specific facilities by making policy changes where required (for example, making the part-time free ride facilities on public transportation full-time which is implemented by certain municipalities and expanding it to the whole country, adding mechanisms that would facilitate older people's embarking and disembarking buses and other public transportation vehicles, making special arrangements for older and disabled people in the scope of urban planning mechanisms, etc.).

(j) Including older subgroups within the organisations of political parties and making the necessary arrangements in the political parties act in this respect.

(k) Organising educational courses for older people by public education centres, social centres and senior solidarity centres for developing their manual skills to ensure rational employment of their labour.

(l) Organising programmes for ensuring adaptation of older people to the contemporary times to ensure that they are not left behind in terms of the rising educational level.

(m) Opening day-care centres for spending leisure times for older people who live in institutions and in their own houses.

(n) Reducing the potential problems of the twenty-first century in terms of rapid ageing process by providing secure, facilitating and supportive environments to increase health and wellbeing at old age; preparing, implementing and monitoring projects and programmes at the national level; establishing an Ageing Institute with the purpose of conducting international studies that would guide governments and political parties (3).

**New approaches**

The initial responsible government body was the State Planning Organisation, but in 2012 the plan of action was transferred to the newly-established Ministry of Family and Social Policy. In due course, the *Tenth Development Plan (2014-2018)* underlined that the

> …share of older population in the total population is increasing as a result of decreasing infant mortality rates and increasing life expectancy at birth. The dependent population will grow and the share of productive population will diminish with the increase of aged population in the future. Without precautionary measures, it is estimated that working age population and total population will start to decrease in 2038 and 2050 respectively. To increase total fertility rate through population policies and to develop effective and timely policies towards aged population is required in this context…Active, healthy and safe living conditions will be provided to growing older population, intergenerational solidarity will be strengthened in the society (4).

On the other hand, as clearly stated by Formosa an ageing population presents itself as an opportunity to communities because many older adults are committed, long-time residents, who contribute their time and energy to local issues. Older persons are both a social resources and key contributors to the socio-economic fabric (5). Supporting the needs of older persons represents a tough challenge in many parts of the world. The welfare system in Turkey has a strong basis on the family mutual help mechanism. This is an informal networking of intra-generational transfers and reciprocity in kinship networks which are dominant in social organization of welfare of the households and the individuals (6).

According to official sources, our society maintains its feature of looking after the elder. As a result of a survey held in Ankara among 1,300 older people, the observance was made that the Turkish family structure has not lost its positive aspects especially in terms of older people, with the latter being still respected and esteemed in family circles. Although the survey was held in the urban sector, it is evident that the tradition approach still remains. The majority of older people that participated in the survey (84.4 per cent) perceive being old as being

respected. Meanwhile 64.4 per cent of older people, who stated that they felt old, maintained a positive attitude towards being old (7).

In Turkey, the service providers claim that the public life is not prepared and organised for older persons. Because of this, in order to prevent injuries and harm, they suggest that older persons should stay at home, and should not come out especially in rush hour times. On the other hand, they claim that older persons are very stubborn, do not listen to others and difficult to cope with. In Turkey, according to service providers, 'being old' is being disabled, not being able to 'do things as the young do'. They are vulnerable, fragile, sick all time, and cannot think properly. On the other hand, culturally they think that is not proper to leave older persons in nursing homes. Nursing home is a place of isolation, it means to be neglected by the family and the society too. Most of the service providers share the view that being relatively 'elder' is something to be sorry about and nobody wants to be old especially in this society (8). Turkey also includes several institutions that provide services and support to older people living at home. These services are provided free of charge and funded through a mix of expenditures from the general budget, taxes, municipal budgets and premiums paid by employers and employees (9).

The Ministry of Health provides health care at home, which is offered by multidisciplinary teams of professionals; the Ministry of Family and Social Policies provides social support, assistance and care across a range of settings, including in older people's homes; and municipalities provide social support and other services, such as home health care; psychological support; home repairs and maintenance; help with housework, personal care and cooking; and social activities.

In 2015, the Ministries of Health, Family and Social Policies and the Interior, and the Union of Municipalities of Turkey instituted a new protocol that called for electronic data sharing among the various institutions and organizations providing home care. The system was planned to be piloted in nine provinces, followed by countrywide implementation, and the government using data-sharing software to help ensure that older people receive home health care, social support and any other public services that they need. Data integration will also enable the delivery of a holistic coordinated approach, thereby improving efficiency and reducing the duplication of services. When an older person or a family applies for a specific service, their information will be entered in the database. If the initial care team thinks that someone would benefit from another service, they will notify the relevant institution via the database. In this way, older people's needs will be met quickly. This protocol is a good example of how a country can enhance the delivery of comprehensive and integrated long-term care, which includes health care and social care and support. Turkey's holistic, collaborative and multidisciplinary approach offers the following advantages:

> (i) it improves access to services and the availability of professional care for older people; (ii) it is people-centred, coordinated and flexible, and adapted to each person's circumstances and needs; (iii) it respects the rights and dignity of older people, enabling them to participate in decisions about their needs and allowing them to receive many of the services in their own home; (iv) it supports

> families who care for their older relatives, and it helps improve the social participation of older people; (v) it increases the quality of life for, and well-being of, older people; (vi) it protects older people and improves their safety; and (vii), it makes the best use of facilities, people and other resources through data sharing, which enables the coordination of care (9).

Although this new system has not yet been evaluated, the protocol demonstrates some general points - namely, that even in a middle-income country with a fragmented system of long-term care, a comprehensive care and support system can be provided free of charge, and that multi-sectoral approaches are key to providing long-term. Of course, any efforts to implement an equitable ageing policy is fraught with many challenges, and Turkey is not an exception. For instance, Albayrak and colleagues pointed how despite the fact that the family medicine model has been fully implemented in Turkey since 2010, discussion on end-of-life care have not materialised. They conclude by asking,

> When is the right time to discuss advance care planning? We think that earlier is better, when people are still healthy and can make sound decisions. For a population still young, but ageing very rapidly as in Turkey, discussions around advanced directives have already been started. Such a move is likely to overcome the challenges…such as families, time, patient reluctance, or dementia (9).

One expects the above issue and other related concerns - ranging from long-term care to dementia to community care services - to be discussed more openly and firmly in Turkey in the nearby years.

**Towards a multi-disciplinary agenda**

Putting Turkey under the spotlight, it is obvious that there is an urgent need for advanced research on individual and population ageing in Turkey that focuses on; 1- Demographics, 2-Environment, 3-Families, solidarity and intergenerational relations,
4-Health, nutrition, geriatric rehabilitation, care, end of life, 5- Psychological and psychiatric issues and 6-Social policies and social services.

It is clear that there is a need to interconnect the field of population ageing in Turkey across a range of disciplines, including the biological, behavioural and social sciences. A multi-disciplinary standpoint refers to an inquiry involving a plurality of disciplines where disciplinary boundaries are maintained and the unique contributions of each are highlighted. Two key contributions emerge from entrenching population ageing in a multi-disciplinary framework: (i) population ageing is no longer regarded by researchers as simply 'senile pathology' but as a 'normal' stage of the life course, and hence, becoming increasing anchored in a normal-ageing paradigm; (ii) population ageing is regarded as a field of study involving more than one discipline on the basis that the process of ageing is complex, and hence, it is inadequate to simply study it from the perspective of a single discipline. These views are shared by many scholars, educators and policy makers who view multi-disciplinarily studies

as essential to reaching a vibrant understanding of population ageing. The benefits of multi-disciplinary graduate programmes in gerontology and geriatrics are generally twofold (10, 11).

First, an audience of students and academics from different disciplines guarantees a cross-fertilisation of knowledge and ideas. The result is that the 'whole' equals more than the 'sum of the parts'. Indeed, it is common for academics and service providers to discover new understandings to assessment skills and situational circumstances following involvement in multi-disciplinary projects on ageing. Although there might be some initial resistance, due to the belief that sharing the same educational experience may lead to an erosion of the boundaries within disciplines, empirical research in gerontology and geriatrics education demonstrates that a multi-disciplinary setting expands horizons and expectations:

> The result is not just that one trainee learns from another but that one trainee recognizes the scope of another's expertise and is open to seeking answers by questioning a trainee from another discipline. Advanced practice nurses, seeing that a Master's social work student knew about available day care in the community, could ask if the social worker also knew about bereavement counselling for a patient about to be discharged (11).

A second benefit constitutes the development of trust and understanding across and between disciplines. It is well-known that professions are created and fermented by universities in experiential and knowledge vacuums, where each professional body pushes an agenda at the expense of competing representations. This functions to limit the trust that disciplines, even overlapping ones, have towards each other. In contrast, multi-disciplinary standpoints act as catalysts for the acknowledgment of the skills and credibility of professional colleagues. Indeed, one recognisable benefit of educating trainees from different disciplines together in one location is that it provides immediate opportunities to practice and model teamwork. In such settings, practice is continuously halted so that different members of professional bodies take time out to reflect upon and evaluate their behaviours and inherent teamwork trends.

Of course, the objective of embedding of any field of study, including population ageing, in a multi-disciplinary framework meets a range of challenges. Apart from the usual variety of differences between participants in any training programme due to individual cultures, ages, ethnicity, gender, languages, sexual orientation, race, and physical and mental attributes, the fact of having to work with several disciplines in a concurrent manner presents an additional layer of differences. Key disparities include various levels of health care experience and clinical skills, differing discipline-specific languages and terminologies, varying philosophies of practice, and adversative work and educational schedules as governed by each discipline. This is because academics from different disciplines tend to exhibit different levels of understanding. Whilst some will have a strong geriatric background with several years training in health and/or social care settings, others may only possess a cursory familiarity with medical diagnoses, interventions, and outcomes. In parallel, similar differences in levels of gerontological knowledge are to be expected. Medical personnel are likely to possess a better grounding in physical aspects of aging than others, whilst peers from social science

backgrounds will be better versed in psychosocial issues. Moreover, unlike disciplines hold unique professional jargon that can be incomprehensible to an outsider. Even more confusing than seemingly indecipherable language is that same words or phrases may hold different connotations for different disciplines. For instance, the notion of

> 'support systems' is considered by nurses to refer to life support equipment while social workers apply it to a patient's network of family and friends who provide support. Trainers, educating more than one discipline together, not only must be aware of these linguistic nuances between the disciplines but also be prepared to identify them to trainees (10, 11).

The presence of above challenges clearly indicates that embedding the study of ageing populations within multi-disciplinary perspectives warrants a plan of action that highlights the diverse contours of ageing lives. Indeed, the specific health and social needs of older persons necessitate a multidisciplinary orientation. Yet, there is a scarceness of familiarity with multidisciplinary perspectives in Turkish gerontological literature. It is augured that this book forms a first step in flourishing improving disciplinary crossings in the study of Turkish ageing.

**Training programmes in Turkey**

Governmental and non-governmental organizations carry out certificated training programmes on various topics giving priority to prevention. Medical doctors, nurses, social workers, etc. can join these activities via their professional occupational associations or the state bodies. Nevertheless, benefitting from certificated professionals is not enough due to the lack in national occupational policies.

Public/community education is very crucial and accepted as one of the basic tools both to maintain health and wellbeing of the population and in order to increase the awareness on aged related issues and to improve the quality of life. Educated health professionals, governmental bodies' facilities and resources, television channels, press media, books, booklets, official websites of the aging focused associations, societies, etc. are good resources in this regard. There are many good information resources for the population in Turkey, however, the communication challenges with older persons due to various reasons including diseases, hearing problems and illiteracy - amongst other reasons - may be a block to reach these data sources. Majority of aged population has low education status compared to younger generations. Data of 2012 shows that percentage of the primary educated elders has been 51.4 per cent among males and 30.0 per cent among females (1).

In such a 'low' educated group, public education should be planned very carefully to achieve intended goals. To cover all needs of aged population, (i) universal health coverage should be provided; (ii) no discrimination in terms of accessing to health care should be present; (iii) preventive measures should be strengthened; (iv) principles of health promotion concern focusing on quality of life should be internalised; (v) disability should be prevented; (vi) dignity of aged population should be given priority; and (vii), systematic approach to support

solidarity between generations will provide active participation of aged people into the society and social life (12).

**Coda**

Developed and developing region differences should also be taken into consideration for both prevention of health including early diagnosis and treatment, and rehabilitation services and promotional activities. Maintaining independence and preventing disability of the aged people are closely related to ensuring the quality of life and effective rehabilitation (13). All these activities need inter- and multi-sectoral collaboration while organizing, planning and implementation phases of solution strategies prioritise the social determinants of health. Not only the sociological, but also economical, ethical and psychological aspects, should never be underestimated.

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# Social Aspects of Ageing

**H. Sibel Kalaycıoğlu**[1]

***Abstract.*** Although in comparison to many European countries, Turkey is still characterised by a relatively young population, two demographic factors are noteworthy. First, the fact that due to the fast transformation in family structure from large extended families to smaller nuclear households and the increasing occupational careerism of women in the labour market the total fertility rate is expected to decrease sharply in the foreseeable years. Second, as a by-product of in socio-economic and medicinal advancement, the life expectancy in Turkey is also projected to increase sharply by the end of the next decade. The government is conscious of the Turkey's impending scenario and the past decade witnessed many ageing-related policy developments. The article concludes that there is an urgent need for advanced research on individual and population ageing in Turkey, but especially on the need to interconnect the field of population ageing across a range of disciplines ranging from the biological, behavioural and social sciences.

***Keywords***: Ageing; older persons in Turkey; ageism; elderly care

## Introduction

The ageing of humans, besides being a biological phase in the life cycle of all living things, has an additional aspect of being a social phenomenon, and displaying a social diversity with respect to historical processes and varying from culture to culture. Experiences related to ageing and old age are attributed different meanings in different societies. Yet, the consideration of old age as a 'research problem' covered by research and included in the discussions of various approaches is quite recent. The perception of the ageing process of human beings in different societies is shaped in the context of the lived experiences and culture of respective societies. It is the given structural and cultural formations of a society that determine whether ageing is perceived as 'negative' or 'positive' or as a 'problem' *per se*.

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In this sense, the social and economic differences in a society, as well as the cultural attitudes running parallel to these differences, may diversify experiences and hence the perceptions of ageing. Human ageing is also a socially constructed phenomenon that is affected by various social factors like social class, gender, marital status, family size, the nature of family, place of living (rural-urban), and degree of solidarity. In turn, ageing also shapes and determines the social, economic, political changes in the society. This present article explored all these factors which are key influences to the ageing transition.

**Socio-demographic aspects**

Turkey is still a relatively 'young' nation with an average age of 28.5 years. However, the proportion of people over 65 is growing. According to 2015 Turkish Statistics the older population comprised 8.2 per cent of the total population and according to projections, by 2023 it will become 10.2 per cent, by 2050 it will rise to 20.8 per cent, and 2075 it will rise to 27.7 per cent (1). The median age in 2015 is 31 but it is expected to rise to 34.6 by 2023. Life expectation for women in Turkey is 80.7 and for men is 75.3, which is below European Union figures. All these facts indicate that Turkey will become an 'old' nation in the very near future. The demography of Turkey indicates that even if the ratio of older persons in the population is not very high in the society the process of fast ageing is the significant aspect of demography in Turkey.

