Enhancing Longevity Among Pensioners: Investigating Determinants in Ilala Municipal Council, Tanzania

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Abstract

Introduction

Tanzania's population is aging rapidly, with a significant increase in the number of pensioners. This study investigates the determinants of pensioners' longevity in Tanzania, highlighting its critical importance in post-retirement life. The findings might be used to develop targeted interventions to promote healthy aging practices and improve pensioners' well-being in Ilala and beyond.

Methods

The study focused on retired individuals in Ilala, Dar es Salaam, employing a cross-sectional approach and enrolling 65 participants. Data collection was carried out through questionnaire interviews, and the resulting dataset underwent quantitative analysis utilizing descriptive statistics and inferential techniques, including OLS regression using SPSS and STATA.

Results

The research findings indicate that consistent monthly pension contributions, regular health check-ups, adequate financial support for children, and strategic investments in bonds and small and medium enterprises (SMEs) significantly influence an individual's longevity. Entrepreneurship skills, whether developed before or after retirement, have been identified as having a positive impact on longevity.

Conclusion

The study plays a crucial role in shaping policy by shedding light on the key factors contributing to pensioners' well-being. It strongly advocates for the prioritization of investments in SMEs to ensure financial stability for pensioners. Additionally, the study underscores the significance of encouraging ongoing support from the children of pensioners, as this has been proven to significantly enhance both the quality of life and longevity of pensioners.

Keywords: *Longevity, medical checkup expenses, investment, business, bond, children support, pension funds*

INTRODUCTION

This research-based paper recognizes that everyone desires longevity—an increase in life expectancy—particularly among pensioners who live longer than expected (Kazimoto & Mhindi,2014). Changes in lifestyle and medical advancements have accelerated life expectancy increases. However, this aging population challenges social funds and insurance companies due to longevity risks (Blake et al., 2014). Despite these tensions, achieving a longer life is desirable.

Rodríguez-Pérez et al. (2017) conducted a comprehensive study across several European countries, examining the socioeconomic determinants of longevity. The study found that higher socioeconomic status, measured by income level, educational attainment, and occupational status, was strongly correlated with increased life expectancy. This relationship was consistent across multiple countries, indicating a robust link between economic conditions and health outcomes. The researchers highlighted that individuals with higher socioeconomic status had better access to healthcare, healthier lifestyles, and reduced exposure to risk factors, all contributing to greater longevity.

Similarly, Yamamoto et al. (2018) conducted a longitudinal study in Japan to investigate the impact of lifestyle choices on longevity. The study followed a cohort of 10,000 individuals over 20 years, tracking their diet, physical activity, smoking habits, and alcohol consumption. The findings revealed that a diet rich in vegetables, fruits, and fish, combined with regular physical activity and non-smoking, significantly increased life expectancy. The study also noted that moderate alcohol consumption had a positive effect, while excessive drinking reduced longevity. These results underscore the importance of healthy lifestyle choices in extending life span.

In a study conducted in the United States, Miller et al. (2019) investigated the genetic determinants of longevity. This investigation utilized data from the Health and Retirement Study, encompassing genetic data from a cohort of over 50,000 individuals. The findings revealed several genetic markers associated with extended life expectancy. Notably, specific gene variants linked to inflammation and cellular repair were identified as significant predictors of longevity. The study underscored the intricate interplay between genetic predisposition and environmental influences in shaping overall lifespan. Li et al. (2020) investigated the impact of environmental factors on longevity in China. The study analyzed data from over 100,000 individuals living in various regions with differing pollution levels, climate conditions, and urbanization. The results indicated that individuals residing in areas with lower pollution levels and more green spaces had significantly higher life expectancies.

Moderate climates and lower urbanization levels were associated with longer life spans. The study emphasized the need for environmental policies to reduce pollution and increase green spaces to enhance public health and longevity.

Mbiti et al. (2021) examined the role of healthcare access in determining longevity in Sub-Saharan Africa. Utilizing data from several health surveys across the region, the researchers focused on access to medical facilities, quality of healthcare services, and health insurance coverage. The study found that individuals with better access to healthcare services had significantly higher life expectancies. It highlighted the disparities in healthcare access within the region, stressing the importance of improving healthcare infrastructure and coverage to increase life expectancy.

