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Health and Lifestyle as Determinants of Retirement Longevity Among Elderly Population in Tanzania

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Abstract

The elderly are typically defined as individuals aged 60 or 65 years, although in developed countries, where life expectancy exceeds 70 years, this definition is extended to those aged 65 and above (Population Reference Bureau, 2012). This study examined retirement longevity among 115 retirees in mainland Tanzania, selected on a probabilistic basis from four regions. Employing descriptive and survival analyses, the study adopted a quantitative approach to test predetermined assumptions. Results showed that 75% of male retirees reported being free from both communicable and non-communicable diseases before retirement. However, post-retirement health outcomes revealed that 66.7% of males and 33.3% of females suffered from blood pressure or cancer-related diseases. Despite these noted results, no strong correlation was found between pre-retirement health and future longevity, although elderly individuals remain highly susceptible to illness. The findings further revealed that 51.2% of urban retirees engaged in post-retirement employment or investment activities compared to 39.4% of rural retirees. However, residential status (urban vs. rural) showed no significant effect on survival outcomes, as indicated by the statistically insignificant chi-square result ($p = 0.185$) at the 5% significance level. This suggests that a retiree's choice of residence does not significantly influence longevity or mortality. In conclusion, while health vulnerability increases in post-retirement, neither health status before retirement nor residential location appears to have a decisive impact on the survival of retirees in Tanzania.

Keywords: *Retirement, Longevity, Health, Lifestyle; and Elderly*

1. Introduction

The concept of elderly refers to a category of adults who have attained advanced ages, more specifically those who have reached the retirement age of a particular country (Population Reference Bureau, 2012). The demographic understanding of the term "elderly" refers to persons aged 60 or 65 years. In developed countries, where life expectancy is high (i.e., more than 70 years) and the retirement age for public service is 65 years, the elderly are defined as persons aged 65 years and above (Population Reference Bureau, 2012). In contrast, in developing countries, where life expectancy at birth is lower—around 60 years, though gradually increasing—the retirement age is typically 60 years, and the elderly are defined as persons aged 60 years and above (Ghana Statistical Service, 2013). At the international level, age 60 is now being used as the cut-off age for defining the elderly (United Nations Population Fund and HelpAge, 2012; UN, 2011; Zanjani et al., 2015).

At the biological level, aging results from the cumulative impact of a wide variety of molecular and cellular damage over time (WHO, 2021). This leads to a gradual decrease in physical and mental capacity, a growing risk of disease, and ultimately death. These changes are neither linear nor consistent and are only loosely associated with a person's chronological age. The diversity seen in older age is not random. Beyond biological changes, aging is often

associated with other life transitions such as retirement, relocation to more appropriate housing, and the death of friends and partners (WHO, 2021).

In China, aging is one of the greatest challenges of the 21st century. Data from the 2010 Sixth National Population Census show that the Chinese population aged 60 years and above reached 177.6 million, representing 13.26% of the total population. Meanwhile, the Chinese population aged 65 years and above reached 118.8 million, equivalent to 8.87% of the total population (Ping Gao & Han-Dong Li, 2016). The key question that arises is: Are these additional years of life spent in good health or in a prolonged state of illness and dependency? Another important question is whether the increase in life expectancy will be accompanied by more or fewer years spent in poor health and/or disability (Ping Gao & Han-Dong Li, 2016). Disability is associated with limitations in carrying out activities of daily living (ADLs), such as walking (ambulating), feeding, dressing and grooming, toileting, bathing, transferring, managing finances, managing transportation, shopping, and meal preparation. It also includes housecleaning and home maintenance, managing communication (e.g., telephone and mail), and managing medications (i.e., obtaining and taking them as directed) (Schulz & Eden, 2016; Karz et al., 1963).

Similarly, Ghana is among the countries in the world that adopted the United Nations retirement age, which uses 60 years of age to define the elderly (Ghana Statistical Service, 2013). According to the Ghana Population and Housing Census Report (2010), the population of the elderly has increased more than sevenfold since the 1960 census, rising from 213,477 in 1960 to 1,643,381 in 2010 (Ghana Statistical Service, 2013). The proportion of the female elderly population is 56% compared to 44% for males, indicating a higher life expectancy among females. A higher proportion of the elderly population (54%) resides in rural areas, while 47% of elderly females and 44% of elderly males reside in urban areas (Ghana Statistical Service, 2013).

The same trend is also observed in India. According to the India Central Statistics Office (2011), the size of the elderly population, defined as persons above the age of 60 years is growing rapidly, although it constituted only 7.4% of the total population at the turn of the millennium (2001). For an emerging country like India, this demographic shift may pose mounting pressures on various socio-economic factors, including pension payouts, health care expenditures, fiscal discipline, saving levels, and medical and psychological challenges (India Central Statistics Office, 2011).

To address aging issues, the Government of India adopted the "National Policy on Older Persons" in January 1999. This policy provides a broad framework for state governments to take positive actions for the well-being of older persons by devising their own policies and plans of action. The policy defines a "senior citizen" as a person who is 60 years old or above (India Central Statistics Office, 2011). Additionally, the Central Statistical Office indicates that about 65% of the elderly depend on others for their day-to-day needs. Less than 20% of the elderly are economically independent, with the majority of economically independent elderly being men (India Central Statistics Office, 2011).