Another significant aspect of demography is the number of older persons living in the rural-urban areas. Although the rural population has decreased to 7 per cent of the whole population, it is also a fact that majority of the rural population are older persons who still live in the villages. In the rural population the ratio of older persons is 11.5 per cent and in the urban areas 6.0 per cent (1). Some of the older persons living in the rural areas are spending 6 months in the urban areas with their children during winter, whilst during summer they stay in their villages. Older persons living in the rural are the most vulnerable in terms of access to income, and socio-health care services in general. Even if they get help from their children, older persons living in the rural areas lack major public services and support from state institutions. On the other hand, older persons living in the urban areas enjoy more privileges in terms of access to health care and medicine, but they also lack mainly income and the support for care at home or in the nursing homes. In Turkey gender differences needs special consideration for demographic aspects of older persons. Since women live longer than men among the older population, especially among those aged 70-plus, women make up a larger group. On the other hand, due to economic and socio-cultural reasons women's educational and employment achievements are very low during youth and middle age. Women's labour force participation in 2015 is still around 30 per cent according to official figures. Hence, the majority of women in Turkey are dependent economically and socially on their husbands, fathers or sons. Therefore, there is a major problem for older women without any income or education in Turkey. These women are bound to live with their families, sons or daughters as they do not have any means to survive on their own. Some of old age women who are not supported by their families experience a deep poverty.

Social and demographic aspects of ageing have implications on the social, cultural, economic and political life of a country. The changing age structure brings changes in all areas of life but mainly on the family size and kinship relations, social solidarity in the society, social welfare and social security systems, the economy and especially in the job market, as well as on political and cultural aspects of life. Moreover, with an ageing population new issue areas and needs emerge like new care sector, geriatric health care, new and inclusive social policies, as well as the need for a change in the urban infrastructure like a new road system, changing buses and buildings.

**Changes in family and kinship relations**

In Turkey, there is a rapid change from traditional extended families of 7 or 8 persons towards smaller size nuclear families of 4 persons. The migration from rural to urban areas, increasing employment of women in the labour market, decreasing fertility rates and changing preferences about family and marriage are effective factors in this change. However, when we consider the fast ageing population this means that there are less members in the households for care and supporting older persons. Increasing employment of younger and educated women means that the gender division of labour in the households has to change and care which was culturally understood to be a task of women, becomes a major problem for majority of the households. Moreover, the traditional roles of older persons in the households about caring for their grandchildren loses its significance with changing education system, increasing importance of pre-school education and need for more professional care for children. Therefore, older persons living in households gradually lose their functionality and roles in the household and turns out to be an increasing 'burden' of care.

On the one hand, due to lack of state support or care services, the task of care for older persons creates an ambivalence for the family members who have to attend their jobs and also take care of older persons living at home. Additionally, loss of functionality by older persons also creates a risk of isolation for older persons either living in their own homes or in nursing homes. According to a research conducted by Kalaycıoglu and colleagues about the living arrangements of families in Ankara, Turkey, with 400 older persons and their relatives, findings suggested that to live together with the family and the children are assigned primary importance in old age (2). Respondents would care for their spouses in old age and trust that their spouses would care for them. People also count on their children to provide them care in old age. Men are more optimistic than women about their spouses taking care of them in old age. Women by contrast are more concerned about being left alone. The majority of older persons live as spouses in their own homes. This pattern is supported by hired care takers living in the house, for one or both of the spouses and under the periodic controls of the children or other relatives. However, upon the death of one of the spouses, especially men, older women usually start living with their children and mostly with sons. If women die earlier, then the men are usually given to a nursing home by the children or relatives. On the other hand, there are other forms of living arrangements with relatives, such as an older woman living with her niece or cousin or sister. Two women or men as friends living together in old age is also seen but not frequent. The expectations of older persons is that the majority think about old age as a period of suffering, ill health, disability, disrespect from their social

environment, people being reluctant to stay with them, and other similar negative perceptions and expectations. So the major discourse among the older respondents was "not to be a burden on their family members and to die early if they become very ill". This kind of expectation and discourse indicates that even if family based on reciprocal and mutual support between members, is a strong institution still in Turkey, with changing social and economic conditions ageing is perceived as a burden by both the older persons themselves and also by their relatives. This research tends to overlook nursing homes, with views on long-term care facilities being based on information gathered from television series, films and news programs rather than on actual experience. Older persons and their relatives describe nursing homes as institutions where old people are abandoned, as crowded institutions, as older persons being kept there in isolation, and mostly felt pity for those older persons 'abandoned' by their families in the nursing homes.

Another important research is conducted in 2010 by the Prime Ministry General Directorate of Family and Social Research Department of Research on Family and Social Problems about an 'Assessment of the expectations about old age' which included 4,000 respondents aged 40-plus, living in rural and urban Turkey (3). According to its findings, the expectations of the respondents from the family change with socio economic status (SES). Compared to the lower SES groups, upper SES group respondents expect to be healthier and better equipped to make good use of their time in old age. Compared to the upper and middle SES groups, lower SES groups are more worried about health issues, being left alone and in need of help in old age. Also compared to urban respondents, rural ones have greater confidence in their children taking care of them in old age, but they are more worried about their future than are their urban peers. The findings of the research suggest that favourable conception of old age grows stronger with increased social activity. Respondents who have the highest level of social activity are also the ones who are more certain of their spouses' caring attention, of good health and of making good use of their time in old age. Many of the respondents preferred getting help from family members in case of need for long-term personal care, hygiene and housework. Only a very little percentage would like to get help from government agencies or other public institutions. The most preferred family members are spouses and then daughters and then sons. The research suggests that the desire to live with children grows stronger with increasing age. The preference for living alone or with one's spouse when too old to care for himself/herself is widespread only in upper SES group and decreases in middle SES group and in the lower SES groups. Hence, those with upper SES since they can afford to hire care workers and the expenses of a separate house and private health care they prefer living on their own or with spouses. Also living alone or with a spouse is favored more by the respondents mostly in good health whereas living with children is more strongly associated with poor health. Parents with functional limitations also expect serious support from their children when they get older. As regards their preference of a nursing home, few respondents asserted that they actually prefer to take up residence in a nursing home in the foreseeable future, though preference for living in a nursing home is positively correlated with SES. The choice of living in a nursing home is associated with two main tendencies: 'unfavorable attitude towards the family' meaning being unwanted by one's children, and 'favorable attitude towards the nursing home' meaning the desire to be with peers.

**Perception of old age: Ageism in society**

As mentioned above, results in two research studies found that getting older is not perceived particularly as a moment of happiness in Turkish society. Rather the perception of ageing in both researches is that being old is a burden and suffering. Perception of ageing from positive or negative aspects varies depending on variables such as gender, age, place of origin, living arrangements as well as age discrimination experiences in the society. The meaning of ageing is socially constructed depending on moral and material experiences of older persons which differ in different socio-economic groups and may lead to different meanings attributed to ageing. Reaching later life is understood to be loss of independence, being useless, lonely and isolated by the respondents which challenge the major belief in the society that older persons are respected, loved and cherished by their families. In fact, old age is associated with undesirable or unfavourable notions in our society. In the research, older persons talk about withdrawal from social life and becoming isolated since they feel unwanted in public life. In 2003 researching later life gave examples of various service providers like bus drivers, social workers or municipality workers who had negative attitudes towards older people on the busses, streets or in public spaces. This effects their satisfaction from life and prevents their active participation to social activities. Older persons generally found it difficult to speak about the positive aspects of old age. People do not appear intellectually familiar with the notion of good ageing or even find it conceivable. Nonetheless, "experience" for the old age persons is specifically named as a positive attribute towards old age.

**Intergenerational networks and elder care in Turkey**

In Turkey, as reported by many research, men almost always prefer to get help from their wives. Getting help jointly from one's spouse and children is a strong preference among both men and women in old age. In Turkish culture, just like many developing countries, there are two contrasting and widely held views about getting help from one's children. One looks upon getting help from the children as a right, while the other view says that asking for such help as being a burden on the children. It is a wide spread understanding of all people that they have to provide care/support for their parents although they think that their own children would not be Touching upon the importance of family as an institution in this point, Kalaycıoğlu and Tılıç rather seek to focus on the relation between family and mutual solidarity especially in the old age (4). According to Kalaycıoğlu and Tılıç, family in Turkey serves as a significant mechanism of support. While today only a small proportion of old age people in Turkey can enjoy retirement benefits due to dominance of informal sector employment, a large part of the remaining has to look for their own means or rely on the support of their children as a means social security. Another point is that rather than leaving their holdings as inheritance after their death to their children as a way to guarantee their future, old aged people in Turkey prefer to spend it for their children during their lifetime so that they can live happily with them (5).

The type of solidarity in Turkish family structures changes according to the role of older persons in the family. For instance, within-family transfers may be centric (through a central agent like a patriarch or matriarch) or non-centric (between two neighbouring family members). In the first model, older persons have the right and authority over the distribution

of the common resources accumulated to the needs of the family. However, in the second model these transfers realized without a family head. According to Kalaycıoğlu and Tılıc, the direction of the economic and social transfers is from older persons to the adult children contrary to the expectations. In this context, this kind of mutual aid networks function as material support for the young and moral support for older persons in coping with the problems faced in their lives. While more prosperous aged people in particular do not face much trouble since their expectations from their children are not so high, there may be clashes especially in middle-income families. Since middle-income families can hold their present status through solidarity between the old and the young, their expectations are higher and solidarity gets more important too. Coming to low-income families, resources are already scarce and there is no expectation for sharing. However, in the case of low-income families this situation leads to distancing of the old and the young rather than clashes. On the other side of the coin, it is noted that these kinds of transfers within the family could lead to some tensions and interfamilial contradictions and ambiguities. While this does not lead to serious problems in high level economic groups, it becomes a vital issue especially in middle classes, because these groups survive mostly by the help of these mechanisms and the expectations of both sides (older and young members of the family) are bilaterally high. Considering the lower classes, there is not an expectation in general since the resources are scarce. However, this situation leads to growing distance among older and young persons.

Within the neoliberal and new right agenda of the current government and as a result of shrinking welfare services by the state in line with this agenda, family has gained an importance as a potential substitute to the welfare state more powerful than ever before. So there emerged a need to support the family both ideologically and financially and strengthen the idea of traditional Turkish family. The legitimacy of the substitution of state by the family as a caregiver comes from the assumption that most of the Turkish people want to live with their own families and also prefer the family members to take their care at their old age. In line with the assumption above, in Turkey, currently, 44 per cent of the living children of older persons are cohabitating with their parents. The proportion of older persons above the age of 85 who are cohabitating with their children increases to 57 per cent. So as the age increases, the responsibility of the comfort, health and needs of older persons passes from themselves to their children (6). This information means that currently, the biggest proportion of the caregivers to older persons in Turkey is composed of family members. One thing which is peculiar to this country is that the daughters-in-law as caregivers outnumber the daughters as caregivers. The older parents are most likely to stay with their sons than staying with their daughters. Daughters have to take care of their own parents-in-law who live in the same household.

In contradiction with the expectations, long term care of the old person becomes difficult for the family, both materially and morally. The rapid transition from traditional family structure to nuclear family structure made the nursing and care for older persons complicated (7). Now the family itself increasingly needs support, if it wants to be able to care for its weaker members without having to substitute the responsibilities of the state and public care services (8). This is why current Turkish government introduced something new to the Turkish society such as the financial support to the family carers of older persons. In addition, Brubaker

argued that it can be talked about positive and negative sides of the family as a site of care for the old age period (9). Since, while on the one hand this family life in old ages providing emotional, financial and physical supporting mechanisms, on the other hand the very close and intimate relations could result in stress and some tensions in the members of the family due to the excessive needs of the inter-generational family and expectations of older persons (9). In that sense it can be argued that the most basic mechanism on which the family life is set up is the inter-dependency which depends on the reciprocal support between family members. But this overall dependency between the generations and unmet expectations of older persons from the young mostly result in the increased ambivalence within the intergenerational relations.

**Conclusion and discussion**

Despite the fact that Turkish culture is very family oriented, in the sense that citizens do not wish to be separated from their children and families, they also do not want to be dependent on them. The perception of older persons about themselves as a burden on his/her adult children has been increasing with the intergenerational ambivalence experienced especially when the long term care of older persons is the issue. Since the changes in the social policies regarding family and long term care in Turkey resulted in a narrowing of the options for older persons other than the family, this situation also creates a problem in terms of the human rights for older persons in Turkey. The family as the only option for the dependent older persons from which they can require their needs to be met is not the best solution for the increasing demands of older persons in Turkey. Instead, this situation brings about the increasing ambivalence within the intergenerational relations and dependency of older persons to the young generation.

The availability of making choice is for the high and middle SES groups, not for lower one. Although we see that the intergenerational relations are still strong although changed their forms in Turkey, the differences among the lower on the one hand, higher and middle SES groups on the other hand show us that there is a big concern for reexamining the current social policies regarding elder care in the country.When the availability of living alone or going to nursing homes is current, older persons feel themselves less as a burden on their children and their relations with their children become more peaceful and less compelling. The intergenerational relations among the older parent and their adult children in Turkey are expected to become more ambivalent, less harmonious as presumed by the government and policy makers as long as the emphasis is given to putting elder care on the shoulders of the family members rather than ameliorating the situation of the nursing homes or providing formal home care. It is, in this way, important that the social policies in a country definitely affect the form and strength of the intergenerational relations among older persons and the young especially when older persons become more dependent and in need of long-term care. Because long term care needs of older persons are very burdensome that not only the family members can overcome by their own means. In this respect, the support, not only financially but also psychologically, has to be given from the state to the family members during their caregiving process. Other than that, the adult children are stuck between the Turkish cultural norms on the responsibility expected from them to take care of their elders and their own

private lives, responsibilities and employment. This situation creates ambivalence within their relations to their parents. The degree of ambivalence varies within different SES groups. The ambivalence is also perpetuated by the current social policies since the individuals (both the older persons and adult children) feel themselves dependent not only in the intergenerational relations but also in their relations with the state. The new policies compelled both parties to be more reliant on each other although their relationships totally changed from more of solidarity-based to ambivalent.

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# Preventive Medicine

**Cihan Fidan[1] and Altuğ Kut[2]**

***Abstract.*** The most common causes of death of older persons in Turkey are heart and circulatory system diseases, cancers, lung diseases, endocrine-nutritional-metabolic diseases, injuries and poisonings, nervous system diseases and infections. The Turkish Ministry of Health provided a list of diseases (Hypertension, Diabetes Mellitus, Dyslipidemia, Osteoporosis, Abdominal Aortic Aneurism, Malnutrition, Obesity, Coronary Artery Disease, Iron Deficiency Anaemia, Dementia, Depression, Thyroid Disorders, Visual Impairment, Hearing Impairment) and cancers (Breast, Colorectal, Cervical, Prostate, Thyroid, Lung, Oral, Ovary, Pancreas, Bladder, Skin and Testicular Cancers) from which death is preventable following an early diagnosis and recommended screenings. Whilst preventive recommendations and lifestyle changes include vaccination, nutrition, fluid intake and dehydration, tobacco cessation counselling, antioxidants, aspirin, and exercise-mobility, screening tests are available for Hypertension**,** Diabetes Mellitus, Dyslipidaemia, coronary heart disease, colorectal cancers, cervical cancer, prostate cancer, osteoporosis, dementia and depression, malnutrition, and obesity.

***Keywords***: Turkey; ageing population, prevention; screening tests.

## Introduction

The easiest and most efficient way for dealing with diseases is to take preventions before the disease itself occurs. Preventive medicine aims to identify individuals under risk for diseases, using cheap, effective, harmless, and most appropriate scanning methods, by determining the risk factors for health and the population at risk. Early diagnosis with this approach is providing an opportunity to proper treatment on-time and is increasing the general health level of the population (1, 2). The fact that preventive medicine has been developed and the chance of early diagnosis has increased has a great importance in the continuation and improvement of health in the whole society. Nowadays, medical practice and treatment costs constitute a large part of health spending, and preventive medicine

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becomes more important. Just as in all the countries of the world, the importance of preventive medicine in Turkey is increasing and serious attempts have been made in recent years (3).

