

## Assessment and Management of Geriatric Care in Pakistan

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### Abstract

Elderly population is on the rise worldwide. With increasing age, the body functions begin to decline making elderly people prone to disease and illness. Geriatrics is the area of medicine that deals with the prevention and treatment of illness and disabilities among elderly people. In Pakistan, elderly people are reported to have more health related problems due to emotional and financial stress, malnutrition, and poor healthcare facilities. Moreover, elderly people in Pakistan have sedentary lifestyle that results in development of geriatric symptoms among them. Although government of Pakistan has designed policies to promote healthcare facilities for elderly people, none of the policies have been implemented properly. The need is to design and implement a policy that ensures proper healthcare facilities to the elderly population of Pakistan.

**Keywords:** Geriatric; Healthcare; Internal medicine; Aging; Population; Malnutrition; Osteoporosis; Cognitive; Depression; Hypertension

### Introduction

Geriatrics is an area of internal medicine, which focuses on health care of older people and aims to raise health standard of elderly people by treatment and prevention of diseases and disabilities in them [1]. As the age of a person progresses, the various body functions of a person begin to decline. After the age of 30 years, the metabolic rates decrease by 7% every 10 years. The processes like cell division, growth and repair get retarded and muscle strength decreases. Blood circulation becomes less efficient, bones become brittle and weak, digestion becomes poor and immune system becomes less efficient [1]. This decline in body functions make elder people more prone to disease and illness.

Aging is a natural process in which a person grows old with time. Generally, people of 60 years age are defined as elderly [2]. The population of the world is aging rapidly. It is estimated that by 2050 over 20% of the world's population will be over 65 years old [3]. The advancement in technology and availability of better health facilities has increased the life expectancy of people in both developed and developing countries. Life expectancy has risen for over last three decades and it is said to reach about 72 years by 2023 [4]. The major population of aged people i.e., 60% live in developing countries and this population is predicted to rise to 70% by year 2020 [3]. The greatest number of aged people i.e., 217 million lives in Asia. According to report of United Nations in 1995, the number of older populations in will rise to 400% in some Asian countries by year 2025 [2]. Increase in number of older people will cause emergence of new disease patterns, chronic disability, and changes in social attitudes [2].

### Literature Review

#### Aging population in Pakistan

Pakistan is listed as a developing country with population of 166 million in 2006 [3]. Due to poverty, malnutrition, economic and social burdens, people of Pakistan tend to age early. According to population census, there were 2 million senior citizens living in Pakistan in 1951 and the number increased to 7.3 million in 1998 [5]. Today there are approximately more than 20 million senior citizens in Pakistan; making over 6% of the population and their number rising [3,4,6,7] while 40% households have an elder person [8,9]. The demographic trends of Pakistan show that the population above the age of 60 has increased by 75.1% from 1990 to 2010. Compared to Pakistan, over these two decades, the population of elder people has increased by 79.5% in

Bangladesh, by 74% in Srilanka, and by 73.2% in India [2]. According to the estimates, the elder population of Pakistan will increase by 15% by 2050 [6]. The life expectancy of people in Pakistan has increased from 45 years to 69 years over five decades and it will continue to increase with time [2]. According to World Health Organization (2003), in Pakistan, the expectancy of healthy life for men is 54.2 years and for women 52.3 years and at age of 60 years, the expectancy of disability free life is 11.4 years [9]. As Pakistan lacks appropriate social care and healthcare facilities for elderly people, therefore, the need is to take necessary measures to increase quality of healthcare facilities for older people [3].

#### Health status of elderly in Pakistan

Old people have high rate of health related problems because the physical processes decline with age. At old age, people in Pakistan face many stressful situations i.e., need of friends and family members, loneliness, change in lifestyle, a sense of loss of self-worth after retirement, reduced income, loss of social status, and loss of physical capabilities. All these factors contribute to depression in elder people. Moreover, substandard diet, smoking, inadequate exercise also contribute to the medical condition of elder people. According to report by Pakistan National Council of Social Welfare in 2000, old people do not get enough meat, fruit and vegetables in their diet [5].

The age for retirement of a person is 60 years in Pakistan [4]. Generally, people beyond this age are said to be "old", however, at this most of the people are mentally and physically active [7]. However, still active they want to be a useful part of the society but due to their old age, they do not get much employment opportunities. Even in case of pensioners, the pensions of old people are not adjusted according to rising inflation patterns. This makes them financially handicapped and they do not get required access to the health facilities or proper medications.