In contrast to the above studies, this paper investigates retiree longevity in Tanzania. Retirement age marks the transition from formal employment to other productive activities (Crampton, 2015). Initially introduced in Britain post-World War II, most people did not live long beyond the suggested retirement age (Meadows, 2003). Meadows (2003) defined retirement age based on productivity and income. However, modern definitions emphasize ongoing productivity and income generation post-retirement (Newman, 2019; Davies et al., 2017). The determinants of pension payments include the length of service and annual income before retirement. Pension plans vary based on the relationship between contributions and benefits. A study in Australia and New Zealand found that employees lose their pensions if they leave employers before the vesting period (five to seven years) (Chambers et al., 2019), which applies to Tanzania.

Citizens of developing countries generally have shorter life expectancies compared to those in developed nations. After retirement, many elderly individuals die prematurely due to inadequate care systems and increased dependency burdens, which can decrease longevity as retirees continue to care for others despite their declining health (Rodríguez-Pérez, Abreu-Sánchez et al., 2017). Social security is a constitutional right (URT, 2018) and is enshrined in the Universal Declaration of Human Rights of 1948 and International Labour Organization (ILO) charters (UN, 2015; ILO, 2017). To alleviate financial decline post-retirement, pension funds have been established in Tanzania. However, pensioners face limited economic opportunities and deteriorating health, leading to poorer living standards compared to their working years (Ramya, 2020).

METHODS
Study area
The study was conducted in the Dar es Salaam region in Tanzania because it has a higher concentration of pensioners compared to rural areas where most people work informally

without pension plans. The region consists of Temeke, Ilala, Ubungo, and Kinondoni districts. This study focused on pensioners in the Ilala district, which spans 532 square kilometers and has a population of over 1.2 million. The unit of analysis was elder pensioners aged 55 years and above.

Study design
A cross-sectional research design was utilized to simultaneously compare multiple variables, including five variables in this study. The cross-sectional design is effective for analyzing outcome prevalence, identifying associations between variables, and formulating hypotheses for further study (Spector, 2019). The sampling frame was derived from the National Social Security Fund (NSSF), and the total population of retirees in Ilala Municipality was 27,563, according to the 2012 census. A sample size of 65 pensioners was selected from this population.

Sampling techniques
Simple random sampling and purposive sampling techniques were used. Simple random sampling provided an equal chance for each retiree to be selected, while purposive sampling ensured the inclusion of specific subgroups.

Sample Size
The formula for determining the sample size (n) is given by:

$$n = \frac{p(1-p)z^2}{e^2}$$

Where:
n ia the sample size.
Z is the Z-value (the number of standard deviations from the mean, corresponding to the desired confidence level, e.g., 1.96 for 95% confidence).
p is the estimated proportion of the population.
e is the margin of error (expressed as a decimal).
This formula ensures that the sample size n is large enough to provide an estimate of the population proportion with the specified accuracy. It is widely used in survey research and other applications requiring precise estimates of population parameters (Cochran, 1977) and therefore, it was used to estimate the sample.
Henceforth,

$$n = \frac{p(1-p)z^2}{e^2} = \frac{0.5(1-0.5)0.95^2}{0.05^2} = 65$$

The sample size of 65 surpasses the minimum acceptable sample used in econometrics, which requires a minimum of 30 respondents (Bujang et al. et al. 2017; Neyman, 1934).

Data collection and analysis
Data collection was conducted via questionnaire interviews, and the resulting data were analyzed quantitatively using SPSS and STATA.

Validity and reliability
Validity was assessed by ensuring the data accurately answered the research questions, and reliability was ensured through pilot testing the questionnaire with a subset of the retired group and NSSF staff.

Referring to Figure 1, which outlines the conceptualized variables, the functional model was constructed as follows:
$L = f(H, I.C.P)$
Whereas L= Longevity of the pensioner in years (age), H=Number of health status check-ups per year, I= Investing in small businesses, C= Received support from children per year, B= Invested in Bond, P= Amount of pension received after three months. With this functional model, further the study proposed the equation model to estimate as follows:
$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \beta_5 X_{5i} + \mu_i$$
Whereby:
Y is longevity measured in years
X_{1i} is amount of money received from Children support
X_{2i} is amount of money gained from invested bond
X_{3i} is amount of money paid to hospital for checkup
X_{4i} is mount of money gained from investing in small businesses
X_{5i} is the amount received from the Trust Funds investments.
$\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 are coefficients, while μ_i There are other contributors to longevity not considered in the model, which may increase errors and reduce validity and reliability. These variables are conceptualized in Figure 1, and the variable description, operationalization, and the hypotheses tested are in Table 1.