Preventive medicine services are evaluated in three categories as primary, secondary and tertiary care. *Primary prevention* is the attempt to prevent the onset of the disease in asymptomatic individuals. It contains services like vaccination, diet and cessation of smoking to prevent illnesses before they actually occur. This includes protective measures for occupational and environmental health and coordinated work with public health practices. *Secondary prevention* aims at early detection of the disease before the disease becomes symptomatic. Screening methods include early diagnosis, follow-up, and treatment to prevent complications of existing systemic diseases. *Tertiary prevention* includes measures to prevent further worsening of illnesses and complications, rehabilitation work, and to provide the advanced counselling services for family (1, 2, 3, 4).

**Preventive care for older persons in Turkey**

As is the case in the world, the proportion of people over 65 is increasing in Turkey. In Turkey, we need preventive health services to improve the quality of life of older persons as well as to control geriatric health expenditures. Lifestyle changes, treatment of risk factors, and primary or secondary prevention practices can prevent partially or completely more than half of the diseases. So the provision of comprehensive and preventive health services to older persons is of great importance (5, 6).

In Turkey, older persons are the group that make the most use of public health services. However, unfortunately these persons are often confused because they have to contact so many institutions until they are able to solve their health concern. The disconnection between various health care institutions and between the level of care are the major problems, which are confusing older persons and makes it difficult to get health care services. In Turkey, primary care physicians and nurses take care of patients in Family Health Centres and play a major role in the implementation and follow-up of preventive medicine practices (6). It is particularly difficult in older persons to establish a standard approach in preventive medicine, which is valid and reliable in all parts of the world. The leading causes of deaths in older individuals worldwide and country-specific are carefully examined for the identification and provision of preventive services and for screening of these diseases. The most common causes of death of older persons in Turkey according to the year 2015 are heart and circulatory system diseases, cancers, lung diseases, endocrine-nutritional-metabolic diseases, injuries and poisonings, nervous system diseases and infections (Table 5.1). This list is almost the same with some minor differences in countries with similar levels of development around the world (7).

**Table 5.1: Distribution of causes of death according to Turkish Statistical Institute.**

| | 2014 | | 2015 | |
|---|---|---|---|---|
| | **Number** | **(%)** | **Number** | **(%)** |
| **Total** | **383639** | **100.0** | **392429** | **100.0** |
| Circulatory system diseases | 153646 | 40.0 | 157965 | 40.3 |
| Malign and benign neoplasms | 78074 | 20.4 | 78661 | 20.0 |
| Lung diseases | 40638 | 10.6 | 43566 | 11.1 |
| Endocrine-nutritional-metabolic diseases | 19424 | 5.1 | 19728 | 5.0 |
| Central nervous system and sensory organ diseases | 16616 | 4.3 | 19035 | 4.9 |
| Causes of external injury and poisoning | 20160 | 5.3 | 17696 | 4.5 |
| Other (infection, infestation, mental-behavioural disorders, musculoskeletal and connective tissue disorders etc.) | 55081 | 14.4 | 55778 | 14.2 |

This list gives us not only roughly the organ systems and diseases that need to be screened; also it gives us the factors and real risks underlying these diseases, and pointing at the protective health practices that should be taken. For this reason, many of these deaths and illnesses can be prevented or at least delayed with proper lifestyle practices and accurate screenings. But there are some differences when it comes to screening of older persons. The frequencies of diseases in older persons are different then younger persons. Therefore, we need to use age related incidence and prevalence rates for each condition we are screening (8). The efficacy of protective interventions also varies depending on the physical health, functional capacity and cognitive status of the older individual. For this reason, in the selection of the screening test we should also consider the accompanying diseases and the general condition of the person (9, 10).

The Turkish Ministry of Health investigated work from various countries, and similar national and international guidelines before preparing the National Periodic Investigation Guideline in 2015, which depends also on numerous scientific investigations (11). The National Periodic Investigation Guideline, which also took the recommendations of the United States Preventive Services Task Force (USPSTF) into account, gives a list of diseases possible with early diagnosis, cancers and recommended screenings in Tables 5.2 and 5.3 (9, 10, 11, 12, 13, 14).

**Table 5.2: Diseases possible with early diagnosis by screening and recommended screenings**

| Disease | Recommended screening in turkey and frequency |
|---|---|
| Hypertension | Screening by blood pressure measurement<br>Consider screening once every two years in patients with optimal blood pressure (120-130/80-85 mmHg). Consider screening once a year in patients with high-normal blood pressure (130-139/85-89 mmHg). |
| Diabetes Mellitus | Screening by fasting blood glucose<br>Consider screening in everyone over 40 and in high-risk groups once every three years.<br>It is recommended to start screening persons with high risk of diabetes in earlier ages and more frequently. |
| Dyslipidemia | Screening by lipid profile (Total Cholesterol, Triglycerides, LDL-C and HDL-C)<br>Consider screening once every five years between 35 to 75 years of age. |
| Osteoporosis | Screening by biochemical tests and DEXA<br>Consider biochemical tests in everyone over 65 once a year.<br>Consider at least one DEXA measurement in females over 65 and males over 70. |
| Abdominal Aortic Aneurism | Screening by abdominal sonography<br>Consider screening once in every male between 65-75 years who has ever smoked. |
| Malnutrition | Screening by measuring BMI<br>Consider in everyone once every year to identify nutritional status. |
| Obesity | Screening by measuring BMI<br>Consider in everyone once every year to identify nutritional status. It is recommended to evaluate and follow-up with BMI and waist circumference. Also, a follow-up with everyone who lose weight was administered within three months' intervals. |
| Coronary Artery Disease | Consider screening everyone regularly with overweight, diabetes mellitus, tobacco use, high lipid profile, high blood pressure or high-risk persons with family history.<br>It is not recommended to screen persons with low risk. |
| Iron Deficiency Anaemia | Screening by complete blood count measurement<br>Consider measurement once a year for persons with underlying chronic condition.<br>Consider measurement once every 5 years for persons 50 years and older without any condition. |
| Dementia | No recommendation for or against screening.<br>If there are any suspicious signs, the relevant physician examination is sufficient. |
| Depression | Consider screening in all adults.<br>Routine physician visit is a good opportunity for screening.<br>Suggest psychiatric evaluation in suspicious cases. |
| Thyroid Disorders | Screening is not necessary unless there is a symptom or family history. |
| Visual Impairment | Consider screening once a year in every person over 65. |
| Hearing Impairment | Consider screening once a year in every person over 65. |

**Table 5.3: Cancers possible with early diagnosis by screening and recommended screenings**

| Cancer | Recommended screening in Turkey and frequency |
|---|---|
| Breast Cancer | Screening by routine physical examination and mammography.<br>Consider mammography and physical examination in every female between 40-69 years once every two years. Start earlier in persons with family history. |
| Colorectal Cancer | Screening by rectal examination, faecal occult blood test, and colonoscopy.<br>Consider in every person between 50-70 years a faecal occult blood testing once every two years and colonoscopy once every ten years. |
| Cervical Cancer | Screening by HPV and Pap smear testing.<br>Consider screening performed every five years in women aged 30-65 years. Stop screening in females over 65 whose two last HPV or Pap smear testing is negative. |
| Prostate Cancer | Screening by digital rectal examination<br>Consider screening once a year after 50 years of age with digital rectal examination and PSA testing<br>Routine screening is controversial. |
| Thyroid Cancer | Screening by physical examination. Routine sonography screening not necessary.<br>Consider screening in persons with family history of thyroid cancer. |
| Lung Cancer | Routine screening in persons without clinical signs or non-smokers not recommended. |
| Oral Cancer | Routine Screening not recommended. Physical examination is sufficient. |
| Ovary Cancer | Routine Screening not recommended. Physical examination is sufficient. |
| Pancreas Cancer | Routine Screening not recommended. |
| Bladder Cancer | Routine screening in persons without clinical signs not recommended. |
| Skin Cancer | Routine screening is controversial |
| Testicular Cancer | Routine screening in persons without clinical signs not recommended. |

**Preventive recommendations and lifestyle changes**

*Vaccination***.** Influenza and pneumococcal vaccinations are the most important primary prevention practices to be applied in older persons. Influenza vaccination should be done once in a year for persons 65 years and older. October and November are the best times for vaccination (12, 13). Both pneumococcal 13-valent conjugate (PCV13) and pneumococcal 23-valent polysaccharide (PPSV23) should be administered routinely in series to all adults aged ≥65 years. The older persons who have not previously received pneumococcal vaccine or whose previous vaccination history is unknown should receive a dose of PCV13 first, followed by a dose of PPSV23. The dose of PPSV23 should be given 6-12 months after a dose of PCV13.

The two vaccines should not be co-administered, and the minimum acceptable interval between PCV13 and PPSV23 is 8 weeks. The older persons who have previously received ≥1 doses of PPSV23 also should receive a dose of PCV13 if they have not yet received it. Those vaccinated with before the age of 65 should be vaccinated once more after 5 years from the first vaccination. Vaccination can be done at any month and can be administered at the same time as influenza (12, 13). More than 60 per cent of tetanus infections occur in older persons. Therefore, tetanus toxoid should be repeated every 10 years throughout the geriatric period (8, 11, 12, 13). In Turkey, meningococcus is being vaccinated for those who routinely visit the pilgrimage. Tetravalent ACWY polysaccharide (meningococcal 4-valent conjugate) vaccine is given to these persons about a month before leaving the country. The meningococcal vaccine can be administered in a single dose (8, 12).

*Nutrition*. With age, the energy requirement of the body decreases gradually. Therefore, after age 51, the daily calorie intake needs to be reduced by 600 kcal / day for men and 300 kcal / day for women. However, proteins, calcium, iron and vitamins are inadequate in diets containing energy below 1800 kcal, and many older persons have to comply with these diets. Therefore, high-nutrient foods should be recommended that would not be in conflict with the diet applied to the older person with multisystemic diseases. A healthy diet reduces both mortality and morbidity, as well as the risk of developing breast and colon cancers, osteoporosis, and malnutrition. The daily nutrition program should include frequent meals with small amounts of high fibre foods. The composition of the diet should include a restriction of alcohol intake, a reduction in salt (3g to 5g per day) and fat consumption (Less than 30 per cent of the daily energy should come from fat, and up to 10 per cent of this should be saturated fats), as well as a calcium supplementation up to 1500 mg per day (6, 8, 14, 15).

*Fluid intake and dehydration***.** Especially in patients with dementia and sensory impairment, there is a high risk of dehydration and hypernatremia due to inadequate fluid intake in older persons. Especially those who have an appetite problem are at increased risk of getting inadequate food and therefore inadequate fluids. Changes in mental status due to hypovolemia may occur and renal function may be adversely affected accordingly. As long as there is no contraindication, an average daily fluid intake of 1500ml to 2500ml is required. The problem of not accessing the fluid should be questioned and if present it must be eliminated. Nocturia and incontinence in older people can also cause volunteer fluid intake restrictions. Stopping fluid intake two hours before bedtime can partially solve this problem (6, 8, 14, 15).

*Tobacco cessation counselling*. It extends the lifetime expectancy of quitting only cigarettes and other tobacco products over the age of 65 between 1.4 and 2.0 years for men and 2.7 to 3.7 years for women. In addition, quitting the cigarette at any age can reduce 80-90 per cent of the damage to the cardiovascular health of victims of passive smoking (14). For this purpose, quitting tobacco products by means of interviews or drug treatment methods is supported by applying to the smoking cessation clinics and family physicians in the 2nd and 3rd step health units of the patients and their relatives (6, 16).

*Antioxidants*. Free radical damage is important in the pathophysiology of atherosclerosis, ischemia-reperfusion injury, Parkinson's disease, cataracts, certain cancers and rheumatoid arthritis. Findings suggest that antioxidant vitamins are protective in ischemic heart disease, cataracts and some cancers. Although theoretical knowledge and laboratory findings for most of these diseases support the effect of antioxidants, clinical findings do not confirm this (17). Additional beta-carotene intake is not recommended while the older people may take additional Vitamin E (100-400 mg/day) and Vitamin C (60-100 mg/day). There is a negative correlation between the levels of vitamin B and plasma homocysteine levels. The prevalence of hyperhomocysteinemia is 42 per cent in patients with cerebrovascular disease, 28 per cent in patients with peripheral vascular disease, and 30 per cent in those with cardiovascular disease. Vitamin B supplements may normalize high homocysteine levels; however, it is not clear whether normalcy homocysteine levels will correct cardiovascular mortality and morbidity. Daily recommended doses are 400 mcg/day for folic acid, 3 mcg/day for B12, 2.5-3 mg/day for B6 (5, 17).

*Aspirin*. It is known that the use of aspirin can significantly reduce mortality in patients at high risk for coronary artery disease seen in older ages. It has been determined through investigations that the age group that makes the most use of this benefit is between 70 and 84 years of age (14, 18). In this context, low-dose aspirin is recommended for men over the age of 40 and postmenopausal women and women who are smoking before the menopausal period or who are hypertensive or high in cholesterol (8, 11, 18).

*Exercise-Mobility*. ADL (activities of daily living) and IADL (instrumental activities of daily living) scoring should be done within the entire older people. Physical performance tests not only have a strong impact on the quality of life, but also on the morbidity and mortality (6, 8). It also offers high benefits against obesity and osteoporosis, which leads to many health problems in old age. It mainly increases bone density while reducing exercise, fall and fracture risk (19). In general, evidence-based research shows that aerobic exercises made three times a week for half an hour a week and in the same way twice a week the force exercises at an older age are extremely useful for health (8, 19).

*Injury prevention*. Older age makes it a risky group in home accidents, including falls and burns. The most important risk factors are; postural hypotension, drugs, vision and hearing loss, posture and gait disorders, mobility limitation, alcohol use, spiritual-mental and sleep disorders, pre-falling history and serious cardiovascular and/or neurological disorders. Changes to the home environment for falls and burns are necessary to prevent accidents. The results obtained from the initiatives are extremely positive (8, 11). Among these are measures such as smoothing the thresholds, using a system to prevent slippage in bathrooms and toilets, providing a wall support to hold up in the restrooms, attaching importance to night lighting, adjusting the hours given to diuretics that can cause older person to wake up during sleep, and precautions for the resolution of the sleeping problem (6, 8).

**Chronic diseases and cancer screening tests**

One of the most important health problems in older people is chronic diseases and cancer. One of the most important protection strategies needed for developmental health problems is routine screening for early diagnosis. Screening tests are used for this purpose. Cancer screenings are recommended for the older people with life expectancy in the frontline.

*Hypertension***.** According to the findings of *Turkey hypertension and prevalence study (PatenT2)* conducted by the Turkish Hypertension and Kidney Disease Association in order to determine the frequency, awareness, treatment and control of hypertension in adults and the factors affecting them, the prevalence of hypertension in adults in Turkey is 30.3 per cent in 2012; 71.5 per cent for males aged 65 and over, and 84.4 per cent for females. In this study, it was determined that the age group in which the hypertension was most frequently observed was between the ages of 70-79 and that this ratio was 85.2 per cent (20). According to the Joint National Committee (JNC) (8). Hypertension Guidelines, normotensive subjects (systolic blood pressure <120 mmHg, diastolic blood pressure <80 mmHg) are monitored biennially by pre-hypertensive persons (systolic blood pressure 120-139 mmHg, diastolic blood 80-89 mmHg) is recommended following the annual blood pressure measurements (21). In Turkey, blood pressure measurement is recommended every two years in older people with optimal blood pressure (120-130 / 80-85 mmHg) and in high-normal (130-139 / 85-89 mmHg) ones at least once a year (8, 11, 22).