In the United Republic of Tanzania (URT), the country covers an area of 945,090 square kilometers and is located in East Africa, facing the Indian Ocean to the east. It is bordered by Kenya and Uganda to the north, the Democratic Republic of Congo, Burundi, and Rwanda to the west, and Malawi, Mozambique, and Zambia to the south (LHRC, 2007). Based on the 2012 census, the population of Tanzania Mainland is 43.7 million, of whom 51% are women and 44% are children under the age of 15 years. The National Bureau of Statistics (NBS) indicates that persons aged 60 and above account for 2.5 million, which is approximately 5.6% of the population. The average life expectancy at birth is 56 years, with 53 years for males and 58 years for females (World Bank, 2008).

The age-sex distribution of the United Republic of Tanzania, as illustrated in Figure 1, suggests rapid population growth indicated by the wide lower bands, while the older population sharply declines after age 50, implying a high death rate. This figure reflects that Tanzania's population is predominantly young, with individuals aged 0-19 making up the majority and older age groups diminishing significantly. This trend indicates that the death rate among older individuals surpasses the birth rate, resulting in a smaller elderly population.

In comparison, countries like the USA have 14.5% of their population aged 65 and over, while India has 5.8% (CIA World Factbook, 2014). In East Africa, the elderly population aged 65 and over is estimated at 2.8% in Kenya and 2.1% in Uganda. These statistics are similar to Tanzania's 2.97% elderly population (CIA World Factbook, 2014), suggesting that East African countries face significant mortality challenges among the elderly.

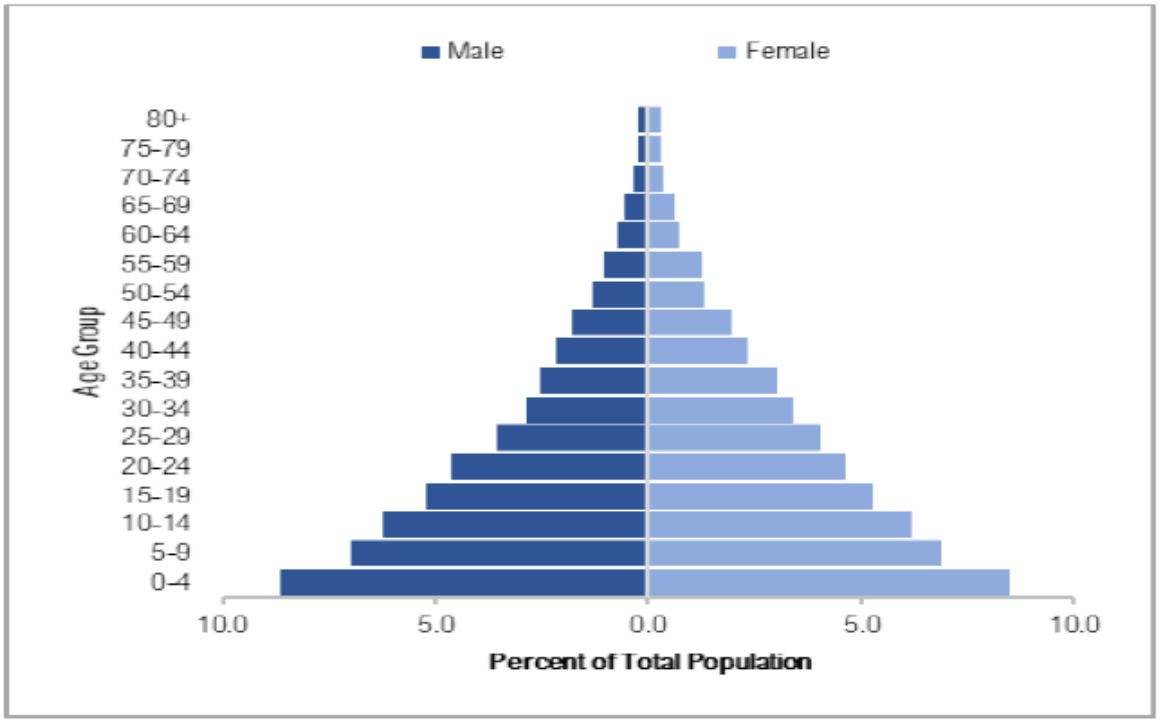

Figure 1: The URT Age-Sex Distribution (Source: NBS, Tanzania in Figures, 2020)

Mandatory retirement refers to the age at which employees are required to retire, typically set at 60 years in Tanzania and some African countries, including Kenya and Uganda (Bukwimba, 2016, 2022). The Tanzania Progress Report on the Madrid International Plan of Action on Ageing (MIPAA, 2007) supports this finding.

This study focuses on the health history and lifestyle of the elderly, whether in urban or rural areas, as key determinants of mortality. Empirical studies (Robert & Joanne, 2013) indicate that education, income, and alcohol abuse are strong indicators of retirement mortality. Furthermore, research by Hurd et al. (1996) demonstrates differential mortality associated with socioeconomic status, such as income, wealth, and education among populations aged 70 and older. Vallin (1995) also highlights that health behaviors—such as smoking, alcohol consumption, and obesity negatively impact mortality, both directly and indirectly through healthcare access. This study aims to explore the factors affecting the longevity of employees in the United Republic of Tanzania post-retirement, emphasizing health history and lifestyle (urban or rural) before and after retirement.

2. Literature Review

2.1. Effects of Working Conditions on Health

About 70 percent of workers in the United Republic of Tanzania believe that their health is affected by their work or working conditions (ILO, 2009). The most common health problems reported by workers interviewed in the study conducted by ILO (2009) include overall fatigue, hearing problems, stomach aches, and respiratory issues. The findings further revealed that employees are exposed to various physical risks, such as loud noises, high temperatures, and the lack of proper safety construction equipment, which increase their vulnerability to higher mortality rates (Nappo, 2019; ILO, 2009).

