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12. Dimensions, Issues and Strategies for Geriatric Health

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Abstract:

This book chapter comprises of five sections. The first section on 'introduction' incorporates conceptual framework and perspective of old age since Vedic to ancient times and concern voiced globally in recent time. The second section provides insight into dimensions of health specifying attributes of a mentally normal person. The third section provides vivid account of issues pertaining to geriatric health (viz, population dynamics, adverse perception about life, compromised living arrangements, socioeconomic deprivation, lack of social support, food and nutrition insecurity, nutritional vulnerabilities, morbidities and functional disabilities, psychosocial abnormalities including cognitive impairment and depression, interlinkages of geriatric problems and quality of life). In section four, a brief account of strategies has been given for ensuring optimum health of geriatric subjects. The last section is a brief summary of the chapter.

Keywords: *Cognitive impairment, Depression, Food and Nutrition insecurity, Socioeconomic deprivation, Functional disability, Spiritual health.*

12.1 Introduction:

Concept of old age varies considerably and the boundary between middle age and old age cannot be defined exactly as old age has different meanings in societies. However, in most gerontological literature people above sixty years of age are considered as old (Mishra and Shakraja, 2012). Even United Nations considers aged person as one who is sixty years and above (CMR,1991). Ageing has been considered as gradual decline in adoptive mechanism of the individuals to the environmental changes. It is a biological reality largely beyond human control. Although an accepted and acceptable definition of old age is lacking, age of eligibility for statutory and occupational retirement pension becomes default definition.

On the basis of this usually sixty and sixty-five years are often taken as the cutoff age for deciding old age (Thane, 1978 and Roebuck et al.,1979). In developed countries chronological milestones mark life stages; old age in many developing countries begins at a point when active contribution is no longer possible. Change in social role and capabilities have been considered a major factor for defining old age. The transition in livelihood occurs between the ages of forty-five and fifty-five years for women and between the ages of fifty-five and seventy-five years for men (Thane, 1978).

The term aged is relative depending upon the society, culture, time and prevalent conditions. According to Vedic and ancient concept four stages of life exists; these are [a] *Bramcharya* which focuses on educational and religious training, [b] *Grihatha* primarily concerned with worldly enjoyment and emotional fulfillment [c] *Vanprasth* which prepares an individual towards service of humanity at large [d] *Sanyasa:* in this stage absolvement from individual and social responsibilities take place. Each stage comprises of 25 years. In the present context with reference to geriatric health concern voiced globally are ageing of nations, demographic transition from pyramid to pillar, epidemiological transition etc. In order to address senescence a branch of science known as gerontology emerged which primarily describes physiological, biochemical and psychological changes during the process of aging. Further, Nascher coined the term geriatrics (Gerus: old age and iatrea: treatment) which refers to clinical study and treatment of old age and its manifestations (Sunder etal.,2022).

12.2 Dimensions of health:

According to the Constitution of World Health Organization (July, 1946) health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity (Kadri et al., 2021). This definition considers three specific dimensions (viz; physical, mental and social). Several other dimensions are also being added in the conceptual framework of health. These are spiritual, emotional and vocational dimensions. It is easier to measure physical health by objective criteria. Social health can be understood on the basis prevailing rates of suicide/ homicide, theft and violence, drug addiction, crime etc. Spiritual health is in conceptual stage. Positive intension of subject lies in core of spiritual health. In case of geriatric health all dimensions of health are pertinent. However, mental wellbeing is of utmost important. Mental health is a state of mental wellbeing. Mental wellbeing is a state in which the individual realizes his or her own abilities, can cope with normal stresses of life, can work productively and fruitfully, and able to make a contribution to his or her community. The attributes of a mentally normal person are [a] ability to mix-up with others and makes friendship, [b] balanced person and emotionally stable, [c] cheerful, happy and enjoys life with a purpose. [d] keeps himself tidy and observes personal hygiene, [e] realizes his short comings, strengths and abilities, [f] thinks positively, contributes full and is productive to society and nation, [g] Unduly not suspicious of others, [h] well oriented to time, place, person and environment.