*Diabetes Mellitus*. The most extensive studies of the prevalence of diabetes in Turkey are the studies of *Turkey diabetes epidemiology study* (TURDEP-I and TURDEP-II). According to these studies, the prevalence of diabetes in Turkish population in 2011 was found to be 13.7 per cent. Approximately 40 per cent of individuals identified as having diabetes is the individuals 60 years of age or older (23). Fasting plasma glucose, HbA1c measurement and / or oral glucose tolerance test are used for diabetes screening. Although the guidelines of the Turkish ministry of health recommends to initiate diabetes screening over the age of 45, The Association of Endocrinology and Metabolism of Turkey (TEMD) guideline is strictly recommending to start screening with the age of 40 (8, 11, 24). Therefore, diabetes mellitus screening with fasting plasma glucose is performed every 3 years in Turkey starting from 40 years old. Individuals at high risk for diabetes should be screened for diabetes from younger ages and more frequently. Those in the high-risk group for diabetes; Body Mass Index (BMI) ≥25 kg/m2, history of diabetes in first and second degree relatives, high prevalence of diabetes ethnic groups belonging to individuals, women who gave birth to big babies or women who were diagnosed with GDM, hypertensive individuals (blood pressure: BP ≥140 / 90 mmHg), dyslipidaemias (HDL-cholesterol ≤35 mg/dl or triglycerides ≥250 mg / dl), previously impaired glucose tolerance or impaired fasting glucose trait, women with polystic ovary syndrome, persons with clinical disease or findings related to insulin resistance (acanthosis nigricans), persons with coronary, peripheral, or cerebral vascular disease, persons with low birth weight, persons with low sedentary lifespan or low physical activity, persons with dietary habits rich in saturated fat and low fibre intake, persons with schizophrenia and antipsychotic medication, solid organ (especially renal) transplanted patients (24). The American Diabetes Association (ADA) recommends screening for all people aged 45 years

and older, especially those with body mass index> 25 kg/m2 (25). The USPSTF recommends Type 2 diabetes screening for asymptomatic individuals aged 65 years and older who have a blood pressure of 135/80 (treated or not) or hypertension. Also, it is recommended screening for abnormal blood glucose as part of cardiovascular risk assessment in adults aged 40 to 70 years who are overweight or obese (18, 26).

*Dyslipidaemia*. In Turkey, the prevalence of dyslipidaemia is 33,4 per cent in males between 65-74 years, 52.5 per cent in females; 28.8 per cent for males and 46.1 per cent for females over 75 years of age (27). The methods used in the screening are total cholesterol, triglyceride, LDL-cholesterol, and HDL-cholesterol levels measured in fasting blood measurements. Cholesterol ≥240 mg / dl, LDL ≥160 mg / dl, triglycerides ≥200 mg / dl, HDL in men <40 mg / dl, and females <50 mg / dl indicate the presence of dyslipidemia. Proven cardiovascular disease, Type 2 diabetes, Hypertension, Chronic inflammatory disease, Chronic kidney disease, Smoking, BMI ≥25 kg / m2 or waist circumference ≥ 90cm for men; ≥80 cm for women, a family of asymptomatic patients with no known disease should be screened for dyslipidemia at an early age (male <55 years female <65 years) with cardiovascular disease or very high cholesterol levels. The Ministry of Health recommends screening of individuals between the ages of 35 and 75 every five years (8, 10, 11). The Association of Endocrinology and Metabolism of Turkey (TEMD) recommends lipid profile screening once every 5 years from 20 years old, once every 1-2 years between 50-65 years, and once a year in individuals aged 65 years and above in people aged 20-50 years without risk factors (28). The USPSTF regularly recommends cholesterol measurement if there is an increased risk of cardiovascular disease in men over 35 years and in women over 45 years of age (18).

*Coronary heart disease*. Just like in the United States, it is the most common cause of death in adults in Turkey (7). Treatment to prevent coronary heart disease by modifying risk factors is now based on the Framingham risk model (18). Aspirin (80-325 mg / day) can be given as the primary prevention for those who have coronary artery disease risk factors. Before taking aspirin, however, some diseases and clinical conditions should be considered and evaluated by the physician (such as patients with GI or brain haemorrhage risk). In people who have proven coronary artery disease (myocardial infarction, positive coronary angiography) or who have cerebrovascular disease, lipid-lowering drugs are recommended as secondary prevention (5, 8). Abdominal Aortic Aneurysm: Abdominal aortic aneurysm is the cause of 1.5 per cent of deaths in people over 55 years of age. In order to reduce aneurysm-related deaths, diagnostic aneurysm should be performed without rupture and appropriate interventions should be performed. Because of the rarity of abdominal aortic aneurysm in women, the aneurysm has not been shown to benefit from scanning. In men, it has been shown that scans to be performed reduce the deaths associated with abdominal aortic aneurysm (29). The Turkish Ministry of Health and the USPSTF are recommending screening by ultrasonography at least once in men between the ages of 65 and 75 who have smoked during a period of their life (8, 11, 18). Breast cancer: Breast cancer is the most common cancer among women both in the world and Turkey (30, 31). The increasing frequency and frequency of breast cancer increases the importance of breast cancer because it can be diagnosed at an early stage and treated when diagnosed (32). The Turkish Ministry of Health recommends screening with mammography every two years in women aged 40-69 years and routine

clinical examination by a physician once a year (8, 11, 33, 34). In women aged 70 years or older, if there is no pathology that requires follow-up, the screening upon patient's request and cost effectiveness ratio should be planned. The main screening method should be mammography, and counseling should be provided to every woman after 20 years of age to make breast self-examination in order to raise awareness in the society. Clinical breast examination should be performed for every woman participating in the screening to increase the effectiveness of the mammography (8, 11). The USPSTF recommends screening of women aged 50-74 years with mammography every two years (18).

*Colorectal cancers*. Colorectal cancer, which causes serious morbidity and mortality in developed countries, is also an important health problem in Turkey (27, 30). Screening methods used for early detection of colorectal cancer are rectal examination, faecal occult blood test and colonoscopy. The Turkish Ministry of Health recommends to screen all people aged 50-70 years for faecal occult blood test every two years and colonoscopy every ten years (8, 11). Colonoscopy should be done, even if all tests of the scanned individuals are negative. The screening should be discontinued for women and men aged 70 years who are negative in the last two faecal occult blood tests (35). The American Cancer Society and American Society of Radiology recommends screening once a year for faecal occult blood testing, flexible sigmoidoscopy every 5 years, double contrast barium enema and CT colonography, and colonoscopy every 10 years starting at age 50 (36). The USPSTF recommends screening for faecal occult blood tests, sigmoidoscopy or colonoscopy for people between 50 and 75 years of age. Once a year, highly sensitive stool screening with faecal occult blood testing, sigmoidoscopy for every 5 years, high-precision faecal occult blood test for every 3 years, and screening colonoscopy for every 10 years is recommended (18).

*Cervical cancer*. Cervical cancer is a preventable disease. Screening with the Pap smear test allows early diagnosis and effective treatment. It should be screened with HPV test and Pap-smear test to be performed every five years in women aged 30-65 years. Pap-smear test should be taken at least once from all women in the age range of 30-40 years and should be repeated with five year intervals (8, 11). Screening should be discontinued in women aged 65 years who yield negative outcome for the last two HPV or Pap smear tests. Follow-up of patients who underwent total hysterectomy with benign gynaecologic causes (presence of CIN II and III, is not considered benign) is not necessary. In cases of hysterectomy due to 2CIN II and III; three documented (reportable), technically insufficient negative cytology, and no abnormal or positive results in the last 10 years (37). The USPSTF recommends screening of cytology with HPV every 5 years in women aged 30-65 years (18).

*Prostate cancer*. It is the most common cancer in men and digital rectal examination, PSA test and trans-rectal ultrasonography are recommended as the screening tests. Nowadays, the most important risky group is the individuals who are family stories and we suggest that they go through regular urological examination. In Turkey, it is suggested to apply rectal examination and PSA determination every year after age 50 years (8, 11). The USPSTF suggests that a significant percentage of men with asymptomatic cancer detected by PSA screening have convincing evidence that they have a tumour that cannot progress or slowly progress, and that the reduction in mortality is very small even for men aged 55-69 years (18).

*Osteoporosis*. Preserving the primer to prevent osteoporosis is to provide a healthy skeleton that contains maximum strength and mass during the base period of the youth. Excessive calcium intake up to 1000 mg / day, sun exposure, vitamin D intake and weight-bearing exercises against gravity increase bone mass (8). To reduce the rate of bone loss, the first step in secondary prevention is to distinguish between risky individuals. Bone density measurement can be detected early in asymptomatic women with osteoporosis risk factors or in men and women who have received glucocorticoid treatment. Dual Energy X-ray Absorptiometry (DEXA) method is used to measure bone mineral density (38). In Turkey, it is recommended that all individuals aged 65 years and older have biochemical tests (Ionized calcium, whole blood count, creatinine, alkaline phosphatase, TSH, 25-hydroxyvitamin D measurements and protein electrophoresis in vertebral fractures) once a year and that DEXA measurements should be made at least once in the lives of women aged 65 years and over and men aged 70 years and over (11, 39). The TEMD recommends screening for women who are younger and in the postmenopausal transition period and women aged 50-69 years who have clinical risk factors for fracture and adults who have fractures after the age of 50, bone disorders such as low bone mass or bone loss as well as rheumatoid arthritis or using glucocorticoids (daily > 5 mg prednisone or equivalent drugs > 3 months). The USPSTF recommends scanning with DEXA at least once for women over 65 years of age. Repetition of the test is done according to the opinion of the physician who follows the patient (18). Patients should be warned against lounging, sudden bending, and especially bearing loads when moving down the stairs to avoid pathological vertebral fractures, in order to be protected from pathological vertebra fractures, which is one of the major problems of older ages. Active measures include dietary vitamin D supplementation with sunlight, taking environmental precautions to prevent falls, mobilization and strengthening exercises, and HRT in selected cases (40).

*Dementia and depression*. Dementia and depression, which are increasing in frequency with the advancing age, are health problems that impose important adverse effects on the quality of life in advanced age (9, 10). The USPSTF found evidence that scanting in dementia was not beneficial and in the depression alone screening and feedback without staff-assisted care support did not improve clinical outcomes sufficiently in the older people (18); however, in Turkey at least once in the life of adults aged 65 years and older, a 'Multi-Lateral Geriatric Assessment' [Mini Mental Status Assessment Test, Yesavage Geriatric Depression Scale, Mini Nutritional Test, *Get Up And Walk* Test, Daily Life Activities Test (Lawton Brody Instrumental Daily Life Activity Scale Tests)] is recommended and, if possible, it is recommended that this assessment is to be repeated every five years (8, 11).

*Malnutrition*. Malnutrition is more common in the older people than in the general population (41). The most frequent cause of malnutrition in the older people is the presence of chronic disease in the developed countries and the nutritional status in the developing countries. Malnutrition may lead to secondary health problems such as memory loss, delay in wound healing, and pressure ulcers in individuals. For this reason, it is necessary to calculate the Body Mass Index (BMI) by performing nutritional screening, height and body weight measurement. BMI level between 18 and 20 indicates the possibility of malnutrition, while

that below 18 indicates definitive malnutrition (42). As a screening test, it is recommended to perform BMI measurement once a year. Older people who are malnourished should be evaluated in second-line health care facilities (8, 11).

*Obesity*. Hypertension, diabetes, hyperlipidaemia, coronary artery disease and cerebrovascular disease are more common in individuals developed obesity. In Turkey, the obesity rate of the older female population is 33.1 per cent, the obesity rate of the older male population is 16.2 per cent and it is estimated that the prevalence of obesity in society is about 25.0 per cent similar to the European countries (43). It is important to determine the presence of obesity in older people, especially in relation to cardiovascular diseases. BMI measurement is often used in obesity as well as in malnutrition. Only body weight can be used to monitor weight loss and assess the efficacy of treatment. People who are determined to have a risk of obesity or obesity by measuring waist circumference and BMI are recommended nutrition and physical activity to reduce energy intake. It is recommended for the individuals who are successfully lost weight to be subjected to health checks within the periods of 3 months. Individuals who are unsuccessful in weight loss should be directed to second-line health care (8, 10, 11).

*Hearing and vision test*. With increasing age, the risk of visual impairment and hearing loss increase along with the frequency thereof. For this reason, annual audiovisual assessment is recommended even if there are no complaints. Visual assessment can easily be done with the Snellen test. Hearing assessment can be done with the whisper test and history taking. Audiometric hearing tests should be performed only on those with hearing loss and tinnitus (11).

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# Geriatric syndromes

**Yeşim Gökçe Kutsal**[1]

***Abstract.*** Geriatric syndromes are difficult to understand due to the complexity of the multiple factors and the synergistic effects of the various risk factors. These situations are called syndromes to emphasize that the combined manifestations are related to a large number of factors. Geriatric syndromes such as frailty, delirium, urinary incontinence, dizziness, falls, sleep problems, malnutrition, pain, self-neglect are multifactorial, and associated with substantial morbidity and poor outcomes in clinical practice. They are highly prevalent in older adults, especially frail older people. An old patient should have received the correct diagnosis and treatment and should have been assessed regularly and thoroughly for improving their quality of life and functional capacity. The problems emerging with aging should be dealt with as a whole and the comprehensive geriatric evaluation should be used when approaching the elderly. An interdisciplinary approach gives the chance to evaluate the elderly not only in medical terms but also in psychosocial and functional terms as well.

***Keywords***: ageing; Turkey; geriatric syndromes; frailty; falls

## Introduction

Maintaining wellbeing and quality of life in an ageing population is often accompanied by significant social and economic difficulties. Hence the growing need to create new policies and strategies aimed at increasing the level of welfare, especially considering that; there is a very significant difference in terms of life expectancy at birth between developed and developing nations in the current century (1). Although such societal modification was until recently viewed as mainly involving only the most developed countries, it has now started involving many developing countries as well (2).

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Ageing is characterized by the progressive accumulation of damage at the molecular level caused by environmental and metabolically generated free radicals, by spontaneous errors in biochemical reactions, and by nutritional components (3). Certain changes such as, gradual decline in glomerular filtration rate, gradual decline in hepatic oxidative metabolism, increase in proportion of body fat, reduction in muscle mass generally occur in the human body in conjunction with the ageing process (4). During the process of ageing, a person becomes unprotected against diseases and injuries due to cellular and non-cellular changes such as a decrease in the reserve capacity of organs and systems, a decrease in homeostatic control mechanisms, examples of which include thermoregulation system defects and decreased baroreceptor sensitivity, a decrease in the ability to adapt to environmental factors, and a decrease in the capacity to respond to stress (5, 6). It should be taken into consideration that, the clinically important consequences of geriatric patients due to diminished physiological reserve are; disease presentation in older persons are often atypical, usually there is the context of contributing comorbid conditions, the compensatory mechanism is weakened, recover from illness is slow, certain preventive measures are beneficial and the weekend reserve puts older persons at greater risk for iatrogenic injury (7).