2.2. Health Background of Elderly People in Tanzania

Health history is closely associated with several indicators, including diabetes, blood pressure, obesity, alcohol consumption, and smoking behavior (Brian & Adrian, 2010). It is evident that elderly individuals with diseases such as diabetes and high blood pressure are at a higher risk of mortality, particularly because many of them experience increased stress when faced with the total loss or reduction of income. Other health indicators that may contribute to or influence mortality in old age include smoking, excessive alcohol consumption, and obesity. In their study, Wei et al. (1999) observed that, compared to men with normal weight, obese men have a significantly higher risk of cardiovascular disease-related mortality as well as all-cause mortality.

Similarly, Lantz et al. (1998) highlighted that certain health behaviors, such as obesity, alcohol abuse, cigarette smoking, and lack of physical activity, are associated with a notably higher risk of death due to specific causes. They also found that the prevalence of these four behavioral risk factors varies significantly based on educational attainment and annual household income. Individuals with the least education and lowest income are more likely to smoke, be overweight, and fall into the lowest quintile for physical activity. Furthermore, Lantz et al. (1998) concluded that health behaviors and socioeconomic factors are critical determinants of mortality.

On the other hand, Vaillant and Mukamal (2001) suggested that avoiding alcohol and cigarette abuse is the most protective factor for successful aging. In other words, alcohol and cigarette abuse substantially increase the risk of mortality.

The BRDIS (2004) report on “Burden of Disease in Old Age” noted that diseases are the leading cause of impairments and functional decline, which ultimately result in disability. However, Lorig et al. (1999) and Nikson et al. (2002) found that older individuals aged 70 years and above typically have two to three chronic diseases, which account for about two-thirds of the total national health service expenditures.

2.2.1. Infant Mortality Rates

High infant mortality rates in Tanzania are caused by numerous health issues that affect the daily lives of its citizens. The country’s infant mortality rate, at 72 deaths per 1,000 live births, is alarmingly high (HDR – UNDP, 2005). Every individual, regardless of their nation of birth, should have access to adequate medical care. Globalization facilitates the transfer of medical resources and knowledge, which can help Tanzanians improve their health standards. Consequently, Tanzanians should have access to medical care comparable to that available in first-world countries. Although Tanzania’s infant mortality rate is lower than that of some neighboring African nations, such as Malawi (92 deaths per 1,000 live births) and Mozambique (109 deaths per 1,000 live births), it remains unacceptably high (Ogbo et al, 2019).

2.2.2. Death Rate in Adults

According to the Mortality and Health Report by the National Bureau of Statistics (NBS, 2015), the adult mortality rate—referring to the overall mortality of the working class aged 15–64 years, which constitutes the majority of Tanzania's labor force—was 6.6 deaths per 1,000 persons. The report also noted that the mortality rate for individuals living in rural areas was 6.3 deaths per 1,000 persons, which was lower than the mortality rate for those living in urban areas, recorded at 7.5 deaths per 1,000 persons.

In contrast, the mortality rate among elderly people in the country was significantly higher. For individuals aged 60–64 years, the mortality rate was 57.4 deaths per 1,000 persons, while for those aged 65 years and above, it rose even further to 74.8 deaths per 1,000 persons. Based on these statistics, among other factors, the researcher sought to explore the underlying reasons for the high mortality rates among the elderly population in Tanzania.

2.2.3. Life Expectancy

Life expectancy in Tanzania is approximately 50 years, ranking 194th out of 222 countries (Lisa et al., 2008). However, by 2013, life expectancy at birth had increased to 61 years, as reported by WHO (2012). The shorter life expectancy in Tanzania can be attributed to various factors, including widespread diseases such as cholera, malaria, and HIV/AIDS. Other possible diseases contributing to shorter life expectancy are shown in Figure 2, which indicates that 31 percent of total deaths in the country are caused by non-communicable diseases (NCDs) among individuals aged 30 to 70 years. In other words, 31 percent of the total deaths in the United Republic of Tanzania occur among the working population and retirees within 10 years after retirement.

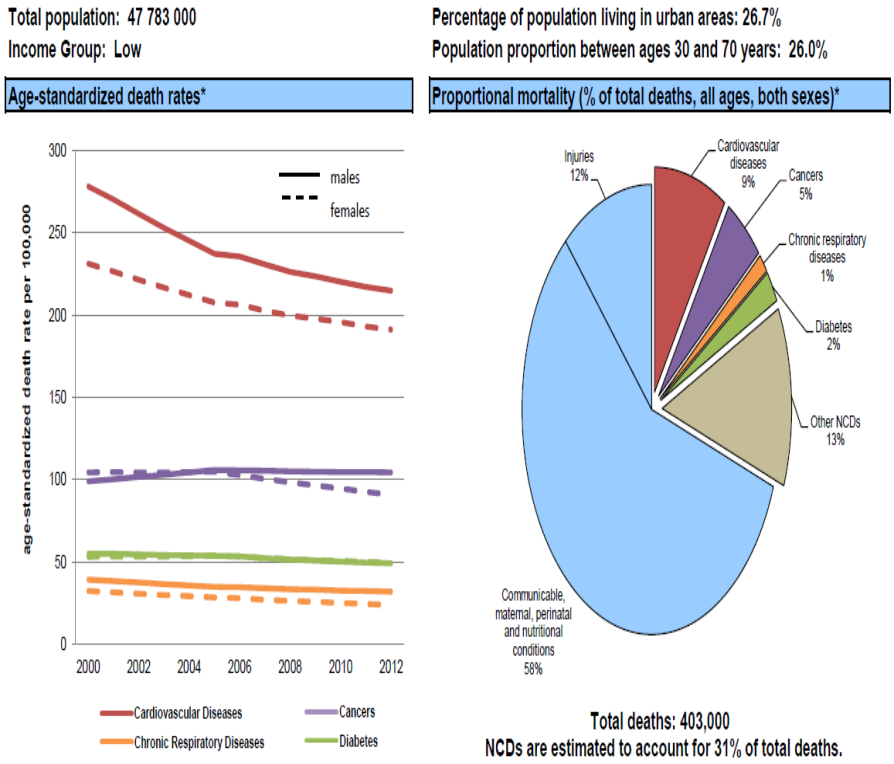

Figure 2: Tanzania with Non-Communicable Diseases (Source: WHO - United Republic of Tanzania 2012)