12.3 Issues Pertaining to Geriatric Health:

In order to ensure optimum geriatric health pertinent issues are given below:

12.3.1 Population Dynamics:

Globally, the 60 plus population constitute about 11.5% of the total population. It is projected that by 2050 this proportion is to increase to about 22%; at this state elderly with the pace of growth of 3.26% per year will outnumber children less than fifteen years of age (UNPF,2017). Number of older persons > 60 years is expected to be more than double by 2050 and more than triple by 2100 (UNDE,2017). In absolute numbers this means 3.1 billion in 2100. In India the share of population over the age of sixty years is 8.6% this is

likely to be 19% by 2050. As per census 2011 India has 53 million females and 51 million males aged 60 years (Census,2011). At the age of 60 years average remaining period of life was 16.9 years for males and 19 years for females. There were 104 million elderly persons having average remaining period of life at the age of 60 years of about 18 years (Gill et al., 1994).

Elder people in western countries are more confident and self-dependent compared to their counterparts in the other world. However, demographic shift coupled with changes in family related behaviour (viz., non-marital child bearing and divorce) has raised concerns about availability of family support for older people. Living alone or with spouse away from children is more prevalent there. However, western countries have more developed elder family health care system to address their age-related health problems. In India majority of the elderly are from rural background and there is increased in the number of older old (persons over 80 years) and a large proportion of them are below poverty line. Feminization of elderly population is another disturbing trend (MHFW(GOI),2011). Majority of them are illiterate and they do not have regular source of income. In India the expectancy of life at birth during 1996-2001 was 62.3 years for males and 63.3 years for females (MHFW(GOI),2011). The life expectancy at birth during 2009-13 was 69.3 years for females and 65.8 years for males. The current life expectancy for India in 2022 is 70 years a 0.33% increase from 2021. Male have a life expectancy of 68.4 years and females have a life expectancy of 71.1 years at the national level.

12.3.2 Adverse Perception about Life:

Perception of old age is built upon cultural and individual norms and beliefs and reflects peoples own judgments about the stages of life and major turning points in it. Adverse perception about life is not a natural part of ageing; loss of role as a worker, a role shifts independent to dependent and isolation and loss of social group leads to negative self-image. According to a study on urban geriatric subjects from India perception of 14.4% and 3.6% subjects about ageing was bad and worst, respectively and 58.3% subjects perceived their present health worse than before (Keshari, 2017).

12.3.3 Compromised Living Arrangements:

Sense of isolation, feeling of social deprivation due to negligence, feeling of disability and dependency, low social esteem and lethargic feelings have enhanced frustration level of geriatric subjects so high that nearly 4 out of 10 elderly wish to shift to old age homes (Dutta,1989 and Saha GB.,1984). According to a study from India loneliness was more prevalent in female (72.8%) as compared to male (65.6%) subjects (Bhatia et al., 2007).

12.3.4 Lack of Social Support:

The trend in the size and growth rate of the elderly population brings many social challenges for them: (a) Widowhood and lack of available caregiver significantly influence health seeking behaviour in geriatric age; (b) elderly who have lost partner experience lower self-esteem, resulting in higher emotional and social loneliness, that is the perception of less support; (c) community support systems are practically nonexistent.

According to a study on urban geriatric subjects from India majority (76.2%) subjects were financially dependent on their family. Although 56.5% subjects were aware about health insurance scheme, only 11.7% subjects had received financial benefits from government/private sector. As much as 40.7% and 27.8% old people were well secured in joint and nuclear families. Support from outside family members (friends, neighbor and relatives) was not taken by 70.6% subjects (Keshari, 2017).

12.3.5 Socio Economic Deprivation:

Socio Economic Deprivation (SED) is a strong predictor of poor health and Chronic Energy Deficiency (CED) is common among older persons who live in socio economic deprivation. Socio economic deprivation among the elderly tends to be more permanent than that among the non-elderly and elderly are unlikely to come out of poverty trap (Panday, 2009). Socio economic deprivation is of major concern in geriatric population as income of the elderly reduces while consumption expenditure increases.

There are several other dimensions of SED which may influence geriatric health; food deprivation directly affects their nutritional wellbeing. Water deprivation not only predisposes them to diseases but also affects their quality of life.

Shelter deprivation adversely affects physical, mental and social welling in general and in geriatric subjects in particular. In order to avoid psychological problems in this group exposure to print and non-print media and literacy status becomes critical for their engagement and expansion of their mental abilities. Education and information deprivation may adversely affect their mental well-being.

12.3.6 Food and Nutrition Insecurity:

Food and nutrition security is directly linked to the human resource development, productivity and prosperity of a country. Viewed from human rights perspective "Right to Food" is the fundamental rights of everyone.

Food insecurity refers to inability to acquire or consume an adequate quality or sufficient quantity of food in socially acceptable ways. The problems of food and nutrition security along with intra household food allocation are often experienced by elderly.