When diseases are prevalent and quality of life is poor, disability issues arise. The number of disabled older persons is increasing not only as a function of population ageing but also because of the increased use medical technology. The concept of disability is very dynamic and involves different types of disabilities. The term 'iceberg of disability' well illustrates the magnitude of the problems involved. Disability can also fluctuate over time, "once disabled" is not the same as 'always disabled'. Activities of daily living have become one of the important indicator of disability (8). It was shown by Gokce Kutsal and colleagues that basic activities of daily living and instrumental activities of daily living scores of older people aged 85 and over were lower. Due to increase in alterations of musculoskeletal system, degenerative joint diseases, osteoarthritis, osteoporosis, chronic diseases, visual disorders and the use of multi-drug in old age compared to other age groups, restrictions in activities of older persons were seen more (9).

In terms of non-communicable diseases/chronic diseases, current pattern in Turkey in older ages is very similar with the other transition countries. Due to the National Burden of Diseases Report both communicable and non-communicable disease increase as the population ages, while injury rates decline after 60-69 years of age. The fact that increased disability in older ages may limit their movability and decrease the risk of injury as they do not go outside, etc. and this may probably decrease injury rates (10). Non-communicable diseases which contribute to disease burden among aged population are cardiovascular diseases, diabetes mellitus, falls, osteoporosis, pain, stroke, cancer, dementia, depression, visual and hearing deficits, polypharmacy, disability, etc. are among major diseases in the older population. Besides, ageism, abuse, and such social deficits in the changing population can be among prior issues (11, 12).

Among social, economic, cultural, demographical determinants, gender plays crucial role in ageing process and many differences in the health/disease patterns of two sexes occur. Women live longer than men in this century and disease patterns differ according to the

country development status. In developed countries; heart disease and stroke, cancer-lung and breast, diabetes and nutritional problems-anaemia/obesity, chronic disabling conditions-arthritis/osteoporosis, multiple conditions, minor conditions, sensory impairment (hearing loss), mental illness-depression/dementia are prevalent. In developing countries, heart disease and stroke, cancer–cervical, communicable disease-tuberculosis/pneumonia, diabetes and nutritional problems-anaemia/obesity, chronic disabling conditions-arthritis/osteoporosis, multiple conditions, minor conditions, sensory impairment (poor vision caused by cataracts), mental illness - depression/dementia are more frequent. Recommendations of wellbeing with gender perspective basically are; national political measures should be developed and applied. These should influence the individual, familial and social responsibilities, and the participation of women in working life and decision mechanisms should be supported (13).

**Geriatric syndromes**

These situations are called syndromes to emphasize that the combined manifestations are related to a large number of factors. Geriatric syndromes are difficult to understand due to the complexity of the multiple factors and the synergistic effects of the various risk factors. In recent years, clinicians and researchers have shown increasing interest in these syndromes. Geriatric syndromes such as frailty, delirium, urinary incontinence, dizziness, falls, sleep problems, malnutrition, pain, self-neglect are multifactorial, and associated with substantial morbidity and poor outcomes in clinical practice. They are highly prevalent in older adults, especially frail older people. Nevertheless, the concept of central geriatric syndrome has remained poorly defined (14).

**Incontinence**

Urinary incontinence (UI) is a component of geriatric syndrome and increases treatment and care costs. It needs to be recognized and treated. This condition also has significant predictive value for functional limitation in older persons. The rate above the age of 80 was found to be 19.1 (mostly urge and functional incontinence). Frailty is more common in UI patients (60.7 per cent vs. 32.3 per cent, $p<0.001$). UI is also associated with poor physical function, poor cognitive function, higher incidence of depressive symptoms, poor nutritional support, polypharmacy, and a high stool incontinence rate. Risk factors for UI are older age (generally >65 years), impaired function, mobility or cognition, high BMI, dementia, and the use of physical restraints (15). To determine the prevalence of UI among older women, risk factors, and the effect on activities of daily living (ADLs), a study was conducted in family health centres located in a city in eastern Turkey. The study population consisted of 1094 women age 65 and older chosen with a simple random sampling method. The inclusion criteria were 65 years and older, female, and not diagnosed with mental or emotional diseases or conditions that obstruct communication. Data were collected in face-to-face interviews with the Questionnaire and Daily Life Activities Data Form created by the researchers based on the Roper, Logan, and Tierney model. The prevalence of UI in women age 65 and older was 51.6 per cent, and the most common type was urge incontinence. The number of births, number of abortions, age at last birth, and home births affected the development of UI. In addition, body mass index, constipation, urinary tract infection, cough, hormone replacement therapy,

genital prolapse, cystocele, urogenital surgery, nocturia, and daily urine output were determined to be risk factors. Among the ADLs, 13.7 per cent with UI reported that they had fallen when getting up from the toilet, 34.3 per cent had experienced a sense of shame, 45.8 per cent avoided coughing, and 46.5 per cent restricted fluid intake. Prevalence of UI in women age 65 and older was high, and the most common was urge incontinence (16).

Many older women are hesitated to initiate discussions about urinary symptoms and their UI. To determine the prevalence of occult UI in outpatient older women and to evaluate its association with other geriatric conditions, 100 female patients 65 years and older were assessed at the geriatric outpatient clinic. The validated form of the Turkish version of the International Consultation on Incontinence Questionnaire-Short Form was used to evaluate UI and quality of life. Comprehensive geriatric assessment including activities of daily living, instrumental activities of daily living, mini mental state examination and geriatrics depression scale was performed. The number of falls, comorbid conditions and number of medications were noted. The association between UI and geriatric domains were evaluated with logistic regression analysis. A total of 100 patients were evaluated, 64 of them included in the study. The median age of patients was 72.5 and the rate of UI was found 40.6 per cent. The association between UI and quality of life, performance status and comorbidity was found statistically significant. Half of the patients with UI believe that it is part of normal ageing and no definite treatment is available. The researchers found that, occult UI is a significant problem in older women that inversely affecting the quality of life. The study suggests that awareness and education regarding incontinence should be increased among older patients and screening of UI is an important part of the geriatric assessment. The evaluation and management of functional status and comorbid conditions should be the initial step during incontinence management in older patients (17).

**Sleep disorders**

Common causes of sleep disorders (SD) may include periodic limb movements, restless legs syndrome, sleep-related breathing disorders such as apnoea, illness, pain, nocturia, dementia and alcoholism. Depression is the most significant cause of insomnia. The prevalence of SD is influenced by environmental factors. A study aiming to investigate the prevalence of SD and its sociodemographic and clinical correlates in a general population-based survey in Turkey was conducted. This population-based study included 4758 subjects among 5021 who participated in the Turkish Adult Population Epidemiology of Sleep Disorders study. Questionnaire items evaluating insomnia were adapted from the International Classification of Sleep Disorders II and the DSM-IV-TR. Subjects with restless legs syndrome were excluded. Insomnia was found to be associated with older age, lower income level, time spent watching television, tea consumption in the evening and smoking status. In respect to other medical disorders, SD was significantly associated with the presence of hypertension, diabetes and heart diseases after the adjustment for relevant risk factors for each disease, across all age and sex groups. SD was found to be a major health problem in our population, affecting subjects in the working age group and those of lower socioeconomic status. It should especially be screened in patients with chronic diseases. A relatively low proportion of insomnia diagnosed

as a SD suggests that this condition and its clinical correlates are possibly under-recognized (18).

**Pressure ulcer**

A pressure ulcer (PU) is defined as a localized damage to the skin and underlying soft tissue usually over a bony prominence. It can also be related to a medical or other device and usually occurs as a result of intense and/or prolonged pressure or pressure in combination with shear. Risk assessment is important for prevention. Extrinsic risk factors are: pressure, friction, shear, chemical effects of moisture, urine, and stool. And intrinsic risk factors are: dermal thickness, subcutaneous adiposity, collagen tensile strength, and skin elasticity all decrease with ageing; nutrition and hydration; conditions associated with immobility, impairment of sensation and reduced level of consciousness. PUs are common in nursing homes, hospitals and especially intensive care units worldwide. They create an important public health problem for older persons, especially in developed countries. The prevalence in Europe is 8.3 per cent to 23 per cent (19). Ageing leads to decreased skin elasticity, blood flow, subcutaneous fat tissue and cell regeneration rate, increasing the risk of PUs. The addition of immobilization, malnutrition, UI and obesity facilitate development further (20).

Multiple pressure ulcer (PU) risk assessment instruments have been developed and tested, but there is no general consensus on which instrument to use for specific patient populations and care settings. The validity of the Turkish version of the Risk Assessment Pressure Sore (RAPS) instrument for use in intensive care unit (ICU) patients was studied using a convenience sample of 122 patients consecutively admitted to an ICU unit in Turkey. The incidence of PUs in this population was 23 per cent. The majority of ulcers that developed were Stage I. Internal consistency of the RAPS tool was adequate. In this population of ICU patients, the RAPS scale was found to have acceptable reliability and poor validity (21). Another study was performed to determine the impact of an educational intervention on the incidence of stage II PUs in adult patients in ICUs in a Turkish medical centre. This was a prospective study of patients admitted to ICUs. Subjects were assessed using the Braden Scale for Predicting Pressure Sore Risk to determine the risk for developing a PU. Educational intervention was employed: Intervention included education of ICU nurses about PU prevention and risk assessment; and following the educational intervention and implementation of the PU prevention protocol in all ICUs, data were collected for study period II. The sample comprised 186 patients admitted to critical care units of a Turkish medical centre. Ninety-three subjects participated in a pre-intervention comparison group, and 93 subjects participated in an intervention group. Data were collected using a demographic and clinical data form, a nursing intervention checklist, and the Braden Scale for Predicting Pressure Sore Risk. Stage II PUs were observed in a total of 50 patients for the overall sample. The most common site was the sacrococcygeal area. The authors concluded that education regarding preventive care can be effective in reducing the incidence of PUs in the ICU setting (22).

**Frailty**

The most common definition of frailty is an age-associated, biological syndrome characterized by decreased biological reserves, due to dysregulation of several physiological systems, which puts an individual at risk when facing minor stressors, and is associated with poor outcomes (i.e., disability, death, and hospitalization) (23). Common signs and symptoms are unintentional weight loss, muscle weakness, fatigue, slow walking speed, and progressive functional decline. Frail older adults are among the most challenging for medical management (6).

Certain authors only define frailty with physical parameters as a decrease in muscle power and endurance, physical activity and balance. Characteristics include decreased endurance, balance and motility, slower performance and less activity, together with wasting and possibly decreased cognitive function. Frailty can be recognized easily by the clinicians with its high number of clinical manifestations (24). In community-dwelling older adults the prevalence of frailty varies from 4.0 per cent to 59.1 per cent (25). A study was conducted in Turkey to present the characteristics, prevalence, and related factors of frailty in older adults in our country, including 1126 individuals over 65 years of age from 13 centres. Frailty was evaluated using the *Fried Frailty Criteria*, and patients were grouped as frail, pre-frail, and non-frail. Nutritional status was assessed with Mini Nutritional Test, psychological status with the Center for Epidemiological Studies Depression Scale-CES-D, and additional diseases with the *Charlson Comorbidity index*. Approximately 66.5 per cent of the participants were between 65 and 74 years of age and 65.7 per cent were women. Some 39.2 and 43.3 per cent of the participants were rated as frail and pre-frail, respectively. The multinomial logistic regression analysis was used to determine the factors associated with frailty. It was observed that age, female gender, low education level, being a housewife, living with the family, being sedentary, presence of an additional disease, using 4 or more drugs/day, avoiding to go outside, at least one visit to any emergency department within the past year, hospitalization within the past year, non-functional ambulation, and malnutrition increased the risk of frailty ($p<0.05$). Establishing the factors associated with frailty is highly important for both clinical practice and national economy. This is the first study on this subject in our country and will provide guidance in determining treatment strategies (26).

Another study was designed as a prospective, cross-sectional study, and was conducted in a rural area of Kars Province in Turkey. A total of 168 older adults (≥65 years old) from 12 central villages were included in the study. The *Fried Frailty Criteria* was used to assess the frailty of the participants. In addition to frailty, the physical, social, and mental status of older adults was also examined. The prevalence of frailty in this rural area of Turkey was 7.1 per cent. The study group ranged in age from 65 to 96 years and 53.6 per cent were female. There was a statistically significant relationship between frailty and older age, lower education level, lower economic level, co-morbidities, polypharmacy, diabetes, chronic obstructive pulmonary disease, gastric disease, arthritis, generalized pain, benign prostatic hyperplasia, urinary incontinence, auditory impairment, impaired oral care, caregiver burden, impaired cognitive function, depression, or a lack of social support (social isolation). The author believed that this study will contribute considerably to understanding the health status and

needs of older adults in Turkey and the health problems of this population as well as to planning the development of public health and geriatric services based on regional needs (27).

Sarcopenia is age related loss of muscle mass and strength seen together with decreased myosin count and muscle cell protein content. Ageing leads to decreased contractile rates of muscle fibres, myosin concentration and force per unit area. Sarcopenic muscle weakness and loss of function are major components of frailty in geriatric syndrome (28). Therapeutic interventions include nutritional supplementation, exercise training, comprehensive geriatric assessment and management by consultation services, and hormonal or anti-inflammatory interventions (6).

**Delirium**

Delirium is a clinical diagnosis that is usually unrecognized and easily overlooked. And can be defined as an acute decline in attention and cognition, is a common, life-threatening and potentially preventable clinical syndrome among persons who are 65 years of age or older. The development of delirium often initiates a cascade of events culminating in the loss of independence, an increased risk of morbidity and mortality, and increased health care costs (29). Recognition requires a brief cognitive screening and astute clinical observation. Key diagnostic characteristics are acute onset and fluctuating symptoms, and impaired cognition and consciousness level. Supportive clinical characteristics can be listed as disruption of the sleep-wake cycle, sensory disturbances (hallucinations or illusions), delusions, psychomotor disturbances (hypo-or hyper-activity), inappropriate behaviour and emotional instability (30).

A study was conducted aiming to determine the prevalence of delirium in older patients hospitalized at a university hospital, and to determine the recognition rate by hospital staff during hospitalization. The study included 108 consecutive patients aged ≥ 65 years that were hospitalized in the medical and surgical inpatient departments at Başkent University Hospital, Ankara, Turkey. All the patients were evaluated using the Mini Mental State Examination (MMSE) upon admission and Confusion Assessment Method (CAM) on a daily basis during hospitalization. Written documents and consultation requests from psychiatry and/or neurology departments were reviewed for recognition of delirium by hospital staff. Among the 108 patients in the study, delirium was noted in 18 (16.7 per cent) during their hospital stay. Consultation from psychiatry or neurology departments was requested for 5 of the 18 patients, only 1 with a delirium diagnosis, indicating that 17 of the cases (94.4 per cent) were not recognized by their primary physicians. Delirium non-recognition rate in hospitalized older patients was very high and they think that hospital staff must be trained to recognize the symptoms of delirium and identify high-risk patients (31).

Altered mental status (AMS) is a challenging diagnosis in older patients and has a large range of etiologies. A study was performed to investigate the nature of such etiologies for physicians to be better aware of AMS backgrounds and hence improve outcomes and mortality rates. This prospective observational study was conducted at 4 emergency departments. Patients 65 years and older who presented to the emergency department with acute AMS (≤1 week), with symptoms ranging from comas and combativeness, were eligible for inclusion in this study.