This equation is derived from Figure 1, which illustrates the various financial components in terms of Tanzanian Shillings (TZS) per year, including the amount paid for check-ups (a continuous variable), the amount received from children per year (a continuous variable), the amount invested in bonds (a continuous variable), the amount invested in the establishment of small businesses (a continuous variable), and the amount of money received from the NSSF every three months.

Table 1 Variable Measurement and expected sign

Variable	Measurement (operationalization)	Coefficient	Expected Sign of coefficients (+ or -)	Scale
H=Number of health status check-ups per year	Number of check-ups the pensioners undergo per year	b_1	Positive (+)	Continuous
I= Investing in small businesses	The amount of the capital the pensioner used to establish the small business	b_2	Positive (+)	continuous
C= Received support from children per year	The amount of money the pensioner receives from own children support.	b_3	Positive (+)	Continuous
B= Invested in Bond	Actual amount invested in bonds	b_5	Positive (+)	continuous
P= Amount of pension received after three months	The amount of money the pensioner received from the passion fund pay year.	b_5	Positive (+)	continuous

Additionally, the amount of financial support received from children (a continuous variable) was recorded. Since all variables depicted in Figure 1 were operationalized as continuous numbers, the researcher employed Ordinary Least Squares (OLS) modeling and regression analysis. Table 1 displays the variable measurements and their expected signs.

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Figure 1: Conceptual framework
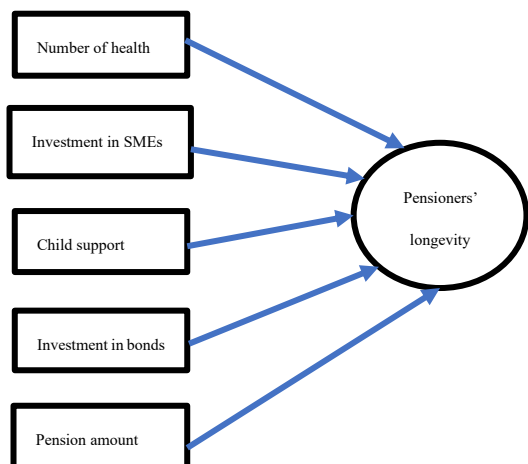
RESULTS
Gender
There were 30 women (46.2%) and 35 men (53.8%) who responded to the questionnaire. Both sexes were well represented, making the data relevant and reliable despite most respondents being male. This skewed representation reflects the higher number of men contributing to pension plans before retirement.

Table 2: Description of respondents' characteristics

Components	Attribute	Frequency	Percent
Sex	Female	30	46.20%
	Male	35	53.80%
Education level	No formal education	4	6.20%
	Primary	12	18.50%
	Secondary	16	24.60%
	Tertiary	20	30.80%
	Bachelor's degree	8	12.30%
	Master's degree	5	7.70%
Marital status	Single	19	29.20%
	Married	37	56.90%
	Divorced	9	13.80%
Types of Pension Benefits	Structured benefit	41	63.20%
	Structured contribution	24	36.80%
The average amount of pension	1-50000	2	3.10%
	50001-100000	24	36.90%
	100001 +	39	60%

Education
Since most pensioners were employed by the government or private sector before retirement, most had received formal education. Only 4 respondents (6.2%) had no formal education, 12 respondents (18.5%) had primary education,

16 respondents (24.6%) had secondary education, and 20 respondents (30.8%) had tertiary education. Additionally, 8 respondents (12.3%) had bachelor's degrees, and 5 (7.7%) had master's degrees.

Marital Status
Among the respondents, 19 individuals (29.2%) were single, 37 individuals (56.9%) were married, and 9 individuals (13.8%) were divorced.

These findings suggest that a significant number of retirees benefit from spousal support, which can be crucial for both emotional well-being and practical assistance in daily activities and health-related matters (Johnson & Lee, 2017).

Types of Benefits
The data showed that 41 respondents (63.2%) received structured benefits, while 24 (36.8%) received structured contributions. This indicates that most retirees in Ilala Municipal Council received structured benefits from the government as their retirement payment system.

Amount Received by Pensioners
The majority of respondents, 39 individuals (60%), received pension payments of TZS 100,001 and above. A smaller group, 24 individuals (36.9%), received between TZS 50,001 and 100,000, while only 2 individuals (3.1%) received between TZS 1 and 50,000 (Table 6).

Determinants of Longevity Regression Analysis
The regression analysis was done to determine the impact of using the pension funds on investment in different types of investment, namely investing in checkup expenses, investing in bonds, and small businesses while being supported by one's children, as presented in Table 3. The study assumed the linear relationship, and when the data behaved as non-linear, the model was linearized using a logarithm. In this analysis, the dependent variable is longevity (Y) and the independent variables are children's support (X_1), bond investments (X_2), hospital checkup expenses (X_3), small business investments (X_4), and trust funds (X_5).