2.3. Life Style (Residential Status)

Tanzania is among the Sub-Saharan countries where a large portion of the population resides in rural areas (NBS, 2012). The economies of rural Tanzanian communities are primarily supported by subsistence agriculture, which provides little to no pension coverage and limited access to health services. The age structure in these areas is influenced by the emigration of younger people to urban centers in search of white-collar jobs in either the public or private sector, as well as the return of elderly individuals to rural areas upon retirement (Mwanyangala et al., 2010).

The United Nations (2007) highlighted that elderly people, both in urban and rural areas, continue to face several significant challenges, which pose an ongoing problem for the government. These challenges include: food shortages, lack of safe drinking water, inadequate clothing, difficulty in obtaining firewood, insufficient financial means to pay for health services, poor housing conditions and the responsibility of caring for children infected with HIV/AIDS and orphaned grandchildren.

The report by UN (2007) further recommended that the government should address the most pressing concerns affecting the daily quality of life for impoverished elderly individuals. The priorities identified for government action include:

i) Allocating sufficient resources in the national budget to protect the interests and rights of the elderly population, such as access to health care, water, and housing.
ii) Ensuring health providers are aware of payment exemptions for elderly Tanzanians and that they deliver high-quality services and care.
iii) Developing community-based initiatives to revive adult education, including involving retired teachers as educators.
iv) Providing access to credit, legal, and financial facilities on fair and transparent terms for all citizens, including elderly individuals.

The United Nations (2007) pointed out that elderly people both in urban and rural areas continue to experience the following problems which present a continuing challenge to the government:

i) Food shortage
ii) Lack of safe drinking water
iii) Problems in obtaining adequate clothing
iv) Difficulty in obtaining firewood
v) Lack of financial means to pay for health services
vi) Lack of standard housing
vii) Care of HIV/AIDS infected children and the care for the orphaned grandchildren are among the challenges older people are facing.

The report by UN (2007) went further by recommending to the government the most pressing concerns which affect the day-to-day quality of life of poor older people.
The following priorities were identified for government action:

i) National budget allocation to safeguard the interests and rights of the elderly population such as Health, Water, and Housing.
ii) Ensuring health providers are aware of exemptions of payment for the elderly Tanzanians and provide elderly people with good quality services and care.
iii) Developing community-based mechanisms to revive adult learning, including the involvement of retired teachers as educators.
iv) Ensuring that credit, legal and financial facilities are available to all people on clear terms, including elderly people.

2.4. The Policy Issues Regarding Elderly People in Tanzania

The Constitution of the United Republic of Tanzania (1977), as amended in 1984 and 1995, recognizes the human rights of all citizens. These rights are enshrined in a range of legislative instruments. Regarding elderly people, Tanzania has responded to the United Nations Declaration No. 46 (1991) on elderly people's rights by formulating and approving the National Ageing Policy (2003), which incorporates many recommendations from the Madrid International Plan of Action on Ageing (MIPAA) and the African Union Policy Framework and Plan of Action on Ageing (AUPFPA).

The main objective of the National Ageing Policy (2003) is to ensure that elderly people are valued members of society, provided with rights and services, and given the opportunity to fully participate in the daily life of their communities. The specific objectives include:

i) To recognize older people as a resource.
ii) To create a conducive environment for the provision of basic services to older people.
iii) To allocate resources for older people's income-generation activities.
iv) To empower families for sustained support to older people.
v) To initiate and sustain programs that provide older people with opportunities to participate in economic development initiatives.
vi) To prepare strategies and programs aimed at eliminating negative attitudes and age discrimination.
vii) To enact laws that promote and protect the welfare of older people.
viii) To ensure that older people receive basic health services.
ix) To develop programs that provide opportunities for older people to sustain positive customs and traditions for the youth in society.

The government of the United Republic of Tanzania also recognizes that population ageing is a cross-cutting issue. Effective interventions require partnerships between the central government, local government authorities, voluntary agencies, families, and villages, with each stakeholder contributing to the design and implementation of plans to ensure their effectiveness. Despite the existence of policies and frameworks designed to facilitate stakeholder action on ageing, adequate budgets have not been allocated, and elderly people remain marginalized within the Poverty Reduction Strategy (URT, 2007).

Although numerous studies (e.g., Robert & Joanne, 2003; Hurd et al., 1996; Vallin, 1995) have been conducted worldwide on factors affecting retirement mortality and related topics, little is known about the extent to which health history and residential status impact retirees in Tanzania. In response to this gap, this study aims to bridge the knowledge gap by systematically examining the association between future life expectancy after retirement (longevity) and the factors affecting mortality in Tanzania, as discussed herein.

3. Methodology

The design used for this study is the multistage sampling technique, which divides a large population into progressively smaller groups (Philip, 2015). Shimizu (2014) explained that the use of a multistage sampling technique helps to reduce data collection costs. Accordingly, this study was conducted on a sample size of 115 retirees in the United Republic of Tanzania. The sample was selected on a probabilistic basis from four regions on mainland Tanzania, representing different geographical zones, using the multistage sampling technique: Dar es Salaam, representing the Coast Zone; Tanga, representing the Northern Zone; Dodoma, representing the Central Zone; and Rukwa (Sumbawanga), representing the Southern Highlands Zone.