The outcomes, etiologies, Richmond Agitation and Sedation Scale scores, and the presence of delirium were recorded. Among 822 older patients with AMS, infection and neurological diseases were the most common etiologies. The hospital admission and mortality rates were 73.7 per cent and 24.7 per cent, respectively. The mortality rate rose if AMS persisted for more than 3 days. Delirium was observed in 55.7 per cent of the patients; these individuals had higher durations of AMS than those without delirium. Notably, delirium was observed in more than two-thirds of neurological patients. The results of this study showed that, most common causes of AMS were infection and neurological diseases. Delirium was associated with AMS in nearly half the patients. Moreover, the rates of hospitalization and mortality remained high (32). Prevention and early diagnosis are essential. Primary prevention of delirium with non-pharmacologic multi-component approaches have gained widespread acceptance as the most effective strategy. These include reduction of psychoactive drugs, early mobilization, therapeutic activities, ensuring high-quality sleep and supplying vision and hearing aids.

**Polypharmacy**

Polypharmacy (PP) increases the risk of geriatric syndrome and negatively affects the morbidity/ mortality rates. Some sources even include PP in the geriatric syndrome group. Patients using multiple drugs had low compliance with the treatment and high mortality rates and consultancy provided by a pharmacist over the phone increased compliance with the treatment and lowered mortality rate. Inadequate or incomplete information increases the risks of drug interactions and side effects. Adverse drug reactions associated with inappropriate use of drugs lead to many problems. PP appears as one of the significant reasons for hospitalization (33). International research shows that PP is common in older adults with the highest number of drugs taken by those residing in nursing homes. Nearly 50 per cent of older adults take one or more medications that are not medically necessary. It has clearly been established that there is a strong relationship between PP and negative clinical consequences. Moreover, well designed inter-professional (often incuding clinical pharmacist) intervention studies that focus on enrolling high risk older patients with PP have shown that they can be effective in improving the overall quality of prescribing with mixed results on distal health outcomes (34). PP in older persons also complicates therapy, increases cost, and is a challenge for healthcare agencies. The incidence of drug interactions and adverse reactions increases exponentially with the increase in polypharmacy. PP was correlated with various factors including age, sex, marital status, number of children, status of retirement, and presence of chronic medical conditions but not educational status in a study evaluating 1430 older persons in different geographical regions of Turkey (35). The general practitioners are frequently involved in the care of older patients with painful problems. The GPs have observed that NSAIDs, antibiotics, vitamins and mineral preparations, cardiovascular system drugs were used by the patients without prescriptions (36).

Not only the PP but safety of drug use, which is defined by the maximum efficacy, safety of drug and its convenience for the patient and cost-benefit relation, is significant for all age groups as well. However, this is much more so for geriatrics. Therefore, the physicians and the other health professionals working in this chain should pay great attention for safe use of

drugs in the older group. Studies are needed to find the most effective way to reduce PP, especially in the frail elder population, and to quantify the real advantages of simplifying their drug regimens in terms of improved quality of life (37). Another issue is herbal medicine and a study was conducted to evaluate the prevalence and documentation of the use of herbal remedies by individuals aged ≥ 65 years and to evaluate possible adverse reactions and herb-drug interactions. Data were collected from 1418 participants (age range 65-95 years) via interview-based questionnaires. The prevalence of herbal use among older adults was 30 per cent. As much as 64 per cent used more than one prescription medication, and polypharmacy was reported by 47.5 per cent of participants. Some participants used herbal products that are known to interfere with conventional drugs used to treat chronic diseases, such as cardiac glycosides, diuretics, anticoagulants, antidiabetics, anticonvulsants, and monoamine oxidase inhibitors. The authors concluded that, to ensure good patient care, it is important that healthcare professionals are aware of possible health complications associated with the concomitant use of herbs and medications (38).

**Malnutrition**

An important health problem which increases with ageing is malnutrition. There are many factors associated with malnutrition in older persons, including demographic, physical and psychosocial factors, eating and oral problems, low functional capacity, living alone, dementia and depression. It causes not only deterioration in the quality of life and functional capacity but also increases the infection risk, length of hospital stay and poor healing. Moreover, it is a predictor of morbidity and mortality. Therefore, it is important to identify older individuals nutritionally at-risk or who are malnourished in early stages of ageing (39, 40). Age related decline in food intake is associated with various physiological, psychological and social factors. Poor nutritional status is found in 44 per cent of the patients and malnutrition rate is higher among those with subsequent hospitalization. Patients with poor nutritional status have lower blood haemoglobin, serum total protein and albumin, and revealed more chronic diseases and geriatric syndromes. Patients with depression, fecal incontinence, decreased cognitive function and functional dependence show poor nutritional status. Malnutrition risk show positive correlation with the number of existing geriatric syndromes. Depression, dementia, functional dependence and multiple co-morbidities are associated with poor nutritional status (41). Nutritional assessment is important to identify and treat patients at risk, the Malnutrition Universal Screening Tool being commonly used in clinical practice. The Mini Assessment and Malnutrition Risk Scale can also be used. Management requires a holistic approach, and underlying causes such as chronic illness, depression, medication and social isolation must be treated. Patients with physical or cognitive impairment require special care and attention. Oral supplements or enteral feeding should be considered in patients at high risk or in patients unable to meet daily requirements (42).

**Pain**

The prevalence of pain increases with ageing (43, 44). Epidemiologic studies have reported especially increased chronic pain prevalence in older persons with a rate of 50-75 per cent. Older persons are an important risk group regarding pain due to chronic degenerative

changes and multiple comorbidities. Common pain syndromes should be diagnosed correctly in this group. Poor pain control causes functional limitation, immobility/loss of independence, depression and decreased life quality. The early and efficient diagnosis and treatment of pain are therefore extremely important. Pain should be accepted as a geriatric syndrome. Chronic/untreated pain causes functional limitation, depression and increased dependence among other problems and these can then make pain treatment more difficult. The result is multi-system interaction and a vicious cycle of poor outcome (45). The effects of demographic and clinical determinants on pain and the possible risk factors that disrupt quality of life were evaluated. The design of this research was a prospective study performed in tertiary care hospital-based physical medicine and rehabilitation departments. A comprehensive geriatric pain assessment (Geriatric Pain Scale, GPS) and health-related quality of life (HR-QOL) assessment (Nottingham Health Profile, NHP) were performed. Of the 275 patients, two hundred seventy-four patients (99.7 per cent) had various levels of pain. Analyses showed that for the total GPS score, female gender, lower education, and economic status were significant determinants of higher levels of pain and the NHP, GPS, Self-Reported Disability Index, and Geriatric Depression Scale were significant determinants of poorer HR-QOL. There was a high prevalence of pain and being female, having low income, having low social support, having a higher rate of disability with related multiple comorbidities, and depression as related factors of HR-QOL. Strengthening these negative predictors of HR-QOL might enhance the efficiency of pain therapies in this population (46).

The increased prevalence of pain in later life may be associated with age related factors, physiological changes and disorders in bones and muscles or comorbid diseases and conditions, such as diabetes, cancer, stroke, and surgery (47, 48). The most common musculoskeletal disorders in the aged group are degenerative, rheumatologic, and neurologic diseases (i.e. neurological and musculoskeletal diseases). These lead to pain, decreased range of joints motion and muscular strength, as well as functional disability (49). Chronic pain can be nociceptive, neuropathic, or mixed (50). The conditions, which cause neuropathic pain, are more common in older people (51). Neuropathic pain in the older population is important because it restricts functional activities, decreases activities of daily living, and can eventually lead to disability (52, 53). Ability to cope with pain in older patients requires identifying the types and causes of pain and its prevalence. In a cross-sectional multi-centre study in Turkey, we aimed to determining the prevalence of neuropathic pain in older patients and the relationship of neuropathic pain with socio-demographic and clinical factors. Thirteen centres in different regions of Turkey. The study included 1163 individuals over age 65. Physicians conducted face-to-face interviews to obtain clinical and socio-demographic data and The Douleur Neuropathic 4 (DN4) and The Self-completed Leeds Assessment of Neuropathic Symptoms and Signs (S-LANSS) pain scales were used to assess neuropathic pain. Patients who scored ≥4 or ≥12 on the DN4 and S-LANSS scales, respectively, were determined to be experiencing neuropathic pain. Neuropathic pain was found in 52.5 per cent of the patients in this study. Approximately 67.5 per cent of the patients with neuropathic pain were in the 65-74 age group, and 72.1 per cent were females. Of the patients who were experiencing neuropathic pain, 48.4 per cent were graduates of primary school, 91.6 per cent engaged in very little or no physical activity, and 56.7 per cent were taking four or more medications. Neuropathic pain prevalence was 52.5 per cent in older persons aged 65-plus who had

presented with pain complaints. Neuropathic pain was more frequently seen in women, patients with comorbidities, those with poor levels of ambulation, those using walking aids, and those using multiple drugs. Interrogating older persons for neuropathic pain seems important for effective treatment (54).

**Osteoporosis**

Osteoporotic hip fractures have a profound impact on the physical health and psychosocial wellbeing of older patients. The incidence of hip fractures in Turkey increased markedly. The MEDOS study in 1988/1989 reported that men and women from Turkey had exceptionally low rates of hip fracture. The FRACTURK study estimated to evaluate current and future hip fracture risks and the prevalence of osteoporosis in Turkey. Hip fracture cases in 2009 were identified from interviews of a population-based sample of 26,424 residents aged 50 years or more in 12 different regions of Turkey and in two hospital surveys. Bone mineral density was evaluated by DXA in an age-stratified sample of 1,965 men and women. Hip fracture incidence in the community-based survey was similar to that in the hospital survey. The age-specific incidence in men and women was substantially higher than that reported for 1988/1989. At the age of 50 years, the remaining lifetime probability of a hip fracture was 3.5 per cent in men and 14.6 per cent in women. In 2009, there were approximately 24,000 hip fractures estimated in Turkey, 73 per cent of which were found in women. Assuming no change in the age- and sex-specific incidence, the number of hip fractures was expected to increase to nearly 64,000 in 2035. The prevalence of osteoporosis at the femoral neck was 7.5 per cent and 33.3 per cent in men and women, respectively, aged 50 years or more. The authors concluded that, although Turkey is still among the countries with low hip fracture rates in Europe, the incidence has increased markedly in the last 20 years (55).

In patients with osteoporosis may spread to a wide range of co-morbidities often adversely affecting the treatment of osteoporosis. Physicians and patients primarily focus on systemic co-morbidities and they can easily be able to neglect or underestimate the diagnosis and treatment of osteoporosis which is initially characterized as a clinically silent disease. Patients with one or more co-morbidities should be followed strictly in terms of primary or secondary osteoporosis and detailed risk calculation should be done. Not only the preventive measures, but early diagnosis and effective treatment should be taken account seriously as well. Treatment recommendations for the patients with several co-morbidities must employ strategies taking patient compliance into account (56).

**Falls**

Falls are a major health problem and often cause serious injuries (especially fracture of proximal femur) which leads longstanding pain, functional impairment, disability and mortality. Incidence of fall is increasing strongly with age and 30 per cent of older persons have at least one fall worldwide (57). The cause can be biological, medical, environmental, social or behavioural causes. Simple preventive measures are arranging the house and living environment, less polypharmacy, using Vitamin D supplement, use of support and orthoses can be used to avoid the related immobility, morbidity, and becoming dependent.

Determining the factors to fall risk seems essential especially for physicians for appropriate treatment and rehabilitation. Previously numerous factors were reported as associated with fall risk among older persons. Increased age, muscle weakness, balance and gait problems, poor vision, cognitive and functional impairment and other comorbidities such as dementia, depression are risk factors for falling in later life (58, 59). Also medication, alcohol use, postural hypotension, fall history, acute or chronic illness, use of assistive devices, frailty / deconditioning, environmental factors and fear of falling are the other factors. Whereas risk factors for serious fall injury are: older age, white race, decreased bone mineral density, decreased body mass index, cognitive impairment. In the literature it has been reported that 33 to 64 per cent of falls took place in the home. But there are studies reporting that falls are frequent outside the home. It may be because of the environment in our country being not suitable for older people. Yeşilbakan and Karadakovan reported that 42.6 per cent of older people fell while walking down the street, 36.2 per cent fell because of dizziness, and 34.0 per cent fell because they tripped on something and it was observed that older individuals fell more in the afternoon. They also reported that 31.8 per cent of older people who fell sustained fractures (60). Akdeniz et al. indicated that fractures and serious soft tissue injuries were observed in 10 to 25 per cent of older people who fell (61). To investigate the association between fall and demographic, clinical and psychosocial characteristics amongst older people a study was conducted in 11 different physical medicine and rehabilitation clinics in Turkey. Two hundred seventy-five patients who were 65 or older were included into this study. The history of fall in the last year were obtained. The demographical and clinical properties, cognitive function, quality of life, disability and level of depression were noted. Sixty-five patients had fall experience in the last year. Falls are common in patients with weakness, fatigue, dizziness, swelling in legs and subjects with appetite loss. The fallers had lower functional status than those who did not fall. Fallers had more depressive symptoms than their peers. Quality of life, especially physical activity, energy level and emotional reactions subgroups were different. Disability and mental status were similar in groups. The authors stated that; falls are common in older patients and a variety of factors affect the situation. Musculoskeletal problems, functional and social status might be some of the contributors (62).

**Comprehensive evaluation**

An old patient should have received the correct diagnosis and treatment and should have been assessed regularly and thoroughly for improving their quality of life and functional capacity. It is agreed that the problems emerging with ageing should be dealt with as a whole and the comprehensive geriatric evaluation should be used when approaching older persons. An interdisciplinary approach gives the chance to evaluate older persons not only in medical terms but also in psychosocial and functional terms as well (1). Comprehensive geriatric assessments would be useful to identify these geriatric syndromes, especially for those older than 85. It is recommended to use geriatric assessment tools such as; Mini-Mental State Examination, functional and instrumental (higher level functional) activities of daily living, gait and balance, visual acuity, depression, delirium, fall risk and skin breakdown. It is clearly stated that, the future care of older persons rests strongly on the ability of primary physicians and advanced care nurses to recognize geriatric syndromes early and initiate a care system that will prevent disability. It is hoped that utilization of these rapid screening approaches for

early recognition of geriatric syndromes will reduce the development of disability in older persons (63).

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# Home Care

**Zahide Tunçbilek[1] and Sevilay Senol Çelik[2]**

***Abstract.*** Home care is becoming so very important due to rapid growth of the aging population, growth in healthcare expenditure, advances in medicine and technology, short length of hospital stay and increase in outpatient surgery. Home care services are continuously, organized and comprehensive preventive, curative and rehabilitative services given by the multi-professional team to the people and their families. Home health care services are provided by the Ministry of Health, other government institutions and organizations, municipalities and private sector for older persons and their families in Turkey. Each organization has its own established procedure and processes that not be compatible with other organization's workflow. As population in Turkey getting older demand for home care services is increasing in recent years. Therefore, there is a need to develop new policies to improve home care services so as to maintain post-hospital care of older persons in Turkey.

***Keywords***: home care, community services, older person, ageing, Turkey

## Introduction

Due to the results of globalization, the quality of life for many populations of the world is improving. Many of the changes have come about through developments in science and technology, a decrease in mother, infant and child mortality, improved and balanced nutrition habits, increases in education levels, declines in the frequency of infectious diseases and improvements in healthy living habits. These changes have increased life expectancy and society's members live longer (1). In keeping with the global demographic trend, Turkey is also experiencing an increase in its aging population (2, 3). According to the TUIK (Turkish Statistical Institute) data, the percentage of people over the age of 65 in 2015 in Turkey was 8.2 per cent (4). Due to rapid growth of the aging population, growth in

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healthcare expenditures, advances in medicine and technology, shorter hospital stays and an increase in outpatient surgery and minimally invasive prodecures, home care services have become very important (5). Factors such as increases in the incidence of chronic diseases and disabilities due to functional and physical impairments of older persons, difficulty in carrying out activities of daily living (ADLs), older persons become dependent on their family and others to receive home care (6). This chapter aims to give an overview about home care services given to older persons in Turkey.

