POPULATION AGEING AND HEATH IN NIGERIA: IMPLICATIONS OF THE 2015 UNITED NATIONS REPORT

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Abstract
In almost all studies of population health, age nearly always stands out as the single most powerful predictor of state of people's health and the prevailing risks of mobility and mortality they face. World Health organization maintains that the specific mechanisms that link age to health status are many and complex. The objective of this study is to examine the implications of health on ageing population and to show the implications of the UN 2015 conclusions on Nigeria. The design was documentary and data were analyzed using direct content analysis Results show that people lost average of nine healthy years due to disability in 2013, the problem is worse in long-lived populations and there is greater demand for prevention and treatment of non-communicable diseases associated with old age. The single most important implication is that Nigeria needs to take proactive measures to avert age related health problems.

Keywords: Population ageing, Health, Implications, Nigeria, United Nations, 2015 report

Introduction
There are enormous implications of ageing on people's health. Across studies of population health, age nearly always stand out as the single most powerful predictor of the state of people's health and the prevailing risks of morbidity and mortality they face. As people age, the specific mechanisms that link age to health status are many and complex (WHO, 2015). At the biological level, ageing is associated with damage to cells that, over time, weakens the immune system, diminishes the body's capacity to repair itself and increases the risk of developing a host of different diseases (Steves, Spector & Jackson, 2012; Beard & Bloom, 2015). A person's age also reflects the amount of time he or she may have been exposed to various external health risks whose effects accumulate over time, such as tobacco use or unhealthy diet. Moreover, the social changes that often take place as people enter advanced ages, such shifts in social roles, and the loss of close relationships, may pose additional threats to older person's health and well-being (WHO, 2015).

There is, however, a great degree of diversity in the health status of people at any given age, reflecting random variation across individuals, differences in the life course, environment and behaviours that shape health risks. Variability in old age is associated with numerous predictors which include, among other things, genetic factors, individual characteristics, environmental factors, and behaviours that pose risks to health, such as tobacco use, physical inactivity or excessive consumption of alcohol. Indeed, while all older persons will eventually face declining health and functioning, their

specific health trajectories may vary widely. Some older adults experience a sudden and rapid decline from good health to death, while for others, the decline in functioning will occur gradually over many years and yet others will experience periods of illness and disability interspersed by periods of partial or full recovery.

The obvious heterogeneity in the health status of older adults underscores the need for health systems that are responsive to the diversity of their experience. Likewise, other sectors must respond by creating the infrastructure and environments that support older adults with varying functional capacities. This includes, for example, housing and transportation infrastructure that is accessible and safe for older persons, suitable employment, and healthy environment. Thus, changes are needed around the globe in general and in Nigeria in particular to adapt health systems to serve a growing number and proportion of older adults and to maximize health and well-being at all ages. World Health Organization, importantly, emphasizes that the changes needed to ensure that older persons receive the health care they require need not imply exorbitant increase in national health budget. In this study, we examine the 2015 UN Report on population ageing including some of the key trends identified as central to the health care needs or older persons and their associations with population ageing.

Literature Review

With statistical data to back it, the United Nations Population Division [UNPD], (2015), writing on levels and trends of ageing posits that globally, the number of older persons is growing faster than the numbers of people in any other age group. As a result, the share of older persons in the total population is increasing virtually everywhere. While population ageing is a global phenomenon, the ageing process is more advanced in some regions than in others, having begun more than a century ago in countries that developed earlier, and getting underway only recently in many countries where the development process has occurred later, including the decline of fertility.In 2015, one in eight people worldwide was aged 60 years or over. By 2030, older persons are projected to account for one in six people globally. By the middle of the twenty-first century, one in every five people will be aged 60 years or over.By 2030, older persons will outnumber children aged 0-9 years (1.4 billion versus 1.3 billion). By 2050, there will be more people aged 60 years or over than adolescents and youth aged 10-24 years (2.1 billion versus 2.0 billion) (UNPD, 2015).