Descriptive analysis and survival analysis were employed as analytical tools, given the nature of the study. The study adopted a quantitative approach to address and test the predetermined assumptions by analyzing the effect size of the problem.

4. Findings and Discussion

4.1. Demographic Information of Retirees

As shown in Figure 3, approximately 76.52 percent of the retirees are married, 18.26 percent are widowed, and only 5.22 percent are separated or divorced. The United Nations (2011) reported that elderly individuals who are married are less likely than their unmarried counterparts to exhibit signs of depression, experience stress, or feel lonely. Furthermore, being married among retirees has been associated with lower mortality rates.

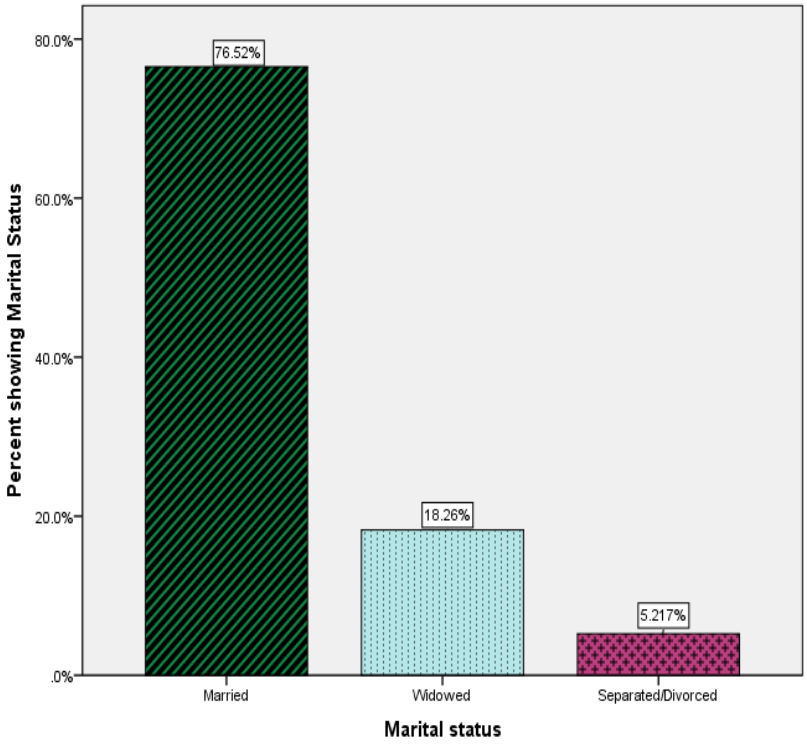

Figure 3: Retirees Marital Status (Source: Research Data, 2022)

Figure 4 presents similar findings, showing that most retirees' households are composed of their spouse, own children, grandchildren, and other relatives. Additionally, it was observed that the majority of retiree-headed households, regardless of the retiree's sex, consist of 1 to 6 members.

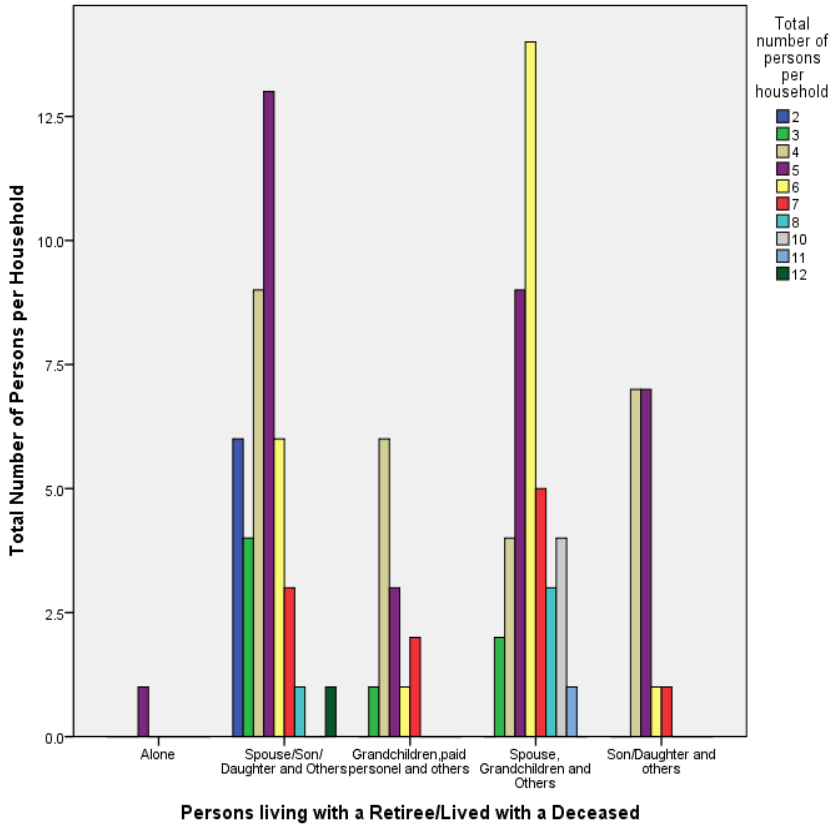

Figure 4: Total Number of People in a Retiree's Household (Source: Research Data, 2022)

It has also been pointed out by the UN (2011) that, in most of developing countries where Tanzania is one of them, majority of elderly persons live with relatives, most commonly, with their own children.