Limited income, functional impairment, adverse health conditions and lack of social support alter ability to use food (availability, affordability and accessibility of food) in old age. In spite of availability of family members old people are vulnerable to experience food insecurity due to their dependency on family members to cook for them and even serve them meals periodically.

Food security at household level does not ensure food security to the old people (Keshari et al., 2021). A study on urban geriatric subject established linkage of household food insecurity with socio economic deprivation and chronic energy deficiency in geriatric subjects (Keshari et al., 2021).

12.3.7 Nutritional Vulnerabilities:

Malnutrition is not an inevitable side effect of ageing but many physiological, psychological and social changes associated with ageing can give rise to malnutrition. During old age there is loss of taste sensation, reduced stomach compliance and increased leptin. These conditions may influence the nutritional status of the geriatric subjects. Due to changing socio-cultural milieu geriatric population are vulnerable to socio economic deprivation which may predispose them to Chronic Energy Deficiency (CED). They may face the problem of micronutrient intake related issues and are likely to become victim of hidden hunger. Subjects with financial security and ensured social support systems may become obese, thereby being at risk of various non communicable diseases as obesity predispose to non-communicable diseases (Banjare et al., 2016).

12.3.8 Morbidities and Functional Disabilities:

The burden of morbidity in old age is enormous. The old age subjects suffer from spectrum of health problems which can be measured by two methods i.e., self-perceived and observed. The problems of old age differ from individual-to-individual basis due to varying socio-cultural, economic and health factors. Owing to work engagement and poor nutrition, the health of older people declines. Poor eye sight, cataract, hearing impairment and joint pain are common ailments**.** Morbidities like asthma, hypertension, osteoarthritis, gastrointestinal disorders, anaemia, eye and neurological problems are significant associates with disability and distress. Prevalence and incidence of hospitalization rates are much higher in older people than the total population. Women are frequently affected than males in both urban and rural (Ministry of Health and Family Welfare, 2011). Many chronic diseases increase with age. It is not unusual for older person to have multiple chronic diseases. In old age there is general physical decline and people generally become less active. Notable changes are reduced functioning of circulating and immune system, changes in vocal cards that prudence the typical old age voice, greater susceptibility to bone and joint lessening or cessation of sex drive etc. (Mishra and Shakraja, 2012). In compares to married people higher percentages of widow/ widower suffer from old age rather nutritionists.

One of the major determinants of quality of life is functional status which refers to individual's ability to live independently and relate to his or her environment or perform normal daily activities for basic needs and carry out normal functions to maintain health and wellbeing. Ageing is associated with a higher risk of functional dependence as well as high prevalence of functional disability. As much as 40.1% and 13.5% geriatric population from urban areas of India had assisted ADL performance and affection of any ADL with maximum severity, respectively (Keshari and Shanker,2017).

12.3.9 Psychosocial Abnormalities:

Behavioral changes can include wandering, physical aggression and verbal outbursts due to diseases such as depression, psychosis, and dementia. Mood disorders and reduced mental/cognitive ability requires serious attention in old age. Older people are often victim of psychosocial problems on account of fear about death and feeling of dependency, anxiety,

boredom, loneliness and helplessness. Apprehension, depression, frustration may not only results in physical, cognitive, functional and social impairments but also decrease the quality of life. Among various psychosocial problems cognitive impairment (dementia) and depression accounts for the greatest burden among geriatrics. According to a study in India 34% geriatric subjects had depression (Keshari and Shanker, 2021). As a consequence of demographic transition there is increase in the burden of degenerative diseases in general and neurodegenerative disorders in particular. These processes lead to cognitive impairment in old age which is a condition where a person has memory complaint and objective evidence of cognitive impairment but no evidence of dementia (Burns and Zaudig, 2022).

12.3.10 Life Style and Ageing:

Lifestyles have become unhealthy in modern society. Tobacco, alcohol, physical inactivity and faulty diets lead to many diseases. Lonely elderly and particularly well to do elderly indulge in excessive use of alcohol and they pay the heavy price of life. Tobacco consumption had been the commonest addiction in rural area of Varanasi, India.

As much as 42.98% male and 40.59% female elderly were tobacco smoker. Prevalence of regular tobacco chewing was significantly higher in males (61.4%) than in female (18.8%) subjects (Sarker, 1989). In a city of India 44.7% males were smokers and 42.1% of males were consuming alcohol whereas 68.4% males and 17.1% females were addicted to tobacco chewing (Pandve and Deshmukh, 2010). According to study in urban area of a district of India consumption of fruits and green leafy vegetables were far from being satisfactory in geriatric subjects (Keshari and Shanker,2018).