The pace of world population ageing is accelerating. Projections indicate that the proportion aged 60 years or over globally will increase more than 4 percentage points over the next 15 years, from 12.3 per cent in 2015 to 16.5 per cent in 2030, compared to the 2.3 percentage points increase in the share of older persons that occurred between 2000 and 2015. By 2030, older persons are expected to account for more than 25 per cent of the populations in Europe and in Northern America, 20 per cent in Oceania, 17 percent in Asia and in Latin America and the Caribbean, and 6 per cent in Africa.In 2050, 44 per cent of the world's population will live in relatively aged countries, with at least 20 per cent of the population aged 60 years or over, and one in four people will live in a country where more than 30 per cent of people are above age 60. The pace of population ageing in many developing countries today is substantially faster than occurred in developed countries in the past (Organization for Economic Cooperation and Development [OECD], 2015; United Nations [UN], 2015a, 2015b;

World Health Organization, (2015);   Consequently, UN (2015b) warns that today's developing countries must adapt much more quickly to ageing populations and often at much lower levels of national income compared to the experience of countries that developed much earlier.

When these figures are localized one notices a drastically disturbing increase in the number of people aged 60 years and above in Nigeria. Figures from the National Population Commission (NPC) show that in 1999 there were 4,598,114 Nigerians aged 60 years and above. Of this number 906,675 were aged 80 years and above, out of which 488,644 were males while 350,772 were females. At 15 years interval, that is, by 2006, the population of the aged, that is 60 years and above, increased by 2,388,933 to 6,987,047. This figure represents 52 per cent increase between 1999 and 2006. Of this figure 1,475,278 were aged 80 years and above representing 18 per cent increase from 1999 to 2006. Of the population aged 80 years and above, 812,701 (0.6) were males while 662,577 (0.4) were females (NPC, 1999, NPC, 2008).

In spite of the increase in population of the aged in Nigeria, UN (2015) observes that Fertility decline in Nigeria began relatively recently and thus the country has not yet experienced an increase in the proportion of older persons. In 2015, 4.5 per cent of Nigeria's population was aged 60 years or over and that proportion is projected to change only slightly (to 4.8 per cent) through 2030. By 2050, however, the proportion of older persons in Nigeria is expected to have begun to grow more significantly, reaching 6.3 per cent in the medium variant projection, 7.0 per cent if total fertility falls to 0.5 children per woman lower than the medium variant, or 5.8 per cent if total fertility declines less rapidly, to a level that is 0.5 children per woman higher than in the medium variant. Higher fertility in Nigeria is also associated with greater uncertainty in projected future fertility. Both the high- and low-fertility scenarios fall well within the 80 per cent prediction interval associated with the probabilistic projections of total fertility for Nigeria (UN, 2015; WHO, 2015). The effect of international migration and other variables are, however, ignored in these projections.

Mirkin and Weinberger (2000) and OECD, (2015b) note that there can be little doubt that changes in age distributions have complex social and economic implications at the societal and individual levels. Of course, they have. Kinsella (2000) notes that, while growths may appear small, even one percent jump in 20-year period profoundly affects a country's infrastructure. Its impact on the family and health care system is significant. International Labour Office (2014) add that as the aged near the end of their lives they are likely to require an enormous output of resources - financial, social, and psychological. Service expenses, whether home based or not, are consuming vast amount of public funds and contribute to the fiscal crisis facing all nations in the developed world (Lindsey & Beach, 2004). The impact might be worse if the increasing population of the aged is not assisted to age successfully.

Theoretical Review

Two theories which give credence to this study were reviewed. The fist is the activity theory. The activity theory is of functionalist perspective. The theory, developed by Havighurst in 1963, suggests that successful ageing means not only that role performance and involvements continue, but that new ones - not simply substitutions for old ones - are developed (Havighurst, 1963; Havighurst, 1968). According to this theory, successful ageing is linked to substantial

levels of interpersonal, physical, and mental activity that help resist a potentially shrinking social world. The choices made at this stage of life will depend in part on opportunities for continued involvement in work or leisure activities that are not regulated by law or limited by cultural beliefs about the aged. Activity theory assumes that the elderly have the same social and psychological needs as middle-aged persons, so these norms become the guideposts for behaviour. According to Sheehy, (1995) there is a strong correlation between activity level, happiness, moral, and life satisfaction in late middle age and old age. According to this theory, both the men and the women who emerge in old age as psychologically healthiest use activity to shape a new self as their expectations and goals change. While involuntary role loss may occur, such as compulsory retirement, activity theory offers a variety of mechanisms to offset such role loss. For example, in most societies of the world, including Nigeria, those who age successfully remain active even after retirement by engaging in such roles as engaging in contract jobs, venturing into politics, becoming contractors, volunteering, learning new things, and becoming community leaders beside the culturally expected roles of the older adults.

