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Free Healthcare Scheme and the Health Status of Older Persons: A Cross-sectional Study in Selected Districts in Tanzania

Rygon John Magata,[*] Kelvin Haule[§] & Abiud L. Kaswamila[‡]

Abstract

This article examines the influence of free healthcare services on the health status of older persons in Tanzania. The Tanzania Free Healthcare Scheme of 1994 aimed to relieve older persons from medical expenses at public healthcare facilities. Despite the aim, older persons still experience challenges such as inadequate geriatricians, illegal payments, and bureaucracy in accessing healthcare. This study used a cross-sectional survey design involving older persons who were randomly selected from Nachingwea and Kilwa districts in Lindi Region, in Tanzania. The data was collected using household surveys, key informant interviews, focus group discussion, and documentary review. The SPSS software was used to analyse the quantitative data, while content analysis was used to analyse the qualitative data. The findings show that 60.5% of the participants (n = 369) have poor self-rated health. The prevalence of non-communicable diseases is high, particularly hypertension (65.38%; n = 369). Due to such non-communicable diseases, 88% (43 out of 49) total deaths in 2023 were of older persons. Medication (χ^2 = 8.2542, p <0.005) and diagnosis services (χ^2 = 6.8891, p < 0.005) are significantly associated with poor health status of older persons. The findings conclude that the overall health status of older persons who utilize free healthcare is poor. The study recommends that the health policy should enhance access to free healthcare services to older persons; including preventive education, early detection, screening, and the availability of medication for the control of non-communicable diseases to reduce mortality among the elderly.

Keywords: *free healthcare, health status, older persons, Tanzania*

1. Introduction

Free healthcare for older persons is a global concern as the number of older persons is increasing (UN, 2020). Globally, the number of older persons (≥60 years of age) in 2019 was 1bn, and projections indicate that this number will rise to 2.1bn by 2050 (WHO, 2022b). This demographic trend is not associated with any particular region; rather, it is a global phenomenon, implying that every country will experience this increase; and fast growth is expected to be in developing countries (Alavi et al., 2022; WHO, 2022a). Various healthcare schemes—including free healthcare—were established following this increase (Dake & van der Wielen, 2020; Saka et al., 2019). On the other hand, this growth contributes to the rising and

[*] Department of Geography and Environmental Studies, University of Dodoma: rygonjohn@gmail.com
[§] Department of Geography and Environmental Studies, University of Dodoma: oswinkelvin@gmail.com
[‡] Department of Geography and Environmental Studies, University of Dodoma: abagore.kaswamila6@gmail.com

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prevalence of non-communicable diseases (NCDs); and hence increased stresses in the access to medical services, availability of NCDs specialists, and challenges in the care for NCDs (Cassim & Tipping, 2022; Dake & van der Wielen, 2020; Lewis et al., 2023). Ultimately, the prevalence of NCDs significantly affects the health status of older persons (Chobe et al., 2022; Hambleton et al., 2023).

Developing countries—such as Botswana, Sri Lanka, Nepal, Senegal, Ghana, the Republic of South Africa, and Tanzania—have been strengthening their healthcare systems[1] by introducing free healthcare schemes. These schemes support older persons to access health services without difficulty (Dake & van der Wielen, 2020; Saka et al., 2019; Shrestha et al., 2021; URT, 2017). However, older persons in these countries continue to experience challenges in the access and utilization of free healthcare; including inadequate geriatric services, illegal charges, and distance to healthcare facilities: all of which impact their health (Dableh et al., 2024; Dake & van der Wielen, 2020; Mussie et al., 2022; Saka et al., 2019). This puts into question the health status of older persons who are supposed to utilize free healthcare in these countries.

Several studies have assessed the health status of the population by using various factors like births and death rates, life expectancy, self-rated health (SRH), health insurance coverage, quality of life, morbidity from specific diseases and prevalence: all in the effort to improve people's health (EPA, 2024; Jung et al., 2020; Lolokote et al., 2017; Madans & Webster, 2015). These assessments were conducted objectively or subjectively, or using both methods (Sahril et al., 2023; Tetteh et al., 2019; Wu et al., 2013). These studies revealed that NCDs contribute to high mortality rates in the world, and mostly in developing countries (Gyasi & Phillips, 2020; Musonda et al., 2024; Natukwatsa et al., 2021). Moreover, the prevalence of self-rated health (SRH) is also associated with the health status among older persons (Gbeasor-Komlanvi et al., 2020; Kasenda et al., 2022; Tetteh et al., 2019). This means that the status of poor health becomes evident when the prevalence of SRH is high; and if a person has more than one NCD the prevalence is high.