**The scope of home care services**

Home care is a care model which includes psychosocial, physiological and medical support services. Home care services are continuous, organized, comprehensive, preventive, curative and rehabilitative services given by a multi-professional team to the people and their families who need them. Home care services comprise the following services (7, 8, 9, 10, 11, 12, 13):

- Nursing services include care and training given by expert nurses at home, regularly or periodically.
- Health support services include services which can help the individual to move and live independently at home. These include psychotherapy, physical therapy, foot care, speech and occupational therapy.
- Day/Night care includes services given to fulfill the need of care of a dependent individual.
- Self-care services include services which do not require professional nursing skills (grooming, bathing, feeding, etc.). These are administered to meet the many needs of the individual who has difficulty in performing ADLs or is dependent.
- Home help service is a service which aims to increase the quality of life of individuals who live in their own home and need regular care and follow up through the many services given at home. These services include housecleaning, clothes washing and ironing, obtaining medications, doing work outside the home and psychological support.
- Social support services help the individual to go shopping and to appointments, engage in social activities, visit friends and to pay the bills.
- Meals-on-wheels services deliver hot meals, permanently or temporarily, to homes of individuals who cannot prepare or cook their own meals. This service usually serves hot meals three times a day.
- Consultancy services include suggestion and consultancy services related to the individual's rights and responsibilities, and requirements and complaints.
- Respite care is temporary care service given to families with a disabled or older person. It is intended to provide family members with a chance to rest from their usual responsibility of caregiving. Nurses and other professionals who are specialized in the field of disabled and older person care provide this service.
- Handyman services include repairing of doors and windows, electrical problems, plumbing issues and changing the locks etc.

**Delivery of home care services in Turkey**

The first legal regulation on home care and older persons' health was enacted in Turkey in 1961 as the 'Law on the socialization of health services'. After establishment of the General Directorate for Social Services in 1963, the government planned a program which would provide various services for older persons (14). Major healthcare reforms in Turkey began in 2003 by establishing the Healthcare Transformation Program (15). In the early years of the transformation program, the Ministry of Health (MoH) enacted the 'Regulation on the delivery of home care services' on 10 March 2005 (13, 15). According to this regulation, Home Care Services (HCS) were defined as 'the provision of healthcare and follow-up services including rehabilitation, physiotherapy and psychological therapy by the medical team in accordance with the recommendations of a physician in the environment where sick people live with their family' (15). HCSs are provided by formal or informal caregivers to meet the daily medical and personal needs of older persons and their family. Informal caregivers are usually family members or unpaid relatives. Formal caregivers are professional members who deliver health care and self-care at home (10). The aim is to help older persons continue with a certain level of independence with the ADLs in their own homes. Caregivers strive to maintain older persons' health, function and comfort at the highest level (7, 8).

There are various government and non-government organizations that provide home health care services to older persons and their families in Turkey. Home health care services are provided by the Ministry of Health (MoH), other government institutions and organizations, municipalities, and the private sector. Each organization has its own established procedures and processes that may not be compatible with other organization's work culture. The usual process requires that a social worker, doctor or nurse at a MoH facilty would assess the needs of the individual who is requesting services, and a home visit by one or more of the various possible care providers would take place (1, 16, 17, 18, 19, 20). The municipalities of big cities usually take an active role in providing home health care services for older persons by using home health care teams. Home health care teams consist of physicians, nurses, social workers, physiotherapists, and other needed health care staff. Older people who need home health care call the municipalities' call center and request an appointment. Thereafter, a social worker visits the person's home and assesses which services are needed. Based on this needs assessment report, a decision is made as to which members of the home health care team are needed. Then the team visits the callers at their homes and gives needed care (1, 16, 17, 18, 19, 20).

In the Turkish health care system, family physicians and nurses play a significant role in meeting primary care and curative care needs of the citizens at the primary level. All citizens must choose their family physicians based on where they reside. Family physicians and family health staff including nurses, midwives or emergency medical technicians may, at times, visit their patients at home if they are incapacitated and need care. Among family physicians it is common practice to visit the very old and patients confined to bed at their homes. However, due to resource limitations these visits do not occur on a regular basis and are not well coordinated with the services provided by other home health care teams of municipalities and MoH institutions (17,18,21).

Home health services include health care at home and training and consultancy services for caregivers and family members. These services provide information to caregivers on how to protect their own physical and mental health, how to handle the problems they will encounter, and what they can do to ensure a healthy ageing. Those using home health services receive treatment, nursing care, physiotherapy, and psychological counseling at their home. Nursing care services include wound care, inserting and removing urine catheters, inserting intravenous catheters, giving injections, patient education, monitoring of vital signs, screening sugar levels, cholesterol and anemia testing etc. Home physiotherapy and psychological counseling services are oriented towards older persons with physical challenges. These include paraplegia and hemiplegic cases which are treated by a physiotherapist; older persons needing psychological counseling are given psychotherapy services by a psychologist (1, 16, 17, 18, 19, 20).

Although various government and non-government organizations provide home health care services, the nationalized health care system in Turkey usually does not provide extensive care for older people who have a disability or who are terminally ill. Family caregivers usually meet these needs. Home care services are usually provided by private agencies but are limited in terms of quantity. They are also expensive, and are not covered by government health insurance.

**Research in Turkey**

Home care services have become an increasingly important aspect of healthcare worldwide. Advances in medicine and technology, growth in the older population, the increasing prevalence of chronic diseases, rising hospital costs, and shorter hospital stays have contributed to the rising need for home healthcare (5, 15). HCS are given to older persons, disabled, patients with chronic disease and people who are recovering from illness (22). The study reviewed by Karahan and Guven and conducted by Aksayan and Çimete in 1998 showed that 62.9 per cent of older persons in Turkey preferred to receive home care (10). Yet the study by Dogan and Degerin found that 92 per cent of older persons wanted to receive care at home (23). Another study which was reviewed by Karahan and Guven and carried out by Golgecen and Tumerdem aimed to determine the home care needs of older persons. Its findings revealed that older persons had difficulties in performing the following instrumental ADLs: 44 per cent, preparing meals; 35.9 per cent, shopping; 25.4 per cent, clothes washing; 25.4 per cent, taking pills on time and right dose; 20.3 per cent, doing housework; 12.4 per cent, managing their money, 11 per cent, using the phone. Challenges with basic ADLs were: 8.5 per cent, urinary and fecal incontinence; 6.5 per cent, bathing independently; 2.8 per cent, getting dressed independently; 1.4 per cent, toileting; and 0.3 per cent of older persons had difficulties feeding themselves independently (10). In the study conducted by Subaşı and Öztek, it was found that home care services were provided to 8.7 per cent of the households. More than half of people (62.5 per cent) who received home care service were female and 42.3 per cent of them were older than 65 years. Fewer than one in five of the study population (15.4 per cent) were receiving home care after surgery, 15.4 per cent were receiving care because of stroke and cerebrovascular diseases, 9.6 per cent had cancer, 7.7 per cent were diabetic and 7.7 per cent had cardiovascular diseases. Only one 86-year-old adult was followed up by the

physiotherapist. The most common intervention performed during home care services was giving oral medication (81.4 per cent). A majority of adults (81.7 per cent) were found to be partly or completely dependent on performing daily living activities. Fewer than half of them (29.6 per cent) were completely dependent in doing shopping and using transportation, 19.7 per cent were completely dependent in bathing and 18.3 per cent needed help in getting dressed (24).

Home care services include patient care, rehabilitation and personal care as well as preventive services. Administering these services requires interdisciplinary teamwork including a doctor, a nurse, a social worker, and a psychologist, etc. (13). Yoruk and colleagues conducted a study to determine the reasons why older persons (65 +) sought care and services from the home care unit (HCU) of the State hospital. They found that 23.3 per cent of older persons received health care for the diagnosis of cardiovascular diseases and hemiplegia. In the last six months, 46 per cent and 40.4 per cent of the bedridden older persons had used the services of the HCU respectively for only a physical examination or for laboratory tests along with the physical examination (25). Studies show that HCS are mostly provided by family members who are females and not very knowledgeable about home care (10,23). Dogan and Deger found determined that 55 per cent of older persons wanted to receive care from the same nurse, and 40 per cent of them wanted to receive care only from family members (23). Another study reviewed by Karahan and Guven determined that 89 per cent of caregivers were female, 56 per cent of them were spouses, and 84 per cent of them were not educated about home care (10). Taşdelen and Ateş performed a study to determine the needs of 177 home care patients, their primary caregivers' problems, and to analyze the burdens of care. In this study, more than half of the patients were women (63.8 per cent) and aged 76 years or older (59.3 per cent). The patients had the most difficulties in performing ADLs (96.6 per cent, shopping; 96 per cent, doing housework; 85.3 per cent, bathing; 83.1 per cent, grooming; 81.9 per cent, getting dressed; 78 per cent, using the phone, and 72.3 per cent, taking pills). Most of the primary caregivers were women who were between the ages of 46 and 64, and most of them were elementary-school graduates and housewives (22).

The scope of homecare is comprised of daily home help, personal assistance, and professional assistance. The basic target of homecare is to support the family by meeting the person's needs and to increase the functioning and quality of life of older persons (13,26). A research study performed with 45 older persons on a project named "Providing health and care service at home for senior people in need of protection" indicated that 28 older persons required medical care whereas all older persons received psychosocial care. The majority of older persons (92.9 per cent) who had requested medical care had their blood pressure, pulse and temperature taken. The other interventions performed during medical care were providing the treatment and emergency services (57.1 per cent), checking blood sugar levels, cholesterol, etc. and providing psychotherapy (35.7 per cent), injections (28.6 per cent), intravenous treatments (10.7 per cent), inserting urinary catheters (3.6 per cent), and caring for wounds (3.6 per cent). Most of older persons (91.1 per cent) received psychological and morale-boosting activities (have a talk, discuss problems about care services, walk around together, etc.) and food supply service as psychosocial care. Other services offered during psychosocial care were house cleaning (51.2 per cent), washing and ironing (42.2 per cent), cooking (24.4 per cent),

supporting self-care (bathing, hand and face washing, cutting nails, etc.) of older persons (15.6 per cent), accompanying the older person to accomplish activities of daily living such as grocery shopping, paying bills, etc. (11.2 per cent); and house repairs (6.7 per cent) (27). The study conducted by Polat et al. with 113 older persons aimed to identify the relationship between health-related quality of life, depression and awareness of home care services by older persons. Study results showed that 96.5 per cent of them had never received such services and 93.8 per cent wanted to receive services from HCS. Older persons who received HCS obtained help with daily chores such as cooking, cleaning, etc. Older persons who requested services from HCS mostly wanted to receive physical treatment/rehabilitation (90.1 per cent), measurement and monitoring of blood pressure/blood sugar (87.7 per cent), physical examination (eyes, ears, mouth, breasts, etc.) (80.2 per cent) and training in medication use (51.9 per cent). They preferred to obtain these services from physicians (92.5 per cent) and nurses (63.2 per cent) (26).

People in need of home care in Turkey can now apply for services through their family physicians, community health centers, or home-care units in hospitals (15). The study of Çatak and colleagues carried out in Burdur, Turkey defined the profile of older patients over 65 years who used home health services. The mean age of 108 of the study participants was 79.6, and 67.6 per cent were women. Nearly all of them (99.1 per cent) were dependent in doing activities outside of their home; 97.2 per cent were dependent in performing daily chores; and 95.4 per cent were dependent in cooking and shopping. Home care services provided to the older persons included medical examination and treatment (46.3 per cent), catheter insertion and wound care (14.8 per cent). Of the home care services given to older persons, 87.0 per cent were provided by the state hospital, and 3.7 per cent of these were provided by a family doctor (28). Aksoy and colleagues conducted a qualitative study to explore the views and experiences of the HCS physicians in the current system and identify the factors and challenges influencing their practice, motivations for practicing HCS, and weaknesses and strengths of the legislative background. Most physicians thought that home care could be provided to patients who are bedridden, are very old, have a chronic disease, have problems leaving the house, or do not have family support. They also expressed displeasure about the abuse of services and discordance of organization between hospitals and primary care centers. They noted that real circumstances in practice were not compatible with regulations and that cooperation and coordination between departments are necessary and important (15).

**Conclusion**

As the older population in Turkey has increased in recent years, so has the demand for home care services. Care at home is often needed for older persons with either temporary or permanent disabilities or after surgery or illness. At present, many home care services for older persons are provided by female family members who are not well educated about what is required for home care. As mentioned earlier, some government and non-government agencies do offer certain home healthcare services, yet the nationalized health care system offers only limited services for older persons with a disability or terminal illness. Private agencies offer such assistance but are limited and expensive and are not covered by the national insurance. The challenges to ensuring quality care to older persons who are fully or

semi-dependent in their needs are many as there are specific regulations governing the delivery of HCS in Turkey. Nevertheless, changes are called for in order to meet the care requirements of an ever-growing older population. Therefore, there is an urgent need to develop new policies to improve home care services for all older persons who need them.

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# Mehrotra, C.M., &. Wagner, L.S. (2019). *Aging and diversity: An active learning experience.* New York: Routledge, 579 pp. ISBN-978-1-138-64553-0

**Reviewed by Andrea Zammit[1]**

*Diversity* is a big word these days, and one that has only started gaining popularity as a research topic in itself, recently. We have been so accustomed to studying homogeneous populations that we never blinked an eye in analyzing all-male and all-White cohort studies, but reviewers flinched when the sample size was "not big enough". Emerging research is showing us that the generalizations we have believed to account across the board for everyone for this long have more complexity and depth than previously acknowledged. For example, social forces (such as gender and race/ethnicity) seem to be more powerful than genetic risk factors; and educational attainment, childhood socio-economic status (SES), and neighborhood inequality are the kind of social forces that are driving late-life disparities and contributing to Alzheimer's dementia and related disorders (ADRD). Mehrotra and Wagner have published their 3rd edition of the Book, *Aging and Diversity,* quite timely.

As they point out in their first chapter of the book, "Aging and Diversity", in the United States, individuals under the age of 18 are more ethnically diverse than individuals over the age of 60. This picture, although more evident in the United States, is a projection of a world-wide transition. However, Mehrotra and Wagner do not only talk about racial/ethnic diversity, possibly the first thing that comes to mind when we think of the term *diversity,* but they also tackle four other major areas that directly hinge upon the topic: gender, social class, rural-urban community location, and sexual orientation and identity. Interestingly, each of these areas are universal and longstanding, and yet, the importance of investigating diversity in older adults has only been recently given its overdue importance in higher institutions in America. This is directly tackled in Chapter 2, "Research Methods", where we are introduced to issues that when attempting to study effects of race/ethnicity, we overlook variables that we are not aware of. For example, within group heterogeneity is also noted to the extent that we learn that there is yet a lot of diversity to be accounted for within one ethic group (e.g. within the Hispanic community there are several diverse subgroups –

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Cubans, Porto Ricans, Dominicans, Mexicans, etc., with regards to the food they eat, the values they live by, and the culture they are immersed in). As the book progresses, the topics take on a deeper look into specific challenges that may arise in typical studies. Effects of acclimation have been rarely discussed in research studies on aging, let alone accounted for. Mehrotra and Wagner approach this topic directly, when discussing several chapters within the book, specifically Chapters 3 and 4, "Psychology and Aging" and "Health Beliefs, Behaviors, and Services", acknowledging that first-generation immigrants are a lot different than their offspring in lifestyle and psychological factors such as dietary preferences, quality of education received, prevalence of non-communicable disease, and even attitudes to aging across generations. Differences also lie within persons themselves between the time they first immigrate (holding onto practices, behaviors, and beliefs from their country of origin) and after acclimating to the new culture (integrating into and adopting new routines and habits, lifestyles, and attitudes towards self and others). This hinges upon the physiological make-up within and across racial/ethnic groups, a topic still in its infancy, but one which is multifactorial e.g. ways in which a combination of genes, evolution, and culture and immigration make some subgroups resistant or vulnerable to certain diseases, and one which could have had its own chapter in the book. Cognitive aging and diversity, also briefly tackled in Chapter 3, would have also been an interesting topic in and of itself, as the field is currently booming within this sphere, especially with regards to rate of cognitive decline and incidence of ADRD across racial subgroups and between genders.