The second theory is the ecological model of ageing developed by Lawton and Nahemow (1973) which is based on the premise that the interaction between a person and his or her environment results in some level of adaptation, which is measured in terms of a person's emotional (effective) well-being and behaviour. According to Gitterman and Germaine (2008), the ecological theory focuses on the person-in-environment and the continual interactions and transactions between the aged and their environments. The model focuses on the growth, development and potentialities of the aged and with the properties of their environments that support or fail to support the expression of human potential.

In the original ecological model (Lawtonn&Nahemow, 1973), the older adult was viewed as a recipient of the press exerted by the environment, more recently Lawton (1989, 1999) has emphasized the transactional nature of the person-environment interaction. Thus, rather than viewing the older adult as a passive responder to the environment, the older adult is considered capable of initiating interaction with the environment. An older adult who is high in competence will be able to identify and shape the resources that are potentially available in the environment. Furthermore, an individual who is low in physical competence may have sufficient cognitive and/or social competence to take advantage of environmental resources compared to the individual who is not competent cognitively or socially. A competent individual's ability to shape the environment can result in successful ageing, assuming that the press of the environment is not too great.

Methods
The design adopted for this study was documentary research design. The study has within its scope, to explain the implications of the United Nations Report on population ageing ageing on Nigeria. Data on demographic trends used in this study were taken from the 2015 Revision of the official United Nations World population estimates and projections. Data on labour participation were obtained from the international Labour Organization (2015), and data on retirement age and healthy life expectancy, causes of morbidity and mortality, and burden of disability were obtained from the World Health Organization (2014). Data on local population ageing were obtained from projections on the 2006

National Housing and Population census (2008). Direct content analysis was employed in analyzing data collected from the above sources.

Findings

The United Nations (2015) Report on population ageing shows that five key findings were made. We hereby look at and examine these key findings as they relate to population ageing and health of older adults in Nigeria.

i.   People lost an average nine years of healthy life due to disability in 2013.

Life expectancy at birth summarizes the average number of years a person would be expected to live if exposed throughout their lives to the age-specific mortality rates of a given period, while healthy life expectancy summarizes how many of those years are expected to be lived in good health, free of disease and disability. In 2013, life expectancy was 71 years globally and the corresponding value of healthy life expectancy was 62 years. Across the six regions defined by WHO for statistical purposes, healthy life expectancy was longest in the Western Pacific at 68 years, followed by Europe and the Americas both at 67 years. Healthy life expectancy was shortest in Africa at 50 years, as was life expectancy at birth at 58 years.

ii. On average people in longer-lived populations tend to spend more years living with disability than people in populations where the average lifespan is shorter. In general, according to the report, the number of healthy years lost due to disability tends to be greater in countries with shorter average life spans. People who live in countries with longer life spans lost more healthy years of life, on average, than those living in countries with shorter life spans. However, when one considers, instead, the number of healthy years lost due to disability as a percentage of the average lifespan, an inverse association is revealed across countries: On average, people living in countries with longer life expectancies at birth tend to spend a smaller proportion of their lives with disability or ill-health relative to people living in countries with shorter life expectancies overall.

iii. Growing numbers of older persons lead to greater demands for the prevention and treatment of the non-communicable diseases associated with old age. Population growth equate to an increasing number of people who require access to health care. This is irrespective of any association between population ageing and the length of healthy life. The prevalence of chronic illness and the disabilities they cause are strongly associated with age. For this reason, the very rapid current and future growth in the number of older persons foretells a surge in the demand for care aimed at the prevention and treatment of the health conditions they face. Indeed, WHO estimates of the burdens of disability caused by non-communicable diseases (NCDs) indicates a powerful association with the pace of growth of the older population.

iv. Population ageing will not necessarily imply growing burdens of disability.