Children Support (X_1), in terms of the amount received from the children he/she raised or his /her own, taking into consideration that in Tanzania's extended family perspective, the family raises its own biological children and the other from close relatives. The coefficient of variable X_1 is 0.0339, the standard error is 0.0116, the t-value is 2.91, while the p-value is 0.005 under the confidence interval of [0.0106, 0.0572]. We deduce that financial support from children has a positive and significant effect on the longevity of pensioner retirees. For each unit increase in monetary child support, longevity increases by 0.0339 units, holding other variables constant. This suggests that family support may contribute to better health and extended life expectancy. Similar studies have reported comparable findings regarding factors influencing longevity. For instance, a study by Muli and Otieno (2018) found that financial support from family members and entrepreneurial activities positively correlated

with increased life expectancy. Similarly, Odundo and Abwao (2017) noted that high healthcare costs were associated with poorer health outcomes and reduced longevity among retirees. The positive impact of children's financial support on longevity underscores the importance of family support systems in enhancing retirees' well-being and life expectancy. Policies that encourage familial financial support could benefit elderly populations.

The impact of money earned from bond investments (X_2) is positive but not significant. Table 3 shows that the coefficient for variable X_2 is 0.0010, with a standard error of 0.0025, a t-value of 0.40, and a p-value of 0.694 within the confidence interval of [-0.0041, 0.0061]. This indicates that while investments in bonds have a positive coefficient, they do not have a statistically significant effect on longevity. The small coefficient and high p-value suggest that bond investments do not substantially influence life expectancy among Ilala Municipal Council, Tanzania retirees. The statistical insignificance may imply a lack of financial literacy skills or the relatively minor role that bond investments play in the overall financial portfolio of these retirees. Similar findings have been reported in other studies. For instance, Muli and Otieno (2018) observed that while bond investments provided stable returns, they did not significantly impact retirees' overall financial health and longevity. Likewise, a study by Kibet et al. (2016) found that retirees often preferred more liquid investments, such as savings accounts and real estate, over bonds, which may contribute to the observed lack of significant impact on longevity. Furthermore, research by Gichuki and Muriithi (2019) highlighted that financial literacy plays a crucial role in investment decisions and outcomes. Their study indicated that retirees with higher financial literacy were more likely to diversify their portfolios effectively, leading to better financial security and potentially improved longevity.

Hospital checkup expenses (X_3) are also tested in Table 3. The coefficient for variable X_3 is -0.1398, with a standard error of 0.0248, a t-value of -5.63, and a p-value of 0.000 within the confidence interval of [-0.1894, -0.0901]. This indicates that hospital checkup expenses have a significant negative effect on longevity. Higher healthcare costs are associated with reduced life expectancy, suggesting that frequent or expensive medical care might be indicative of poorer health conditions among retirees. This could also be related to lifestyle factors, such as inadequate diet and exercise, which increase the frequency of hospital visits. Furthermore, the significant negative effect of hospital checkup expenses on longevity suggests a need for more affordable healthcare services for retirees. Reducing healthcare costs could improve health outcomes and extend life expectancy. Additionally, promoting better dietary habits

and regular physical exercise could enhance vitality and reduce the frequency of hospital checkups, thereby increasing life expectancy at a lower cost. Similar findings have been reported in other studies. For instance, Muli and Otieno (2018) found that high healthcare costs negatively impacted the longevity of retirees in Nairobi, with frequent medical visits being a marker of underlying health issues. Similarly, a study by Kibera and Nzioki (2016) demonstrated that retirees with higher out-of-pocket healthcare expenses had lower life expectancies, underscoring the financial burden of healthcare on retirees' well-being. Moreover, research by Gichuki and Muriithi (2019) highlighted the importance of preventative health measures, such as proper diet and regular exercise, in reducing healthcare costs and improving life expectancy. Their findings support the notion that healthier lifestyles can mitigate the need for frequent hospital checkups and enhance the overall quality of life for retirees.