The culmination of the book is reached in Chapter 5, "Inequalities in Health", where the authors present a framework which helps us understand and visualize how integral factors of gender, race/ethnicity, SES, rural/urban living, and sexual orientation affect health behaviors, access to health care, environment and occupational exposure, which in turn affect health outcomes. Mehrotra and Wagner also take care to note that the immigration experience is not equal across all of those who immigrate. While different subgroups experience immigration for different political, sometimes forced (war or natural disaster), reasons, other subgroups make the transition to progress further in educational and occupational domains, leading to the healthy immigrant effect. All these factors in turn affect their (and their offspring's) educational and occupational opportunities. While individuals who make a choice to leave their country tend to be a very selective and elite group in terms of health and education, and who continue to strive for opportunities for themselves and their offspring, individuals who have been forced into immigrating, may not have the same qualities and consequently, the same opportunities. Furthermore, immigration is a complex phenomenon, which may affect individuals from within the same family differently. For example, the experience for an adult male who moves from his home country to another country to further his career, may be different from that of his wife and children who were uprooted from their home. It may be altogether different for any parents who may make the move to join their offspring. The ages of when the children immigrate is another matter altogether. These effects are reinforced in later chapters in the book (Chapters 6 "Informal and Formal Care for Older Persons" and 7, "Work, Retirement, and Leisure") in that the employment pattern is consistent with the distribution of educational attainment. Mehrotra and Wagner pointedly note in Chapter 7 that despite the rise in education levels, females are still more likely to leave and re-enter the workforce, more

likely to decrease their work hours, or to work part-time for care-giving reasons regardless of their ethnic group. Interestingly, the authors also note in Chapter 6 that formal care is a last resort across all ethnic groups, mainly because females in the family usually decide to do the caregiving themselves, sometimes temporarily leaving the workforce to do so. All these multi-level and socially complex issues are brought to our attention, and illustrated with vignettes and a personal tone that almost moves away from the scientific into the experiential. It is this kind of approach that has been largely ignored in scientific studies, and one that we will need to adopt in our research in order to be able to account for as many factors as possible before we even get to the science of things.

The authors broaden up to wider topics in Chapters 8 ("Religious Affiliation and Spirituality"), and 9 ("Death, Dying, and Bereavement"). Sometimes, a more text-book approach is adopted where definitions are laid out and are, to an extent, unnecessary. For example, definitions of Buddhism, Hinduism, Islam, etc, in Chapter 8 were beyond the objectives of the book. Furthermore, although the wider scope of the book is *aging and diversity*, over and above the ways each ethnic subgroup approaches retirement, practices religion or spirituality, or comes to terms with death, how each of these approaches may lead to disparities and inequality in the bigger society would have given the later part of the book more depth. The information presented is interesting and factual; however, the book tends to stay at the descriptive rather than analytic in these later chapters.

Overall, this book serves as a solid and broad introduction to the topic on diversity, specifically within the aging community. By providing online resources, active learning experiences, and a quiz at the end of every chapter, it keeps the reader engaged. This book makes a good case of illustrating that just by looking into some of the social, racial, demographic, and gender/sexuality factors highlighted, a whole world previously overlooked and understudied will open up. We will come forth as more sensitive and tuned-in researchers by picking up a copy and educating ourselves on what may be really driving some of the findings in our studies.

# Cahill, S. (2018). *Dementia and human rights*. Bristol: Policy Press, 252pp. ISBN: 978-1447331407

**Reviewed by Alexandre Sidorenko [1]**

There are few diseases that can make people who are diagnosed with them and their relatives particularly hopeless and often also helpless. One of such diseases is dementia. The threats and challenges of dementia are felt globally. According to the World Health Organization (WHO), nearly 9.9 million people around the world develop dementia each year; in 2015, there were 47 million people in the world living with dementia, and this number is predicted to almost triple and reach 132 million by 2050 (WHO, 2017). These figures must be multiplied by a factor of at least two if we broader the notion of the term "people living with dementia" by adding the immediate family members, usually spouses. Dementia typically occurs in people aged over 65 years; about 5% of the world's population of older persons has dementia. With ongoing and accelerating population ageing the incidence and prevalence of dementia are expected to grow. However, dementia is getting 'rejuvenated': young onset dementia (defined as the onset of symptoms before the age of 65 years) is accounting for up to 9% of cases (Alzheimer's Disease International & WHO, 2012).

The progress in exploring the etiology and pathogenesis of dementia has been impressive. The involvement of cellular and molecular mechanisms can be better understood and that there are several forms of dementia. In addition to Alzheimer's, there is also vascular dementia, dementia accompanying other brain diseases – symptomatic dementia, and the recently discovered LATE (National Institute on Aging [NIA], 2019). Despite the evident progress, the cure is not available, this means that people diagnosed with dementia must live with dementia and adjust to the challenges associated with this disease. The same applies for their relatives, care givers, and friends. However, the good news is that many manifestations of dementia are manageable, and while the underlying illness is not curable, its course might be modifiable by a good dementia care plan. Moreover, an important fraction of dementia is considered preventable (Livingston et al., 2017). The important conclusion is that in anticipation of future radical remedies significant efforts in dealing with dementia should focus on its management and assistance to people living the rest of their lives with this disease. Adjusting to dementia must be recognized and promoted along with continuous efforts of understanding and controlling the underlying causes of the illness.

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Most of the above introductory contemplation reiterate the reasoning of the book, *Dementia and Human Rights* by Suzanne Cahill. According to Cahill, adjusting to dementia means, in the first instance, discovering, revealing and utilizing the remaining abilities and strengths of people living with the disease in order to "overcome social and structural barriers which can create additional disabilities and which can threaten human rights of people with dementia". To achieve this, argues the author, we need to deconstruct dementia and transport it from an "isolated island of cure and care" to a "broader world of rights". In more practical terms, this would imply better understanding of dementia, and translating this new understanding into policy options. Such policy options should be based on a "rights based approach, (which) demands accountability, dignity, fairness and social action". In other words of the author, the task is "to elevate needs to rights" so that the lives of people with dementia and their relationships with a broader society be framed within "a system of rights and obligations".

As follows from the title and content of the book, its central premise is that dementia must be brought into the realm of human rights. Such a transfer would open an opportunity to reconsider the situation of people living with dementia against the well-established framework of international legally binding instruments on human rights. The first essential step for bringing dementia into the realm of rights, suggests the author, is to conceptualize dementia as disability.

Conceptualizing dementia as disability, the author elaborates, can bring various benefits. Most importantly, such an approach would place people living with dementia under the political and legal umbrella of the legally binding international instrument – the United Nations Convention on the Rights of People with Disabilities (CRPD) and, consequently, give them a full entitlement to all the human rights embedded into the CRPD (United Nations, 2006). The author rightly notices that although the CRPD, unlike the national human rights acts, is not legally enforceable in court, "it offers people living with dementia the potential for legal protection and entitlement to services". At the same time, regarding dementia as disability does not exclude it from the consideration and exploration by biomedical research and health and social care practice. In this connection, the author advocates for the advantages of considering dementia simultaneously as "a health condition, a social construction and a neurological impairment influenced by a broad range of factors including biological, psychological, economic and cultural factors".

The author defines a central and unifying theme of her book as "recognition of the civil, political, social, economic and cultural rights the individual living with dementia possesses". The applicability of the CRPD to reframing the dementia as a human rights issue and promoting the rights of persons living with dementia is substantiated throughout the book. Based on the CRPD, the author identifies several individual's rights most pertinent to persons with dementia:

(1) Equal recognition a person with dementia before the low as a holder of rights and obligations. This right refers to the legal capacity of persons with disability outlined in

the Article 12 of the CRPD. For persons with dementia, it envisages the provision of assistance in cases when persons cannot exercise their legal capacity.

(2) The right to an early diagnosis and its appropriate disclosure or non-disclosure.

(3) The right to treatment and rehabilitation based on multidisciplinary assessment and focusing on enablement as an approach aimed at supporting people "to be and to do what they have reason to value" and to enable them "to function at their optimal capability".

(4) The right to live independently and be included in the community. Implementation of this right requires availability and accessibility of home care services for persons with dementia, and a range of options of long term care for people with severe dementia, which are considered attractive by both the people with dementia and their family members.

The articles of the CRPD are addressing four broad themes: equality, autonomy, participation and solidarity. At the same time, the author rightly argues that some articles of the CRPD should "be re-worked to make them more inclusive of the individual living with dementia". For example, elaborates the author, the CRPD focuses on promoting the rights of people with disabilities living in the community; it omits the issues related to the rights and needs of people living in institutions - most people with dementia belong to the latter category. The selection of human rights that are relevant to individuals diagnosed with dementia who live in care homes or in nursing homes include the right of freedom from torture or cruel, inhuman or degrading treatment or punishment; the right to privacy; the right to access the physical environment; and the right to participate in meaningful activities. All the above rights refer to a good quality of life at any stage of the dementia illness.

CRPD provides the legal norms and standards for protecting the rights of persons with disability. It also offers a framework for designing and implementing national policy in disability. Moreover, as the international legally binding document, CRPD sets the well-established international *procedure* for regular reporting and the *structure* for monitoring the implementation process (United Nations Department of Economic and Social Affairs, n.d.). Thus, linking international and national policies on dementia to CRPD would help to enforce the implementation by and compliance of national governments.

Another international policy framework, to which the author makes numerous references, is the *WHO Global Action Plan on the Public Health Response to Dementia. 2017 – 2025* (WHO, 2017), which was developed ten years after the approval of the CRPD. Among the seven cross-cutting principles of the Global Action Plan, there is the principle of "Human rights of people with dementia", as well as the principle of "Empowerment and engagement of people with dementia and their carers" and the principle of "Equity". The Global Action Plan makes references to the CRPD in its Action area 1 "Dementia as a public health priority" and Action area 2 "Dementia awareness and friendliness".

One more policy framework might be on the horizon of international debates: The Convention on the rights of older persons. Such a prospective legally binding document might fill the above-mentioned gaps of CRPD with regards to dementia. The nucleus for developing a draft Convention – the United Nations *Open-Ended Working Group on Ageing* - has been in place for nine years (United Nations, 2011), and the *Independent Expert on the enjoyment of all human rights by older persons* was designated in 2014 (United Nations, Human Rights Office of the High Commissioner, 2019). Meanwhile, the political decision of the UN legislative bodies (i.e., General Assembly) has not been taken yet owing to the luck of consensus among the UN Member States.

The book includes useful references to selected models of national policy on dementia, which contain "moderately strong" commitment to human rights principles. The author's own choice of good models is based on the assumptions that such model policies must address discrimination, marginalization, and exclusionary practices and should be inclusive of human needs, personhood and human rights of people with dementia. Among the countries with exemplary policy models the author mentions Australia, Norway, Scotland and the US; Scotland being also the first country that elaborated in 2009 the national *Charter* of *Rights for people with dementia and their carers*.

The author is quite persuasive in her central arguments for addressing the challenges faced by persons with dementia and their families from a human rights perspective. Equally important, she presents her arguments in a crisp clear language, which does not hide her dedication and passion for the subject. Among other benefits of reading the book is that it contains an excellent overview of key concepts and terms related to the areas of both dementia and human rights.

A concluding chapter of the book gives an opportunity to summarize the entire content and outline the perspectives. The subtitle of the concluding chapter, "grounds for hope", attests to a positive view of the author. The reader is eager to pick up the concrete recommendations how to advance the positive future for people with dementia. The author formulates two key recommendations; the first is addressed to policy-makers and, the second, to practitioners working with people with dementia:

(1) "Policy-makers need to be more cognizant of human rights – social, economic and cultural along with civil and political rights".

(2) "Practitioners need to undergo training in dementia and human rights and use a human rights framework in their everyday practice".

In the two recommendations, the policy-makers and practitioners are addressed as major "doers"; one would hardly object such designation, but what about family members and other informal careers who are referred to throughout the book?

The two recommendations placed by the author are of a very general nature and sound more like goals or slogans, while concrete measures for reaching these goals are missing. Meanwhile, various specific areas of concern and measures to address those concerns are mentioned throughout the book: adaptation of physical and living environment, including establishment of small scale residential (housing) units; development of appropriate gadgets and services, which, I would add, in turn entails concerns of their safety and compliance with human rights of users; poorly designed care environment and inappropriate working conditions of care givers; inadequate funding of care systems; et al. The challenging task of securing legal capacity of people with dementia is thoroughly discussed in the book, but, again, concrete approaches and methods of addressing this task are not distilled and concentrated in a set of recommended policy measures. It would have made sense to consolidate these and other concrete recommendations into some sort of an outline for policy framework.

Another obvious question: what is the cost of measures needed for transporting dementia from an "isolated island of cure and care" to "a broader world of rights"? The various measures, including those listed in the previous paragraph, might be pricy. Dementia is a costly problem. Below is a quote from the Global Action Plan on the Public Health Response to Dementia:

In 2015, dementia costs were estimated at US$ 818 billion, equivalent to 1.1% of global gross domestic product, ranging from 0.2% for low- and middle-income countries to 1.4% for high income countries. By 2030, it is estimated that the cost of caring for people with dementia worldwide will have risen to US$ 2 trillion, a total that could undermine social and economic development globally and overwhelm health and social services, including long term care systems specifically (WHO, 2017).

Nearly 85% of costs are related to family and social costs, rather than medical care (Livingston et al., 2017).

The cost of adjustment to dementia might be more affordable for economically advanced countries which can mobilize sufficient financial resources and which also have well established public systems of care and support. No wonder, all exemplary policy models quoted by the author are coming from the economically advances countries. However, in author's own words, even in those countries "there is a massive underfunding of all services for people living with dementia"(Cahill, 2018). Moreover, there are also "diagnostic gap" and corresponding "treatment gap" in high-, middle- and low-income countries. Filling these gaps and introducing new diagnostic and treatment techniques would require significant investments. Meanwhile, nearly 60% of people with dementia currently live in low- and middle-income countries and most new cases (71%) are expected to occur in those countries (WHO, 2017).

The burden of dementia, including its financial burden, is shared by families, and, again, this burden is particularly big in less economically and socially advanced countries. While in high-income countries the share cost of informal care related to dementia amounts to 45%, in

low- and middle-income countries it reaches 85% (ibid.). Another major parameter of financial impact for people with dementia and their families in various countries is reduction or loss of income (ibid.).

"Transporting dementia into the realm of human rights" implies policy measures aimed at implementing the social and economic rights. The author acknowledges that implementation of these "positive rights" is resource-intensive. Thus, the selection of policy measures and introduction of new approaches and techniques for adjusting to dementia should be thoughtful and concrete to make the response to dementia appropriate, affordable and sustainable. Such measures are indispensable while we are waiting for the future medical cure and care to "replace and reduce some of the cost" (Livingston et al., 2017) and relive the humanity from one of its big challenges and threats.

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