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The government of Pakistan does not subsidize the health system and treatment for older population. There are around 300 different private hospitals and approximately 1000 government hospitals in Pakistan. The public sector hospitals provide cheaper health facilities but the quality of service is poor, so most of the patients prefer private sector hospitals due to better quality of service. In both cases, patients have to pay out of pocket to avail medical services [4].

### **Status of geriatric care in Pakistan**

Elder people in Pakistan do not have the privileges as elder people in developed countries. Elder people, due to their age and deteriorating health conditions have special medical needs and require comprehensive and multi-disciplinary medical approach for medical care. Therefore, the primary health care practitioners must be trained to deal with geriatric issues [10]. Geriatrics as a specialized separate medical facility has not been established in Pakistan. General specialists and medical practitioners see and treat the elder people. As there is already heavy patient load in general hospitals, elder people do not receive comprehensive medical care. There are no rehabilitation centers for older people who suffer from fractures, stroke or such medical conditions. Disease burden among elder people is high in Pakistan. Very little observation-based data is available on diseases among the elder population of Pakistan [4,7].

In Pakistan, the psychosocial and medical needs of older people are not met properly. According to population census of 1998, 28% people above 60 years of age have some kind of disability (crippled status, blindness, deafness or mental retardation) [4,11]. Most of the elder people in Pakistan suffer from diseases like diabetes, hypertension and arthritis [4,8]. According to estimates, 40 million elder people have osteopenia and 10 million elder people in Pakistan have osteoporosis [4]. Most of the elder people in Pakistan have sedentary lifestyle that results in developing mobility disorders, sarcopenia as common geriatric syndromes among them.

### **Initiatives of the government**

The government of Pakistan designed the National Policy to promote better health of elderly people in 1999. This policy included training doctors for primary care in geriatrics, providing dental care, domiciliary care and a system of health care providers for older people including physical therapists and social workers. However, unfortunately this policy has not been implemented [4,11]. Prime Minister Chaudhary Shujaat Hussain approved a relief package on August 24, 2004 for senior citizen of Pakistan to ensure that their basic social and medical needs are met and they get honor in the society. The package also included educating young students to care for senior citizen, as part of their moral education but this package was not implemented properly [5]. Other such initiatives by the government include Social Security Act 1965, Employees Old Age Benefit Act 1976, Government Employees Benevolent Fund and Pensions for Government Employees [5]. Public Sector Development Programme (PSDP) and Ten Years Perspective Plan addressed the care, well-being and protection of elder people by establishing homes for senior citizen, local senior citizen clubs where senior citizen can share their experiences, knowledge and expertise. However, all these initiatives need proper implementation. Establishment of geriatric wards at hospitals has also been priority area of the government [5].

Apart from efforts of the government, the private sector is also working to provide better health care facilities to the elder people. Few non-government organizations like the Edhi trust or the agha khan foundation are working in this field, but their work is limited.

Therefore, still much work is required on part of public and private sector regarding senior citizens [5].

## **Major Social and Healthcare Challenges in Geriatrics**

### **Social problems**

Pakistan is a Muslim state with family system influenced by religious values. The society of Pakistan always had always stood for high values, dignity and respect of human life and regarded old age as mark of wisdom, esteem and piety. However, with the introduction of western media, the status of elder people has declined as now the young generation is more influenced by western family patterns [5] causing decline of extended family system in Pakistan [4]. Elder people have invested their years to up-bring their children and at old age expect their children to support them as the retirement provisions are not adequate and they become dependent on their families for financial support [4]. Unfortunately, there are not enough employment opportunities for elder people who want to contribute to the society. This creates a sense of loss of self-worth and uncertainty among the elder people.

### **Cognitive decline**

One of the major challenges that our elderly face is cognitive decline and finding solutions to this remains an active area in geriatrics research [12-14]. Mild cognitive decline refers to what differs from normal preservation of function of the same age group and it affects about 10-25% of the 70-year age group people [15]. On the other hand, dementia is a type of cognitive impairment that harbors difficulties in functional abilities as well affecting approximately 10% of the population annually [16]. Cognitive dysfunction is shown to be associated not only with decreased physical activity but also with higher medical morbidity rate [17].