According to the UN (2015) population ageing report, there are several plausible explanations for why ageing may not lead to greater levels of disability in a population overall. First countries that are more advanced in the ageing process tend to be those with higher levels of economic development, which is associated with improvements in health and well-being. Second, the more aged and more developed countries are often better able to treat illness or to accommodate disabilities that commonly occur in older persons, thereby lessening the degree of functional limitations they cause. Thus, while vision impairments associated with cataracts, for example may cause minimal limitation in a

country that offers corrective surgery or adaptations that preserve the functional capacities of persons with poor sight, the same health condition could be profoundly be disabling in contexts where such treatments or adaptations are not available. Surveys of older persons in sub-Saharan Africa indicate high rates of hypertension, musculoskeletal disease, visual impairment, functional limitations and depression, many cases which go undiagnosed or untreated (Aboderin& Beard, 2015). Finally, some of the health conditions that commonly afflict young people in the comparatively youthful developing regions cause chronic disability, adding substantially to the overall level of disability in the population. Parasitic diseases, such as intestinal worm, are examples. They afflict hundreds of millions of mostly poor people in the developing regions and are among the leading causes of disability worldwide (Hotez, 2008).

v. Population ageing need not imply exorbitant increases in national health budgets. Despite the impending increased need for care, several studies have found that older persons use health services significantly less often than younger adults. Often the lower rates of health care utilization among older persons reflect inadequacies in the availability or delivery of care, or structural barriers that prevent older adults from utilizing the care they need, which occurs in both developed and developing countries (WHO, 2015). Some evidence from high income countries indicates that health expenditures per person actually fall significantly starting around age 70 (Kingsley, 2015).

Discussion

The first item on the report on population ageing and health indicates that people lost an average nine years of healthy life due to disability in 2013. For the world as a whole in 2013, the life expectancy of 71 years and healthy life expectancy of 62 years imply that on average, approximately nine years of healthy life were lost due to disability. Across the regions, average number of healthy years of life lost due to disability range from 8 years in Africa and in the Western pacific to 10 years in the Americas. The percentage of the Nigerian population aged 60 years or over is 4.5 (UN, 2015). Life expectancy at birth in Nigeria is 52 years, while healthy life expectancy in Nigeria is 47 years. The implication of this is that 5 years, on average, are lost to disability in Nigeria (WHO, 2015). The policy implication of this is that Nigeria should evolve policies in the health sector aimed at reducing years lost to disability by increasing healthy life expectancy. This can be achieved by offering treatments and enhancing adaptations to those non-communicable diseases that lead to disability. Early diagnosis and treatment is a sure way of preventing disabilities. Survey of older persons' health in Sub-Saharan Africa indicate high rates of hypertension, musculoskeletal disease, visual impairment, functional limitations and depression, many cases of which go undiagnosed or untreated (Aboderin& Beard, 2015).

The second item on the report on population ageing and health states that on average, people in longer lived populations tend to spend more years living with disability than people in populations where the average lifespan is shorter. In spite of the above report, associations observed in cross section among countries do not necessarily persist in assessment of changes over time within a given population. That is, just because the years of healthy life lost tend to be greater among countries with higher life expectancies at birth does not guarantee that the number of healthy life years lost will increase as longetivity improves in a given country. Whether the growing number of

older persons is enjoying their added years of life in good health is a crucial consideration for policy development in Nigeria (WHO, 2015). The federal Government of Nigeria and the component states have to understand that, if the added years of life expectancy are spent in disability or ill-healthy, then the coming trends in population ageing could portend substantially increased demand for health-care, while also preventing families, communities and societies from benefiting from the contributions that older persons would otherwise be able to make it they remained in good health. In contrast, if the onset of severity of ill-health is increasingly postponed as life expectancy increases - a phenomenon termed a "compression of morbidity" – then the health system pressures exerted by population ageing may be attenuated (UN, 2015). This is the thrust of gerontology "to enable people age successfully, so that as lifespan increases, the health span increases proportionately". The policy thrust should centre around this.