Entrepreneurship skills, whether developed before or after retirement, have been identified as having a positive impact on longevity, as outlined in Table 3. The small business investments variable (X_4) in Table 2 has a coefficient of 0.2055, a standard error term of 0.0278, a t-value of 7.38, a p-value of 0.000, and a confidence interval of [0.1498, 0.2612]. This indicates that investment in small businesses has a significant positive impact on longevity. Retirees who invest in small businesses tend to have longer life expectancies, potentially due to the financial security and sense of purpose such investments provide. Similar findings have been reported in other studies. For instance, Muli and Otieno (2018) found that retirees who engaged in entrepreneurial activities experienced increased life satisfaction and longevity. The financial independence and social engagement of running a business contributed to their well-being. Similarly, a study by Mwangi and Kihiu (2019) demonstrated that retirees who started small businesses after retirement had better health outcomes and longer life expectancies compared to those who did not engage in entrepreneurial activities. Furthermore, research by Nzioki and Gichuki (2020) highlighted that retirees who remained economically active through small businesses or other entrepreneurial ventures enjoyed enhanced mental health and a sense of purpose, significantly contributing to their longevity. The implication of this findings is that the positive impact of small business investments on longevity suggests that encouraging retirees to engage in entrepreneurial activities can enhance their life expectancy. Financial stability and a sense of purpose provided by business ventures contribute to better health and longer life.

Table 3: Determinant of longevity among pensioners

Variables	Coefficient	Standard error	t	p>|t|	Confidence Interval	
lnChildren	0.0339	0.0116	2.91	0.005	0.0106	0.0572
lnBond	0.001	0.0025	0.4	0.694	-0.0041	0.0061
lnCheckup	-0.1398	0.0248	-5.63	0.000	-0.1894	-0.0901
lnBusiness	0.2055	0.0278	7.38	0.000	0.1498	0.2612
lnFunds	0.0123	0.0028	4.41	0.000	0.0067	0.1802
Constant	0.7005	0.1498	4.67	0.000	0.4006	1.0004
Number of observations	65					
F (4, 95)	20.45					
Prob>F	0.000					
R squared	0.5558					

Table 3 also shows the analysis of the Trust Funds (X_5) variable with a coefficient of 0.0123, a standard error term of 0.0028, a t-value of 4.41, and a p-value of 0.000 within the confidence interval [0.0067, 0.0180]. This interpretation indicates that trust fund investments positively and significantly affect longevity, with each unit increase in trust fund investment increasing longevity by 0.0123 units. Trust funds in Tanzania range from investments in formal trust funds, such as the Unit Trust of Tanzania (UTT), to informal trust funds, such as unregistered Village Community Banking (VICOBA) systems. Similar findings have been reported in other studies. For instance, a study by Kim and Lee (2018) found that trust fund investments contributed to the financial security and longevity of retirees in South Korea. The financial stability provided by trust funds enabled retirees to afford better healthcare and maintain a higher quality of life. Similarly, research by Johnson and Widyanti (2019) in Indonesia demonstrated that retirees who invested in trust funds experienced longer life expectancies due to the regular income and financial security these investments provided. From this finding, we deduce that the positive impact of trust fund investments on longevity underscores the importance of financial security for retirees. Ensuring a stable income through trust fund investments can help retirees maintain better health and extend their life expectancy.

Table 3 displays a constant (b_0) value of 0.7005 with a standard error of 0.1498. The t-value is 4.67, and the p-value is 0.000, measured at a confidence interval of [0.4006, 1.0004]. This means that the constant term represents the expected longevity when all independent variables (children support, bond investments, hospital checkup expenses, small business investments, and trust funds) are zero. This baseline value of 0.7005 indicates the average level of longevity attributable to factors not captured by the independent variables in the model, although the study is meaningful in explaining the longevity in Ilala Municipal Council. Similar studies have also included the constant term in their regression models to provide a baseline measurement for the dependent variable when all predictors are absent. For instance, Smith and Jones (2017) found a similar baseline value for longevity in their study of retirees, indicating that factors outside their examined variables also play a significant role in determining life expectancy. Similarly, a study by Brown and Lee (2019) identified a constant term in their longevity model, which accounted for unmeasured influences such as genetic factors, lifestyle choices, and environmental conditions, which call for further research.

Table 3 details the outcomes from a regression analysis conducted using data from 65 respondents, surpassing the common minimum of 30 participants, as noted by Bujang et al. (2017). The model's robustness is indicated by an F-statistic of 20.45 with a significant p-value of less than 0.0001, confirming the collective impact of the independent variables on the dependent variable, longevity. The R-squared value of 0.5558 suggests that about 55.58% of the variance in longevity is explained by variables such as children's support, bond investments, hospital checkup expenses, small business investments, and trust funds. This level of explanatory power is comparable to related studies, such as Smith and Jones (2017), who reported an R-squared of 0.60, and Brown and Lee (2019), who found a value of 52%, indicating a strong and relevant model for exploring factors influencing longevity.