4.2. Retirees' Health Before and After Retirement

Table 1 provides information on various diseases experienced by individuals, categorized by sex. Both Table 1 and Figure 5 reveal that, when retirees were asked about their health status before retirement, 75% of males reported being free from both communicable and non-communicable diseases. However, when asked about their health status after retirement, the results indicated that 66.7% of males and 33.3% of females suffered from blood pressure or cancer-related diseases.

Table 1: Health Status before Retirement by Sex

		Sex of the deceased	
		Male	Female
Health status before Retirement	Asthma/Diabetes/eye diseases	None	100.0%
	Blood pressure/ Cancer	66.7%	33.3%
	HIV/Kidney / Liver diseases	100.0%	None
	Nothing	75.0%	25.0%

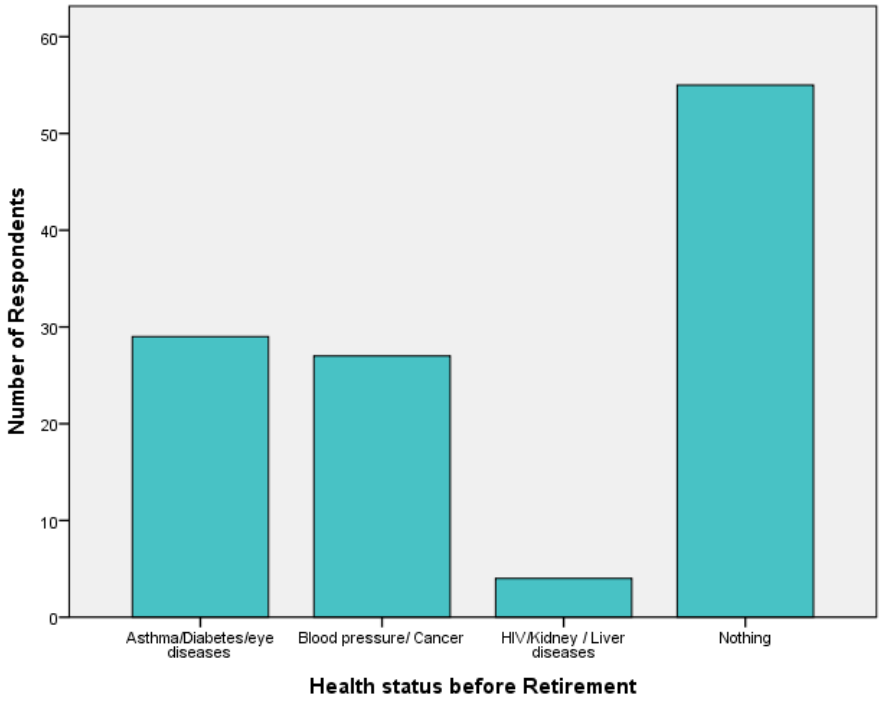

Figure 5: Various Diseases before Retirement (Source: Research Data, 2022)

Figure 5 reveals that, on average, 28.2% of the respondents reported being affected by asthma, diabetes, and eye-related diseases. Some respondents were unaware of whether they had contracted a specific disease, largely due to a lack of regular medical check-up habits. As shown in Figure 5, about 82% of the respondents stated that they visited health facilities only when necessary. In other words, most retirees do not have a routine schedule for medical check-ups.

According to the Population and Housing Census (2012), there were 2.5 million elderly people in the United Republic of Tanzania aged 60 years and above, accounting for 5.6% of the total population (Julia et al., 2014). A situational analysis by Mboghoina et al. (2010) revealed that elderly people in the country are more likely to be poorer, be susceptible to chronic illnesses and disabilities, and experience discrimination and social exclusion.

Apart from ageing, which is considered a major cause of sickness and death, HIV/AIDS has been identified as a significant threat to the lives of elderly people (UN, 2007). Additionally, non-communicable diseases among the elderly were highlighted as a growing challenge. The WHO (1999) identified several health issues affecting elderly people, including: alcohol use, cardiovascular diseases, hearing loss, tobacco use, visual disabilities, diabetes mellitus, respiratory diseases, etc.

Since elderly people in Tanzania are prone to prolonged illnesses. They are frequent users of both public and private health facilities. However, one of the reasons for their vulnerability to health complications is the reduced ability of body cells to fight diseases as they age (McPherson, 1990, as cited by William, 2013). Mwanyangala et al. (2007) observed that the health status and quality of life of elderly people in both urban and rural Tanzania deteriorate significantly as they age. Similarly, poor living standards and overall well-being are closely related to marital status, sex, and age. The ageing process thus poses a significant public health challenge for the country.

Furthermore, the United Nations (2007) pointed out that the situation of elderly people in the United Republic of Tanzania is characterized by:

i) Laws that fail to protect older people, particularly women, who are often denied property rights and subjected to abuse.

ii) Poverty
iii) Poor health and an inability to access free medical services.
iv) Isolation and lack of family support.

Given the health status of most retirees before retirement (Table 4 and Figure 5), as well as those who were unaware of their health status (i.e., those who only visited health facilities "whenever required"), this may be attributed to factors such as low income or limited education levels (Figure 6). Figure 6 displays interesting results: most retirees, regardless of their education level, visited health facilities only "whenever required." Based on these findings, the researcher proposed the following explanations:

i) Many individuals might lack basic health education, which prevents them from recognizing the importance of regular medical check-ups.
ii) Health workers may provide poor-quality services.
iii) Health infrastructures, such as buildings and medical equipment, may be inadequate.
iv) There may be an insufficient supply of health professionals, resulting in a high doctor-to-patient ratio.