In Tanzania, the implementation of the free healthcare scheme of 1994, and its guidelines in 1997, ensured increased accessibility of healthcare services to older persons (Kaele, 2019; MoLYDS, 2003; Mujinja & Kida, 2014). Specific measures—such as signs and directions in most public healthcare (PHC) facilities—are aimed at ensuring priority is given to older persons when accessing healthcare (Edward & Maluka, 2021; Frumence et al., 2017). Despite these efforts, however, older persons still encounter healthcare challenges associated with age-related illnesses and chronic conditions that may impact their health status. Other challenges include inadequate medication, bureaucratic procedures, and illegal payment for

[1]Is an organization of people, institutions, and resources that provide healthcare services to target population in order to meet their health demands (Kapologwe et al., 2023).

healthcare; as well as a limited awareness of the scheme among this demographic (Ntahosanzwe & Rwegoshora, 2021b, 2021a; URT, 2017).

Lindi Region, which is one of the regions with the highest proportion of older persons (8.6%) in Tanzania—when compared to the 6% of the national population—continues to face these challenges (Frumence et al., 2017; HP, 2021; NBS, 2022b). The region stands out as one of the poorest regions in Tanzania, characterized by inadequate health services (PoRALG, 2017; TAUS, 2022). It has a lower density of health workers, with only 4 workers per 10,000 populations. Furthermore, the density of health facilities is notably lower at 2.5 per 10,000 populations (MoHCDGEC, 2019). This combination of factors paints a bleak picture of healthcare provision among older persons in the region. It also raises legitimate concerns about the health status of older persons who receive free healthcare within PPH facilities. Therefore, this article examines the health status of older persons; and specifically on the prevalence of SRH, NCDs, and mortality due to NCDs. Moreover, it assesses the association between free healthcare services, and the health status of older persons.

2. Literature Review

2.1 Empirical Review

Older persons are prone to long-term care illnesses that require a variety of personal and medical services. The provision of free healthcare services can increase access to healthcare and have an impact on early diagnosis, treatment, and control of NCDs (Aikins et al., 2014; Burström, 2022). This suggests that providing free healthcare can improve access to essential care for older persons, and ultimately lead to better health status. To understand the health status of older persons, the WHO proposed using population-based surveys on SRH and NCDs to provide data on the prevalence, diagnosis, treatment, and management of these diseases in a community (WHO, 2023a).

As mentioned earlier, several studies have assessed the health status of populations using various factors such as births and death rates, life expectancy, SRH, health insurance coverage, quality of life, morbidity from specific diseases and prevalence: all in an effort to improve people's health (EPA, 2024; Jung et al., 2020; Lolokote et al., 2017; Madans & Webster, 2015). Moreover, these studies have been used to predict healthcare demands, morbidity, mortality, health outcomes, and the quality of health care services. For instance, in prevalence of mortality, the World Health Statistics for 2023 showed that the four main NCDs killed 33.3m in 2019, an increase of 28% when compared to the year 2000 (WHO, 2023). Also, cardiovascular diseases (CVD) caused 17.9m deaths, followed by cancer (9.3m), chronic respiratory diseases (4.1m), and diabetes (2.m) (WHO, 2023). However, in Tanzania, recent data on health status show that 66.7% (two-thirds) of deaths are caused by NCDs

(Njiro et al., 2023). With the available data, there are limited studies on the health status of older persons who utilize free healthcare in Tanzania.