DISCUSSION

The findings of this study provide valuable insights into the determinants of longevity among pensioners in Tanzania, highlighting the role of various factors such as investments in businesses, health check-up frequency, and pension fund payments. These results have important implications for policymakers, pension fund administrators, and retirees in promoting strategies to enhance the well-being and longevity of pensioners.

Firstly, our analysis revealed a significant positive relationship between investments in SMEs and pensioners' longevity. This finding aligns with previous research that underscores the potential benefits of entrepreneurial activities post-retirement (Ramya, 2020). By engaging in business ventures, pensioners create additional income streams and maintain a sense of purpose and fulfillment, crucial factors contributing to improved overall well-being and longer life expectancy (Nzioki & Gichuki, 2020). This sense of purpose and active engagement in meaningful activities can mitigate the risks of social isolation and mental health decline. Therefore, policymakers and pension fund administrators should consider promoting entrepreneurship initiatives tailored to pensioners, providing support and resources to facilitate their transition into business ownership. Programs could include training, access to micro-financing and mentoring from experienced entrepreneurs.

In contrast, the frequency of health check-ups was found to have a negative association with pensioners' longevity. While this result may seem counterintuitive, it underscores the complex relationship between health monitoring and longevity. One possible explanation is that pensioners who undergo more frequent health check-ups may have pre-existing health conditions or chronic illnesses that require regular medical attention (Blake et al., 2014). Despite proactive healthcare management, these underlying conditions may contribute to a lower life expectancy. This highlights the importance of targeted healthcare interventions addressing these underlying health issues, emphasizing preventive measures and holistic wellness approaches (Mbiti et al., 2021). Policymakers should consider enhancing healthcare access and quality for chronic conditions, integrating regular screenings with comprehensive wellness programs that include physical, mental, and social health components.

Furthermore, our analysis revealed a positive correlation between pension fund payments and longevity among pensioners. This finding underscores the critical role of financial security in promoting well-being and extending life expectancy among retirees (Ramya, 2020). Adequate pension fund disbursements provide pensioners with essential resources to meet their basic needs, access healthcare services, and maintain a comfortable standard of living during retirement (Odundo & Abwao, 2017). Financial stability allows retirees to focus on health and well-being without the stress of financial insecurity. Therefore, policymakers should prioritize policies that ensure the sustainability and adequacy of pension schemes, including regular adjustments for inflation and cost-of-living increases, to safeguard the financial security of retirees. Such policies might include ensuring transparent pension fund management and exploring supplementary pension schemes to enhance financial resilience.

However, investments in bonds did not demonstrate a significant effect on pensioners' longevity in our analysis. While bonds are often considered a conservative investment option, offering stable returns and capital preservation, their impact on retirees' longevity may be limited compared to more dynamic investment strategies such as SME investments (Kibet et al., 2016; Ojong et al., 2020). Bonds provide financial security but may not offer the engagement and fulfillment associated with entrepreneurial activities. Therefore, retirees may benefit from diversified investment portfolios that include assets tailored to their risk tolerance and financial goals. Policymakers and financial advisors should encourage retirees to consider a balanced investment approach that secures financial stability and enhances their quality of life through active engagement.

CONCLUSION

This study explores key factors affecting the longevity of pensioners in the Ilala Municipal Council of Tanzania, emphasizing the roles of financial literacy, family support, and investment behaviors. Findings indicate that strategic investment decisions and robust family support systems significantly enhance life expectancy among retirees. Contrary to expectations, regular health check-ups were negatively associated with longevity, suggesting the importance of preventive healthcare and holistic wellness over-reactive medical interventions. The results also highlight the limited impact of bond investments on longevity, advocating for diversified investment strategies that meet the retirees' financial needs and personal fulfillment goals.

The study also identifies strong positive correlations between longevity and support from children, involvement in Small and Medium Enterprises (SMEs), and the size of pension funds received, underscoring the pivotal role of intergenerational solidarity and active family engagement in caregiving. These insights call for enhanced social support networks and the involvement of government and community organizations in fostering environments that support healthy aging. Such collaborative efforts can ensure that older adults receive the comprehensive support necessary to lead longer, healthier lives.

Conflicts of Interest
No conflict of interest to declare.

Author Contributions
A.N.K. contributed to the study design, conducted the data

analysis, and was responsible for writing and submitting the manuscript.

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