The third item on the report on population ageing and health states that "growing number of older persons lead to greater demands for the prevention and treatment of the non-communicable diseases associated with old age". The table below shows the ten leading causes of disability globally among older person by sex.

Table 1: Ten Lead causes of Disability Globally among Older Person, by Sex, 2012

S/N	Females	YLDs per 100,000 people	Males	YLDs per 100,000 people
1	Unipolar depressive disorder	1465	Other hearing loss	1870
2	Other hearing loss	1427	Back and neck pain	1530
3	Back and neck pain	1413	falls	1347
4	Alzheimer's disease + other dementias	1295	Chronic obstructive pulmonary disease	1276
5	Osteoarthritis	1201	Diabetes mellitus	1121
6	Chronic obstructive pulmonary disease	1200	Retractive errors	902
7	Diabetes Mellitus	1143	Unipolar depressive disorders	883
8	Refractive errors	1066	Alzheimer's disease and other dementias	850
9	Falls	998	Hyperplasia of prostate	840

| 10 | Cataracts | 756 | Oseoarthratis | 739 |

Source: WHO, 2014
YLDs = Years of life lost due to disability

Indeed, growing number of older almost certainly portends growing demand for the prevention and care of non-communicable diseases, however, any association between the proportion of older persons in the population and the burden of disability or demand for care is less direct. The WHO's global health estimates suggest that the share of older persons is, in fact, a poor predictor of the overall burden of disability in a population. The implication of the knowledge about leading causes of disability is that governments should take proactive measures to forestall their occurrence, or when they occur should treat them to limit functional limitations.

The fourth issue on the report on population ageing and health is that population ageing will not necessarily imply growing burden of disability. Given the growth of the older population, which will occur in virtually every country, including Nigeria, in the world over the coming decades, health systems should prepare now to address the specific health concerns of older persons. Addressing disability among older persons entails not only treating health conditions as they arise, but also:

i)   Providing the necessary accommodations, such as eyeglass, hearing aids and accessible housing and transportation, to reduce the degree of functional limitations they cause;

ii)   Preventing or postponing the incidence of disability-causing conditions in the first place. A growing body of research supports the notion that much of the disability-causing chronic disease that arises in old age is linked to exposure to risk factors early in life, or events prior to birth. Factors like low birth weight, childhood obesity, poverty, and experiences of stress during childhood have all been linked to the onset of chronic diseases, such as heart diseases and diabetes in adulthood (Barker, 2004; Haas, 2008; Hayward & Gorman, 2004; Winning & Ashley, 2015). The implication of this is that the Nigerian Government needs to appreciate the importance of fostering good health and habits early in life to prevent or postpone the onset of morbidity at old age.

The fifth and last issue on the report on population ageing and health is that "population ageing need not imply exorbitant increases in national health budgets." Nigeria needs not get perturbed by population ageing. If population ageing were the major drivers of increases in health costs, then the largest in per capita health expenditures would be observed in the countries that were ageing the fastest. However, this is not the case. Contrary to this, most of the countries that experienced extremely rapid rises in health care expenditures since 2000 were ageing relatively slowly. Given the loose and variable relationship between population ageing and health expenditures, WHO (2015) cautions that to predict increases in healthcare costs on the basis of population ageing is simplistic and unlikely to lead to good policy decisions. Instead, a host of other factors should be taken into account when evaluating short and long-term trends in health-care costs, such as technology related changes, growth in personal income, and cultural norms and attitudes surrounding end-of-life care.