Many factors are considered when measuring health status, especially for a wide and diverse population (EPA, 2024; Madans & Webster, 2015). These factors include birth and death rates, life expectancy, health insurance coverage, quality of life, morbidity from specific diseases, and disease incidence and prevalence. They may also include physical, cognitive, emotional and social functions; and financial and geographical care (EPA, 2024; Madans & Webster, 2015). Madans and Webster (2015) and EPA (2024) assert that it is not easy to completely collect data on health status for a single survey because the definition is complex, broad and multidimensional; and hence involves a wide range of factors. However, according to the Global Health Data (2024), several indicators can summarize the information and provide a clue—although not a complete picture—for further interventions. By combining several factors, an assessment can be conducted objectively, subjectively, or both; using standardized examination, medical records or self-reported health (Madans & Webster, 2015; Sahril et al., 2023; Tetteh et al., 2019; Wu et al., 2013). On its part, this study used the prevalence of NCDs, mortality due to NCDs, and SRH as factors that determine the health status of older persons who use free healthcare.

2.2 Theoretical Review

The Goddard and Smith's theory (2001) of health equity was used to guide this study. The theory contends that all groups of people have equal access to, and utilization of, healthcare regardless of age, gender, ethnicity, religion, social class, socioeconomic status, or socially determined circumstances. It assumes that health services are to be availed to all patients in equal right and need (Goddard & Smith, 2001). This implies allowing everyone having a fair opportunity to attain optimal health; which in turn implies avoiding any disparities that may affect the disadvantaged or excluded groups from achieving optimal health (Biljon et al., 2022; Braveman et al., 2018). The theory identifies key variables crucial to achieving health equity: availability of services, quality of care (ensuring appropriate treatment), financial costs associated with accessing healthcare, and the availability of information about, and knowledge of, healthcare services.

However, the theory has been challenged of being inconsistent and a multidimensional concept (Lee-Foon et al., 2023; Lewis et al., 2023; Yao et al., 2019). It has been understood differently in terms of application for decision making, either as a measure for a whole society or only the targeted population (Braveman et al., 2018). Nevertheless, according to Braveman et al. (2018), health equity respects marginalized people, and assesses whether interventions are in place. In this study, the theory was relevant as it provided valuable insights in understanding inequalities in terms of health outcomes among older persons who use free healthcare in Lindi Region.

3. Methodology

3.1 Study Area

The study was conducted in Lindi Region, specifically among older persons in Nachingwea and Kilwa districts (Figure 1). The selection of Lindi as a study area was based on several criteria. First, Lindi is one of the regions with the highest proportions of older persons—8.6%, which is above the national average of 6% in Tanzania (NBS, 2022b). Secondly, the region had a lower density of health professionals (4 per 10,000 population). Thirdly, it had a lower number of health facilities (2.5 facilities per 10,000 population) (MoHCDGEC, 2019). On the other hand, the selection of Kilwa and Nachingwea districts within the Lindi Region was based on these two having a large proportion of older persons: Kilwa district had a population of 18,961 of older persons, accounting for 18.5% of its total population; while Nachingwea District had 20,821 older persons, making up 20.3% of its population. In contrast, other districts in the region had significantly smaller proportions of older persons: Ruangwa – 18,265 (17.8%), Mtama – 17,788 (17.4%), Lindi Municipality – 16,888 (16.5%), and Liwale – 9,704 (9.5%) (NBS, 2022a).