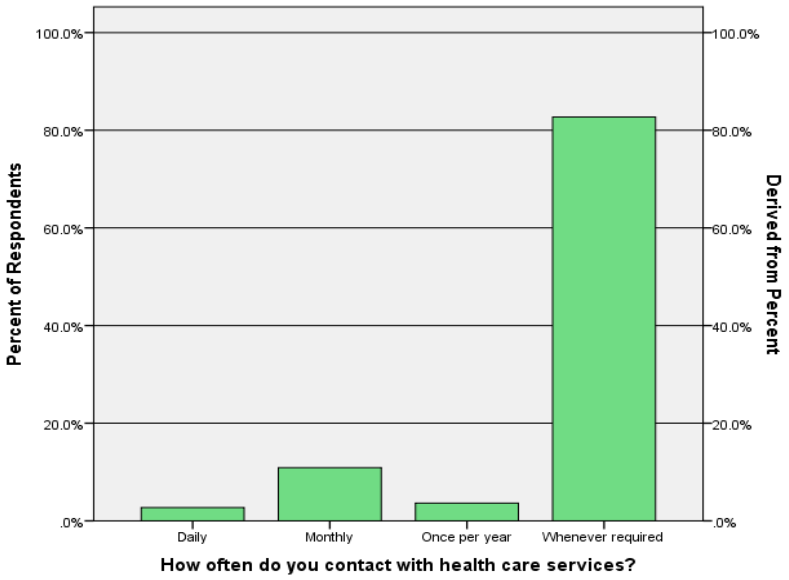

Figure 6: Frequency at which people visit health facilities (Source: Research Data, 2022)

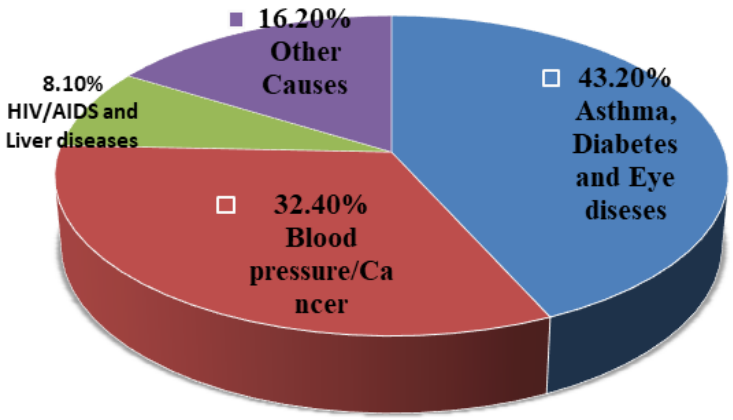

Figure 7: Elderly mortality by cause in Tanzania (Source: Research Data, 2022)

Figure 7 illustrates the various causes of mortality after retirement, expressed as percentages. It shows that most retirees face a significant risk of dying from diabetes and asthma, which account for 43.2% of all post-retirement deaths. Blood pressure and cancer are the second most common causes of death, contributing to 32.4% of all deaths among the elderly. Although HIV/AIDS accounts for the smallest percentage of deaths, it remains a strong indicator that the disease is prevalent among retirees. This calls for an urgent action by the government and the community to protect the elderly population from this hazardous disease.

The measure of association between two variables (Health status of retirees after retirement and Longevity) is the chi-square, i.e. $\chi^2\left(N=115,3df\right)=0.557, p=0.906$, the p-value is greater than 5% level of significance. This concludes that the health status of retirees after quitting their offices has no direct implication on their survival or non-survival, but rather this happens by chance.

Given the state of income of retirees—most of whom primarily depend on retirement pensions to sustain themselves, their spouses, and their dependents—it is nearly impossible for them to meet regular medical expenses. In 1999, the Government of the United Republic of Tanzania established the National Health Insurance Fund (NHIF) to address the healthcare needs of government employees both during and after retirement. The National Health Insurance Fund began providing medical benefits to retirees on July 1, 2009. These benefits cover a retiree who was a member of the fund, as well as their legal spouse thus enabling them to access medical care for the rest of their lives. However, the benefits do not extend to other dependents (NHIF, 2015). According to the NHIF, retirees eligible for medical benefits are defined by the following criteria:

i) They must be at least 55 years old for voluntary retirement or meet the statutory retirement age of 60 years.
ii) They must have contributed to the scheme for a minimum of 120 months.
iii) Members who retire voluntarily or by law before completing 120 months of contributions must top up the remaining months to qualify for the retiree benefits package.
iv) They must be active members at the time of retirement.

It is evident that almost all retirees who retired before 2009 were not incorporated into the scheme. As a result, they must bear the costs of their healthcare expenses. Consequently, many retirees remain in prolonged states of illness, as they cannot afford regular medical visits. This lack of access to health services increases their vulnerability to severe health complications and ultimately, to higher mortality rates.

4.2.1. Education Influences the Decision to Visit Health Care Services

There is evidence that individuals with higher levels of education, such as a university degree, do not frequently visit health facilities to seek health care services (daily or even monthly). Conversely, those with lower levels of education and income tend to visit health facilities more frequently. This trend can be viewed from two perspectives (Figure 8):

i) Highly educated individuals are often extremely busy with work or other commitments, leaving them with little time for routine medical checkups.
ii) Individuals with lower education levels and limited income are more vulnerable to diseases, which leads to a higher frequency of health facility visits.