12.3.11 Quality of Life:

Quality of life is a multidimensional concept. It reflects all the aspects of health status, lifestyle, life satisfaction mental state and well-being. It includes aspects of happiness and satisfaction with life as whole. It is more related to personal sense of happiness and subjective understanding in life rather than objective probes like physical functioning (Akbar et al., 2013). Although quality of life is conceptually complex, yet its measurements are most meaningful when they measure key concepts in logical and precise way in its more possible means (Tripathi, 2012).

As quality of life is concerned with individually perceptions of their position in life in the context of the culture and value system have changing socio-cultural context may profoundly influence quality of life of geriatric subjects. It is linked with their goals, expectations and concerns. Socio-economic environmental factors and living arrangement, cognitive impairment and presence of depression may have considerable influence the quality of life in geriatric subjects.

12.4 Strategies for Ensuring Health of Geriatric Subjects:

Strategies for ensuring health of geriatric subjects takes into account legislative, service and education approaches of public health perspective.

12.4.1 Strategies Based on Legislation:

In order to protect the rights of geriatric subjects, legislation has been universal phenomena. in India Ministry of Social justice and empowerment is the nodal ministry for all developments and welfare programs. Directive principles of State Policy (Article 41) is step to ensure old age social security. In the year 1992 income tax exemptions were provided to geriatric subjects. Hindu adoption and maintenance act (1956) envisaged that every Hindu son and daughter has to maintained their aged and infirm parents.

Code of criminal procedure (1973) ensures that on getting proof of neglect or refusal a first-class magistrate may order to pay monthly allowance. Based on the evidences that low socioeconomic status, lack of decision power, no financial security, widowhood and female geriatric subjects are at higher risk of chronic energy deficiency (Mishra and Gupta, 2012). Government of India initiated Old Age Pension Scheme. In concepts this sounds very well but there are many operational problems and their outreach is limited.

12.4.2 Strategies Based on Health Service Provision:

In most of the countries health care system at various level are designated for the general population. Unless special provision and preferences for geriatric subjects are made, utilization of these services by them will be poor. As many geriatric subjects believe that old age is an age of ailments and physical infirmities, they do not participate in screening programs. They are mentally and emotionally stressed and have tensions and worries due to growing uncertainties these days **[Sharma PS.,1980]**. All attempts should be made for risk reduction, promotion of health and specific protection through vaccination (viz., pneumonia and COVID vaccine). Early diagnosis and treatment of diseases, disability limitations and rehabilitation, if needed, should be provided to them. Non-Governmental Organizations (NGOs) can play very significant role in this endeavor. Health services must be tailored as per needs of the geriatric subjects and family members as well as local bodies have to play very critical role in utilization of health services.

12.4.3 Strategies Based on Educational Approach:

Community members need to be sensitized that health of old age persons mainly lies in their actions. They should do planning in terms of economic security beforehand and maintain their own health and health of the spouse. They should be made aware of all welfare schemes so that they can derive benefit from them. Indian values and norms of society be promoted. Lifestyle modification can play very significant role. Dietary diversification, avoidance of alcohol and tobacco, regular physical activity along with muscle strengthening activities and yoga as well as meditation are needed to ensure their optimum health. Non-Governmental Organizations, health service provider, community organizations can play very significant role in behavioral modification of geriatric health. International organizations and national governments can play advocacy role in the strengthening of legislative service and educational approaches for geriatric health. Academic institutions and research organizations should provide evidences having translational values for improving health of the geriatric subjects. Strong political will for geriatric health the need of the hour.

12.5 Summary:

In recent times, world is experiencing unprecedented demographic, epidemiological and nutritional transitions coupled with changing socio-cultural context. They have brought several complexities for geriatric subjects. Their adverse perception about life, compromised living arrangements, lack of social support and socioeconomic deprivation compel them for several adversities of life. They face food and nutrition insecurity which make them vulnerable on nutritional scale.

Multi morbidities and functional disabilities in geriatric subjects pose several challenges for the families, community and existing health system. High level of psychological abnormalities and deranged lifestyle of geriatric subjects are threat for quality of life. Multi-pronged attack, multisectoral linkages, strong political will and global advocacy are needed to move forward in the mission of ensuring optimum geriatric health.

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