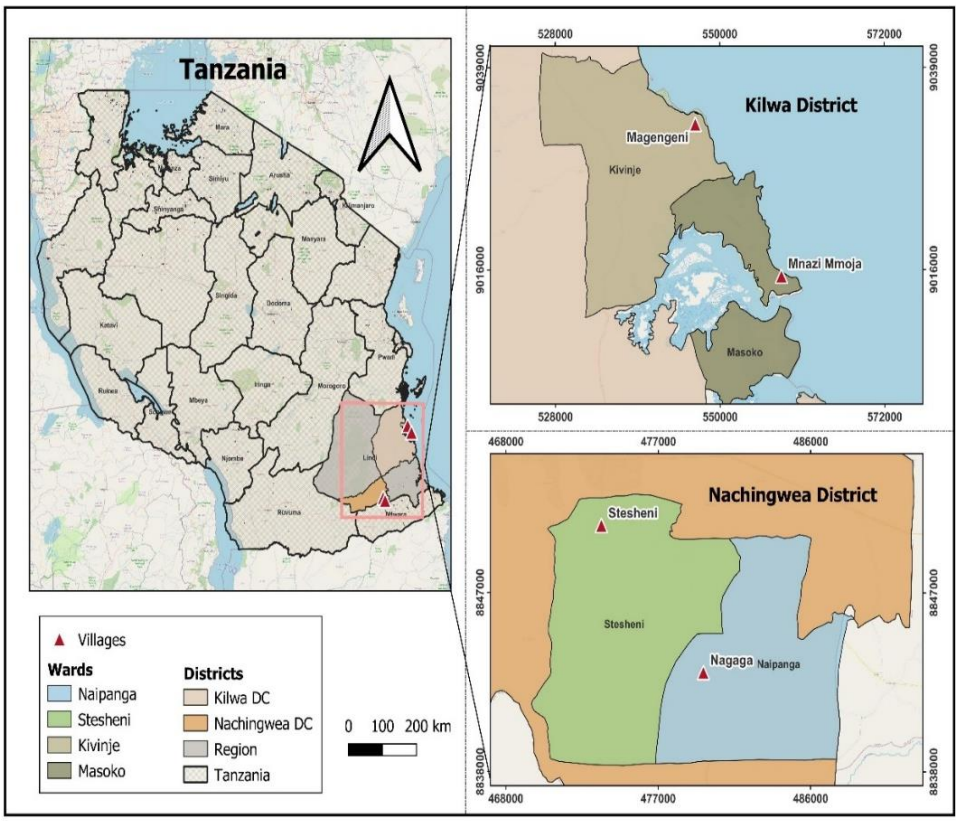

Figure 1: Location of the Study Area

3.2 Research Design, Sampling Procedure, and Sample Size

A cross-sectional design using a mixed approach was deployed. This was a one-time data collection design using a mixed approach that allowed triangulation of data to obtain a comprehensive understanding of the provision of free healthcare services. The collection of data on the prevalence of NCDs and SRH was also a one-time activity.

Multistage sampling was used to select participants for the study. This method allowed the collection of data on SRH and the prevalence of NCDs from 369 selected respondents in the two districts, who were representatives of older persons receiving free healthcare. The multistage sampling involved four stages. In the first stage, two districts were purposely selected for the study. In the second stage, two wards were randomly selected from each district; while in the third stage, four villages were randomly selected from each ward. In the final stage, proportionate sampling was used to select respondents who were aged 60+ years. The sample size was calculated based on a 95% confidence level, and 5% precision level by applying Yamane's 1967 formula:

$$n = \frac{N}{1 + N\,(e)^2}$$

Therefore, the sample was:

$$n = \frac{4{,}808}{1 + 4{,}808\,(0.05)^2} = 369$$

Purposive sampling was used to select Nachingwea and Kilwa districts in Lindi Region. The selection of these districts was based on the large proportion of older persons in the region, where Nachingwea had the highest proportion (20.3%) of older persons in the region, followed by Kilwa (18.5%). The 17 key informants were purposely selected because they had more knowledge, experience, and in-depth information about the free healthcare scheme. The data on service availability, healthcare policies and schemes, and mortality due to NCDs was collected from them. The key informants included 2 district medical officers (DMOs), 2 hospital in-charge/heads, 2 social welfare officers (SWOs), 2 NCDs coordinators, 1 representative from the Ministry of Health (MoH), 2 ward executive officers (WEOs), and 4 village executive officers (VEOs).

3.3 Data Collection and Analysis

The data was collected using household surveys, key informants' interviews, focus group discussions (FGDs), physical field visits, and a documentary review. The survey was used to collect primary data on socio-demographic and health status using individual questionnaires[2] as proposed by the WHO as a

[2] Only selected individuals are taken into account as a survey unit (Hubrich et al., 2018). In this study, every older person was treated as an independent individual selected in household.

self-rated health (SRH) measure, with both open- and closed-ended questions. Semi-structured interviews between the researcher and the selected key informants were designed to collect data on mortality due to NCDs, health service provision, and the free healthcare scheme. The checklist for FGDs covered healthcare provision and utilization. For secondary data, a documentary review was used to collect data on free healthcare for older persons from various open data sources, including the Tanzania National Bureau of Statistics (NBS), Centre for Disease Control and Prevention (CDC), World Health Organization (WHO), books, journals, and other official reports.