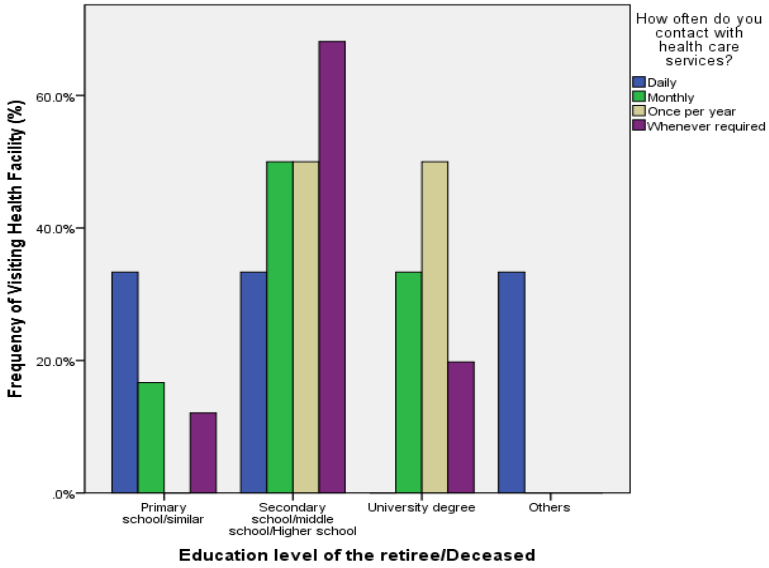

Figure 8: Frequency of Retirees Visit Health Care Services (Source: Research Data, 2022)

Taking into consideration the two education levels, i.e., secondary/middle/higher school and university education, it is evident that a significantly smaller number of retirees with a university education visits health facilities as required compared to those with lower education levels, who typically visit health facilities whenever necessary. This observation suggests that education alone cannot be regarded as a decisive factor influencing an individual's health-related decisions.

4.3. Life Style

According to the Tanzania National Bureau of Statistics (NBS, 2012), the Population and Housing Census revealed that the urban population constitutes approximately 29.1% of the entire population of mainland Tanzania. This includes both retirees and non-retirees, and it is within this context that the present study was conducted. The study findings indicate that, on average, 68.9% of retirees reside in urban areas, while only 31.1% live in rural areas. This finding contrasts with the NBS (2012) expectation. The reasons for this contrast could include (Table 2):

i) Most of the offices where the retirees were employed are located in urban areas.
ii) Many retirees seek post-retirement jobs, which are more readily available in urban areas.
iii) A significant number of retirees established permanent settlements in urban areas during their working years.
iv) Many retirees invested in urban areas, as these locations provide a more supportive environment for investment.

Table 2 highlights contrasting results regarding the assumption that, worldwide, most urban areas are well-equipped with public social services such as health services, education, good markets that ensure the availability of various types of food, transport systems, and financial services, such as banks. Public social services in urban areas are generally believed to be more advanced compared to those in rural areas, where people often walk long distances in search of health facilities, clean and safe water, education, transportation, and financial infrastructure. This situation is evident in the United Republic of Tanzania, where this study was conducted.

Table 2: Effects of Residential Status on Investment Decision and Retirement Life

Sources of Income	Residential Status (Life Style) (%)	
	Urban	**Rural**
Retirement Pension	48.8	57.6
Disability Pension	None	3
Work and Investment	51.2	39.4
Total	**100**	**100**
Status of		
Retiree	**Urban**	**Rural Total**
Died	62.2	37.8 **100**
Survived	75.6	24.4 **100**

Table 2 also shows a higher percentage of deaths (62.2%) among retirees residing in urban areas between 2007 and 2015 compared to 37.8% of deaths reported among retirees living in rural areas during the same period. This finding aligns with the National Bureau of Statistics (NBS, 2015) report, which pointed out that the mortality rate for those living in rural areas was 6.3 deaths per 1,000 persons, lower than the 7.5 deaths per 1,000 persons recorded in urban areas. Nevertheless, retirees' decisions to settle in urban areas appear to be influenced by several factors, including:

i) Greater access to economic, political, and social information, which serves as a powerful tool for shaping individual mindsets.
ii) Increased likelihood of discovering new investment opportunities.
iii) A greater chance of securing post-retirement jobs, which can contribute to additional sources of income.

Table 2 further provides evidence that about 51.2% of retirees residing in urban areas engage in post-retirement work or employment, as well as various investment activities, ranging from small-to large-scale businesses. This is significantly higher compared to the 39.4% of retirees residing in rural areas who engage in similar activities.

The p-value (p = 0.185) indicates statistical insignificance of the chi-square value $\left(\chi^2 = 2.228\right)$ at the 5% level of significance, confirming that retirees' residential status (urban or rural) does not necessarily influence survival or mortality. Thus, death occurrence with respect to residential status happens largely by chance.

5. Conclusion

This study considered two key factors that were shown to affect the future lifetime of retirees, either directly or indirectly, and made the following observations:

i) Most people do not have the habit of undergoing thorough body checkups to identify their health status during their working years or after retirement.
ii) Residential status (i.e., urban or rural) has no direct relationship with the death rate among retirees and remains a matter of personal choice.

The results revealed no significant relationship between future lifetime and health status before or after retirement, even though elderly people are highly vulnerable to various diseases. The findings suggest that retirement does not inherently result in contracting different diseases; rather, such occurrences happen by chance. Similarly, the results indicate

that the decision to live in either urban or rural areas after retirement has no effect on a retiree's future lifetime.

On the other hand, the study calls on responsible government bodies—such as the Ministry of Health and the Prime Minister's Office for Labor, Youth, Employment, and Persons with Disability—as well as other stakeholders to identify the best ways to support retirees. This could include establishing an independent institution dedicated to training, research, and offering financial support to retirees. The study also suggests that existing policies, laws, rules, and regulations concerning aging issues, particularly for retirees, should undergo a comprehensive review to better address the needs of retirees in the country.

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