### **Depression**

Depression is the most prevalent psychiatric condition in elder people and it is estimated that by 2020, it will be the major contributor of disease among the elder people [18,19]. This emphasizes the need for continuous screening methods for the identification and management of depression in elderly people. Some of the major consequences of depression include falling, psychotic breakdown or mental disorders, myocardial infarction, congestive heart failure and increased mortality [20-24]. At worst, depression can lead people to commit suicide that causes loss of almost 1 million lives annually. Anxiety, boredom, feeling of helplessness and dependence on others are the major reasons of depression among the elder people. Depression affects 12% of adult population worldwide and 60% of elders are diagnosed with geriatric depression annually [18].

In Pakistan, depression is most common psychiatric condition among older people but less research is conducted on geriatric depression. Studies have been conducted in different areas of Pakistan that report 42% prevalence of depression among elder people in Islamabad and Rawalpindi and 22.9% prevalence of depression among elder people living in Karachi [18,19,25,26].

### **Ill health**

In Pakistan, important factor of mortality among elder people is non-communicable chronic illness. Hypertension, Diabetes, Cardiovascular diseases, Musculoskeletal diseases, Kidney diseases, Bronchitis are most common age related non-communicable chronic illness. The rate of morbidity is higher in elder females as compared to elder males. Majority of elder population of urban areas belonging to

higher socioeconomic class suffer from age related chronic illness. Apart from non-communicable diseases, a portion of elder population also suffer from communicable diseases. Viral Hepatitis and Tuberculosis are the major cause of mortality among elder population. Unlike non-communicable diseases, communicable diseases are more prevalent among the poor [9].

### Mobility and nutrition

A decrease in habitual walking has been shown by a group led by Lan and colleagues. They developed an index that uses walking speed as a measure of physical disability limitation. The ability of rapid walking involves a variety of factor involving vision, physical strength, cardiovascular fitness and coordination. These factors are used to find a relationship between aging and mobility [27,28].

The changes in eating behavior remain at a central position in developing under-nutrition associated mortality in elderly people [29]. Changes in eating behaviors include dietary restriction and decreased snacking due to a fear or weight gain [30-32]. Various approaches are being used in weight loss management including taste enhancers and caloric supplements, but unfortunately little light is being thrown on the importance of vitamins and trace elements [33,34] which must be taken into account for its role in functional impairment in elder persons [35,36].

### Frailty/sarcopenia

There are multiple factors appearing to be responsible for an important geriatric syndrome known as frailty leading to functional decline and ultimately mortality [37]. Muscle function alterations, cognitive impairment, sarcopenia (loss of muscle mass), diabetes and cardiovascular disease are its leading causes [38-40]. Resistance exercises can help ameliorate its symptoms and prevent its consequences [41].

### Immune systems and aging

The immune system is also shown to be compromised with increased aging that is further aggrandized by malnutrition especially of proteins. The overall result of this is a decrease in the production of immune cells (cytotoxic CD<sub>4</sub><sup>+</sup> T-cell lymphocytes) increasing the vulnerability to various diseases [42-44]. This can be ameliorated with exercising and taking nutritional supplements both of which act as enhancers of the immune system [45-47].

### Discussion

In the past decade, a significant increase in the life expectancy together with urbanization has caused an increase in the prevalence of chronic diseases, particularly in the developing countries. This has come with challenges to address their comprehensive assessment and prevention, especially in the older population-A term commonly referred to as comprehensive geriatric assessment (CGA). It can be defined as a diagnostic process to determine an older person's health conditions (physical and mental) so as to develop a complete plan for treatment, rehabilitation and subsequent follow-up [48,49].

The major limitations for a good assessment program for elderly in Pakistan are: a lack of awareness and good practices in geriatric medicine; poor awareness and support; carelessness and negative attitude towards elderly people; and limited access to dementia care training so that complex care needs of elderly people can be met [50,51].

### Conclusion

The situation demands a vehement need for the cost effective and innovative methods of health care to mobilize resources on a large

scale in order to not only address but also solve the elderly issues. There should also be a strengthening of primary health care systems to cover the services for the disabled elderly. Finally, the family support system should be made stronger by rising awareness, realization and consciousness among people about elderly care and their particular needs.

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