The SPSS (V26) software was used to analyse quantitative data, while thematic analysis was used to analyse qualitative data. The analysis involved sorting, file-splitting, selecting cases, and modifying data values from the coded database to obtain information of interest for answering the research question. Three major statistical analyses were performed. On the prevalence of SRH, frequency distribution analysis, percentages and averages were calculated. These were cross-tabulated as per the two districts and the studied villages. To establish whether there was an association between the provision of free healthcare services and the health status of older persons, a Chi-square (χ^2) was calculated at 0.05 significance level. Regarding the prevalence of NCDs, as well as mortality due to NCDs, descriptive statistical methods—especially frequency distribution, percentages and averages—were calculated. These were also cross-tabulated at village level to see the differences or similarities.

The health status on SRH was measured using the WHO-SRH on a Likert scale, from 1 ('very good'), 2 ('good') 3 ('fair'), 4 ('poor'), to 5 ('very poor'). The responses 1–5 were grouped into two categories: category one consisted of responses 1 and 2 that were merged and formed 'good health status'; while responses 3, 4, and 5 were merged and formed category two as 'poor health status.' This method of assessing health status has also been adopted in other studies such as by Sahril et al. (2023), and Tetteh et al. (2019). Since the method is a psychological tool, and is considered as a good measure of health outcome, it captured the general health status of the past, current, and future; and also covered the emotional, physical, functional, mental, and personal components of an individual's health (Gyasi & Phillips, 2018; Nielsen, 2016; Saevareid, 2008). Further, the Chi-square test was used to determine the relationship between the health status of older persons and the free healthcare services provided at PPH facilities.

4. Findings and Discussion

4.1 Health Status of Older Persons

4.1.1 Prevalence of SRH among Older Persons

The SRH among older persons who received free healthcare was assessed by using the question: "How do you rate your general health status?" The responses were: 1 ('very good'), 2 ('good'), 3 ('fair'), 4 ('bad'), and 5 ('very bad'). In determining the SRH, it was categorized into two parts: 'good SRH' (very good and good); and 'poor SRH' (very bad, bad, and fair). The results in Table 1 show

that, overall, more than 60.5% (n = 369) had poor SRH, compared to 39.5% who reported 'good' health. The results further show that the four villages differed in SRH. Mnazimmoja and Stesheni had a higher poor SRH (69.3% and 63%, respectively), compared to Magengeni (56.7%) and Nagaga (53%).

Table 1: SRH Among Older Persons in the Study Area

SRH in %	Kilwa District		Nachingwea District		
	Magengeni n=141	**Mnazimmoja n=91**	**Nagaga n = 38**	**Stesheni n = 99**	**Average**
Poor SRH					
Very bad	14.18	30.83	2.63	10.10	14.43
Bad	34.01	34.07	36.84	45.83	37.69
Fair	8.51	4.40	13.53	7.07	8.38
	56.70	69.30	53.0	63.0	60.5
Good SRH					
Good	33.37	30.70	28.58	18.82	27.87
Very good	9.93	0.00	18.42	18.18	11.63
	43.3	30.7	47.0	37.0	39.5

Source: Survey data (2023)

The probable reasons for the poor SRH in the study area might be due to functional inability and the prevalence of NCDs among older persons. In the study area, most older persons were observed to have functional difficulties, such as self-care at home, ability to remember, immobility, communication challenges, and inability to perform their daily domestic activities. This suggests that older persons were likely experiencing worse health outcomes and greater healthcare needs to improve their health conditions and manage NCDs effectively. Older persons reported having limited access to information on how to enhance their health conditions and effectively manage NCDs, which in turn negatively impacted their overall health status. FGDs indicated that some older persons accessed mass media—particularly the radio—to receive information and education on NCDs and campaigns promoting regular health check-ups for early diagnosis and treatment. However, others reported having no such exposure. For instance, one older person in Magengeni said, *'I don't have a radio. I can read, but I have never witnessed any campaigns on general health or NCDs in my village'*. During interviews with two NCDs coordinators, they acknowledged having conducted educational sessions with patients in hospital settings; however, they noted that insufficient efforts had been made to reach the entire community.