Recommendations

The above analysis of the UN report on population ageing and health and its implication on Nigeria is meant to alert Nigeria on the content of the report. The following recommendations are put forward to guide Nigeria prepare for the inevitable population ageing.

      i.   Changes are needed at the Federal and State levels and in all the component regions to adapt health systems to serve a growing number and proportion of older persons and to maximize health and well-being at all ages. Such changes may include adequate (free) medication for older adults including those in rural areas where the incidence of disability is highest.

      ii.   Research shows that many of the disability-causing chronic diseases that arise in old age is linked to exposures to risk factors early in life, or even prior to birth. Factors like low birth weight, childhood obesity, poverty, and experiences of stress during childhood have all been linked to the onset of chronic diseases, such as heart disease and diabetes in adulthood. It is therefore, recommended that Nigerian government evolve health care systems and habits at pre-maternal level and early in life to prevent or postpone the onset of morbidity at old age.

      iii.   Ecological theory of ageing posits that the social environment of the aged affects his ageing pattern. For people to age successfully, the Nigerian government should not only treat health conditions as they arise but should of necessity provide the necessary accommodations such as eyeglass, hearing aids, and accessible housing and transportation, to reduce the degree of functional limitations they cause. "Government should provide" because poverty rate is high in Nigeria and higher among older adults implying that they on their own may be unable to provide these necessities.

      iv.   Compression of morbidity should be the guiding principle in geriatric policy formulation and implementation. This is because if the onset or severity of ill-health is increasingly postponed as life expectancy increases the health system pressures exerted by population ageing may be attenuated.

      v.   Periodic medical diagnosis of not only older adults but also these in middle ages is necessary in order to detect disability-causing ailments and nip them in the bud. If the cost of diagnosis is heavy on the people, this recommendation may not be realizable. Therefore, diagnosis should be heavily subsidized.

      vi.   Population trends indicate that virtually every country should anticipate significant growth in the number of older persons over the coming decades. Nigeria is not exempted from this trend. It is, therefore, strongly recommended that Nigerian governments and agencies evolve multisectoral policies to ensure that older persons are able to participle actively in the economic, social, political and cultural life of the Nigerian society. This is to ensure the well-being and full socio-economic integration of older persons while maintaining the fiscal solvency of pension and health care systems and promoting economic growth.

      vii.   Lastly, it should be observed that the ten leading causes of disability among older adults by sex, shown on table one reflect global occurrence. Research should be carried out in Nigeria to find out the leading causes of

disability within the country. It may well be that other ailments like malaria, AIDs, and some other tropical diseases are more important leading causes of disability in Nigeria. Such finding will enable Nigeria focus on research-based interventions.

Conclusion

As populations grow increasingly aged, it is more important than ever that the Nigerian government designs innovative health policies and public services specifically targeted to older persons. In Nigeria where existing health systems are weak and ill-prepared/equipped to address the health needs of an ageing population, there should be conscious effort to evolve and expand necessary health systems in preparation for a growing burden of non-communicable diseases. As life expectancies increase in Nigeria, it becomes more important than ever for Nigerian governments to enact policies that promote lifelong health and emphasize preventive care-such as those that support good nutrition and physical activity, and discourage tobacco use and the harmful use of alcohol and drugs – to prevent or postpone the onset of age-related disability. This is the position of the United Nations and World Health Organization in the 2015 report on population ageing and health.

Population ageing does not necessarily imply growing burdens of disability. Although population ageing poses economic challenges, two recent studies concluded that ageing need not impede economic growth, and in fact, could support continued economic growth under certain conditions (Lee & Mason, 2010). The authors proposed that an additional contribution to economic growth beyond the period of the first dividend, termed the "second demographic dividend", could be generated when low fertility and rising longitivity lead to an increase in human capital and physical investment, which in turn raises labour productivity and income per capita. The authors present evidence that lower fertility is strongly associated with rising rates of investment in human capital per child which raises labour productivity and economic growth.

Healthy living and general well-being of older adults are integral to the above findings. However, Nigeria has not viable health policies for the increasing older persons. A recent assessment by the World Health Organization warns that health systems around the world are falling short with respect to meeting the needs of older persons (WHO, 2015). In Nigeria, current public-health approaches to population ageing have clearly been ineffective. The health of older people in Nigeria is not keeping up with increasing longitivity. Current national health systems are poorly aligned to the care that older populations require. Physical and social environments present multiple barriers and disincentive to both health and participation. Nigeria must therefore evolve innovative approaches to ensure that the health span increases as life span increases in Nigeria.

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