These study findings are similar to those from previous studies, which revealed that the lack of awareness on NCDs, and functional difficulties due to ageing, were associated with poor health status among older persons (Kleisiaris et al., 2019; Sahril et al., 2023; Tetteh et al., 2019). However, the overall poor SRH

reported in this study is comparatively higher than the ones found in Ghana (34.9%) and Malaysia (32.6%) (Sahril et al., 2023; Tetteh et al., 2019). The results on SRH performance may vary between one area and another based on several factors, including healthcare system infrastructure and healthcare programmes implantations. For instance, the free healthcare services provided for all older persons (70+) in all levels of healthcare in Ghana might have impacted such low SRH (Amoak et al., 2024; Dake & van der Wielen, 2020). The SRH prevalence in the study area has an implication for the health equity theory: that older persons have negative perceptions of free healthcare services, which may reflect inequity in access to health services.

4.1.2 Prevalence of NCDs among Older Persons

The results in Table 2 show that 65.38% (n = 369) of older persons had been told by their doctors that they had hypertension. However, only a few had been told that they had cancer[3] (2.32%) and chronic respiratory diseases (CRD) (3.33%). Diabetes remained the second prevalent NCDs (14.57%) among older persons, although the magnitude was low. The variations in the prevalence of NCDs could also be observed between the villages. Hypertension was high in Magengeni (98%) compared to the rest of the villages, with the least prevalence being in Nagaga (39.5%). Although not rampant, diabetes was recorded as high in Nagaga (28.9%), and low in Mnazimmoja (4.4%). This may imply that hypertension is a common health challenge to older persons in the study area.

Table 2: Prevalence NCDs among Older Persons in the Study Area N (%)

Condition	Kilwa District		Nachingwea District		Average n= 369
	Magengeni n=141	*Mnazimmoja n=91*	*Nagaga n = 38*	*Stesheni n = 99*	
Hypertension					
Yes	98.0	60.0	39.5	64.0	65.38
No	2.0	40.0	60.5	36.0	34.62
Cancer					
Yes	1.0	3.0	5.3	0.0	2.32
No	99.0	97.0	94.7	100	97.68
Diabetes					
Yes	13.0	4.4	28.9	12.0	14.57
No	87.0	95.6	71.1	88.0	85.43
CRD					
Yes	1.0	2.0	5.3	5.0	3.33
No	99.0	98.0	94.7	95.0	96.67

Source: Survey data (2023)

[3] including prostate cancer for men, breast and cervical cancers for females

The findings from the district hospitals also indicated that hypertension is most prevalent among older persons (Table 3). In Nachingwea, older persons constituted 84% (108 out 128) of all people who were diagnosed with hypertension from July to September 2023. Meanwhile, this population group in Kilwa District constituted 69% (251 out 363).

Table 3: Number of People Diagnosed with NCDs from July to September 2023

Indicator Name	Population Group	0–29		30–59		60+		Total
	District	*M*	*F*	*M*	*F*	*M*	*F*	
CVD/Hypertension	Nachingwea	0	0	9	11	32	76	128
	Kilwa	13	24	35	40	111	140	363
Diabetes Type 2	Nachingwea	0	0	1	3	5	12	21
	Kilwa	7	9	30	124	63	87	320
Cancer***	Nachingwea	0	0	0	0	0	0	0
	Kilwa	0	0	0	0	0	0	0
CRD (COPD)	Nachingwea	0	0	0	0	11	7	18
	Kilwa	0	2	0	0	0	0	4

Key: CRD = chronic respiratory diseases; **CVD** = cardiovascular diseases; **COPD** = chronic obstructive pulmonary disease; **Cancer*** ** = including men diagnosed with prostate cancer, women diagnosed with breast cancer, and cervical cancer.

Source: District hospitals data; Nachingwea and Kilwa (2023)

The government has made it clear that healthcare facilities should avail specific windows where older persons can freely access healthcare needs (MoH, 2022; URT, 2017). In this regard, and in response to the prevalence of NCDs, district hospitals in the study area have planned education and screening programmes for those who would be coming for treatment. For example, during discussions with older persons in Mnazimmoja, one of them said: *"We are thankful for the free clinics and special windows at hospitals; but we still need at least two or more clinic visits for different NCDs, and more specialists."*

According to the NCD coordinators in the study area, free clinic visits for NCDs had also been arranged for those diagnosed with NCDs. For example, such clinics were conducted every week, on Tuesdays and Thursdays, at the Nachingwea District Hospital. However, clinic visits in Kilwa were held once in every two weeks. According to Seth et al. (2023), regular clinic visits for NCDs improve health outcomes among older persons. Since older persons have a limited number of days to access NCDs care, this has implications for the health equity theory: that there might be disparities in access and health outcomes among older persons who receive free healthcare services in the study area. Given that older persons have fewer days to receive care for NCDs, this suggests that there exist inequalities in access to healthcare. This may demonstrate that free healthcare cannot ensure that everyone has equal access to health benefits, particularly if there are obstacles such as older persons' limited days of service availability.

4.1.3 Mortality due to NCDs in the Study Area

The study results in Table 4 show that, from July to September 2023, out of the total 49 death counts of older persons, 43 (88%) were due to NCDs. Mortality due to CVDs/hypertensive stroke was high compared to other NCDs, counting to 29 (59.2%) out of 43 deaths among older persons in the study area. Out of the 31 deaths due to CVD/hypertension only, those of older persons were 29 (93.5%). When compared to global mortality due to hypertensive stroke (53%), this is relatively high (WHO, 2023a); implying that mortality due to hypertension is high among older persons in the study area.

Table 4: Number of People who Died from NCDs in the Study Area from July to September 2023

Indicator Name	Population Group	15–44	45–59	60+	Total
	District				
CVD/Hypertension	Nachingwea	0	0	17	17
	Kilwa	0	2	12	14
Diabetes Type 2	Nachingwea	1	0	3	4
	Kilwa	1	2	6	9
Cancer***	Nachingwea	0	0	2	2
	Kilwa	0	0	1	1
CRD (COPD)	Nachingwea	0	0	1	1
	Kilwa	0	0	1	1
Total		**2**	**4**	**43**	**49**

Source: Health Institution-based data: Nachingwea and Kilwa District (2023)

Moreover, mortality due to NCDs among older persons varied in the study area. Nachingwea District recorded 23 (53%) out of 43 deaths of older persons as being due to NCDs, while Kilwa recorded 20 (47%) out of 43 deaths. Also, Nachingwea had a high number of deaths (17 (58.6%) out of 29) in the study area as being due to CVD/hypertensive stroke compared to 12 (41.4%) recorded in Kilwa District. This may imply limited intervention measures—such as awareness and prevention among older persons on NCDs—in the study area.

During discussion with older persons, institutional factors—such as waiting time and the lack of money to pay for health care services—were mentioned as contributing to most NCD deaths. However, interviews with NCDs coordinators revealed that deaths from NCDs were caused by socio-economic and personal life styles like poor diet, lack of exercise, and lack of awareness of NCDs symptoms and treatment. This is corroborated by a study conducted in Zambia, which also revealed that persons aged 45+, and those who lacked education, were associated with dying from NCDs (Musonda et al., 2024). In Tanzania, the *NCDs Week* that is conducted annually, involves several activities that are fruitful in raising awareness, promoting physical activities, providing health education in schools, screening of NCDs, etc. (Njiro et al., 2023). However, although education and

other prevention measures may be influential in lowering mortality and improving NCDs conditions, it is clear, as claimed by the health equity theory, that older persons are not well reached by these preventive measures.

4.2 Free Healthcare Services Utilization and the Health Status of Older Persons

As mentioned earlier, this article also sought to establish the association between the provision of free healthcare services and the health status of older persons. Such healthcare services included consultation, diagnosis, medication, and hospitalization; which are supposed to be provided for free to older persons at all public hospitals. The data in Table 5 show a significant association between poor health status with medication ($\chi^2 = 8.2542$, $p < 0.005$), and diagnosis ($\chi^2 = 6.8891$, $p < 0.005$) services. This implies that inadequate free medications and laboratory diagnostic services may likely result into poor health status of older persons.

Table 5: Association Between Free Healthcare Service Provision and Health Status of Older Persons

Healthcare services	Health Status		χ^2	p-values
	Bad (n=225)	*Good (n=144)*		
Consultation			2.1964	0.333
Not provided	14(6.22%)	14(9.72%)		
Fairly provided	47(20.89%)	34(23.61%)		
Provided	164(72.89%)	96(66.67%)		
Medication			8.2542	0.016**
Not provided	181(80.44%)	130(90.28%)		
Fairly provided	23(10.22%)	4(2.78%)		
Provided	21(9.33%)	10(6.94%)		
Hospitalization			1.9113	0.385
Not provided	43(19.11%)	36(25%)		
Fairly provided	10(4.44%)	5(3.47%)		
Provided	172(76.44%)	103(71.53%)		
Diagnosis			6.8891	0.032**
Not provided	19(8.44%)	19(13.19%)		
Fairly provided	62(27.56%)	24(16.67%)		
Provided	144(64%)	101(70.14%)		

Source: Survey Data (2023)

During the interviews with hospital heads/in-charges, they complained that although medications and diagnosis services at their facilities were being provided without bias, they were insufficient; and some medications were restricted. According to one hospital head, some types of NCDs medications for diabetes type 2 such as *pioglitazone, sitagliptin,* and *empagliflozin* were restricted to being prescribed at regional referral hospitals and tertiary hospitals by a specialist or a medical officer only; therefore, these medications could not be

prescribed at lower levels due to the lack of the requisite expertise at these levels. Referring to the STG of 2021, there were no diabetes specialists at lower levels of the healthcare system (dispensaries and health centres), and one needed a special permit to prescribe these medications (MoHCDGEC, 2021). Therefore, in Tanzania, the STG restricts prescription of medicines at all the three levels[4] of service provision. This is a good practice as it ensures there is recognition of levels of care and professionalism in prescribing medications.

Moreover, the Nachingwea district institutional data (Table 6) show that only 60.7% of all the medications ordered in 2023 was received. The major reason for the insufficient supply of medications and laboratory equipment to lower levels of PPH facilities was attributed to limited healthcare budgets. For example, in 2022 the Nachingwea district received TZS7,120,746,427 for healthcare. However, in 2023 the healthcare budget was reduced to TZS6,145,002,448. Likewise, in Kilwa, the healthcare budget for the year 2022 was TZS7,731,995,921, and in 2023 it decreased to TZS7,293,133,500. During a discussion with older persons in Stesheni Ward, one person complained about not being provided with the requisite medications: "*If you go with a prescription from a doctor to the dispensing facility, you will not be given all the medications. You will be directed to purchase the medications in question from pharmacies, or to wait until the next clinic.*" As such, limited budgets might have impacted the provision of free healthcare to older persons.

Table 6: Amount of Drugs/Medication Ordered and Received in the Year 2023

Month	Description	Quantity		
		Ordered	*Received (%)*	*Out of stock (%)*
January	All medication	77	26(33.8)	51(66.2)
February	All medication	80	38(47.5)	42(52.5)
March	All medication	91	87(95.6)	4(4.4)
April	All medication	76	33(43.4)	43(56.6)
May	All medication	83	46(55.4)	37(44.6)
June	All medication	67	46(68.6)	21(31.4)
July	All medication	72	41(56.9)	31(43.1)
August	All medication	88	40(45.4)	48(54.6)
September	All medication	77	61(79.2)	16(20.8)
October	All medication	90	51(56.7)	39(43.3)
November	All medication	82	54(65.9)	28(34.1)
December	All medication	79	61(77.2)	18(22.8)
Total		**962**	**584(60.7)**	**378(39.3)**

Source: Nachingwea district hospital, 2023

5. Conclusion and Recommendations

[4] The Ministry of Health of Tanzania categorizes three levels of healthcare provision as primary level (dispensaries, health centers and district hospitals); secondary level (regional referral hospitals); and tertiary level (national, zonal referral hospitals, and specialized hospitals) (MoH, 2021).

Health status is an important indicator of the level of healthcare provision. The study findings indicate that the health status of older persons who receive free healthcare in the study area is poor. More than half of them had poor SRH, and hence were susceptible to NCDs, particularly hypertension. The poor health status of older persons was associated with medication and diagnosis services. The study recommends that the health policy should enhance access to free healthcare services by measures such a providing preventive education, early detection, screening, and availing medications for the control of NCDs and the reduction of mortality among older persons. Further research could be conducted to examine the financial burden of NCDs on the health sector.

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