FINANCIAL LITERACY AND INVESTMENT DECISIONS AMONG MIDDLE AND LONG-DISTANCE ELITE ATHLETES IN KENYA

Fednard Machoka Nyang'au & Dr. Charity Njoka, PhD

FINANCIAL LITERACY AND INVESTMENT DECISIONS AMONG MIDDLE AND LONG-DISTANCE ELITE ATHLETES IN KENYA

Fednard Machoka Nyang'au [1] & Dr. Charity Njoka, PhD [2]

[1] *MBA Student (Finance), School of Business, Economics, & Tourism, Kenyatta University, Kenya*
[2] *Lecturer, Department Of Accounting and Finance, Kenyatta University, Kenya*

ABSTRACT

This study examined the impact of financial literacy on the investment decision-making process among middle- and long-distance elite athletes in Kenya. The research design employed in this study was descriptive in nature. A total of 1,695 athletes specializing in middle- and long-distance events, and based in Kenya, were included in the study. From this population, a sample size of 318 athletes was selected. The researcher took into account of both stratified and purposive sampling methodologies in order to identify the specific participants. Data collection was conducted using structured questionnaires. The study included correlation analysis and a multivariate regression model to assess the hypotheses. The research results were presented through the utilization of graphical representations and tabular formats. The findings revealed that the participants exhibited a lack of knowledge of the functioning of the Nairobi Securities Exchange (NSE). Moreover, it was observed that athletes engaged in moderate buying and selling activities of ordinary shares, preference shares, and bonds for various firms inside the NSE. The findings of the study revealed that a significant proportion of the participants expressed a tendency to infrequently allocate a portion of their profits following each successful race for the purpose of saving. The findings of the survey revealed that a significant proportion of the participants expressed a modest level of awareness regarding various investment prospects both domestically and internationally. The findings of the study suggest that the allocation of investments in real estate, business, and financial assets in the region was only partially and inadequately executed. The findings of the research indicated that the level of literacy among the participants was significantly low. The team had a limited understanding of fundamental concepts in financial literacy, including the overall inflationary trend in the economy, the concept of time worth of money, and the potential misperception of cash holdings. It is imperative that athletes obtain the necessary knowledge that will serve as the fundamental basis for an effective investment strategy. By acquiring such knowledge, athletes will enhance their ability to develop a robust investment plan that is resilient to inflation. Hence, it is imperative for athletes to actively pursue financial counsel, as there exists a multitude of advisors who can offer them the necessary assistance, direction, and expertise required to construct a robust investment strategy that ensures long-term viability, while safeguarding against potential financial setbacks stemming from the prevailing economic climate.

Key Words: Financial Knowledge, Saving Habits, Investment Opportunities Awareness, Decision-Making

INTRODUCTION

Athletics industry has proven to be a multifaceted driver of most social-economic status in the world for many countries and their nationals, be it emerging or the developed ones. Nations such as China, United States of America (USA) and United Kingdom (UK) are good example of such scenarios where developed countries has financially and economically enjoyed from athletics such as increased capital spending on athletes, capital budgeting on infrastructure, programs related to athletics and hosting of world class events (Huang and Humphreys, 2018). The returns in some economies such as China and Hong Kong in terms of economic growth and development and cash flow increment has proven comparative advantage to those economies (Lin, Piong, Wan, Li, Chu, Chu, and Chu, 2023). In addition, athletics have acted as a talent nurturing Centre where individual sportsmen and women prosper in many ways.

Many financial literacy programs have been put in to test in efforts to bridge athletics success in athletics through investment conduit for sportsmen across the globe. For instance, the following 4 Universities, namely; Botswana University, University of Dar es Salaam, University of Ghana and State University of Michigan all in unity entered in to partnership with those athletes with the aid of the scholars thereof to facilitate financial literacy (McCole, Malete, Tshube, Mphela, Maro, Adamba, and Ocansey, 2022). In addition, other participants who joint these endeavors to impact athletes with financial literacy were schools from community organizations based in African cities namely; Gaborone, Botswana; Dar es Salaam, Tanzania; and Accra, Ghana. This aforementioned program was for the purposes of creating jobs amongst youth athletes in sub-Sahara, Africa and the context of the training program was skills on entrepreneurial field and life skills. The results thereof after the training were impressive for it was realized that the youth had portrayed increased acquisition of entrepreneurship skills which aided them in decision making as far as investment decision is concerned. This was implemented by involving these youths in athlete activities (Cronin and Allen, 2017).

Acquired knowledge by an individual is broad. However, for the case of financial literacy it is the mixture of knowledge and the skills in addition to the attitude and character which are necessary for proper financial management decision which can help an individual arrive at the optimal financial wellbeing (OECD, 2016). It is the ability of an individual to make an appropriate financial management decision that concern him or her (Irungu, 2017). According to Glidden and Brown (2017). Financial literacy is the approach people adhere to in making financial management decision using basic finance ideas to set plans for the future such as identifying of insurance services, capital budgeting decisions, choosing of marginal propensity to save and budgeting of any nature (Abdeldayem, 2016).

Financial Knowledge is the finance-based education which uplift someone to be well set to make use of that knowledge in solving financial issues (Zhao and Zhang, 2021). So, by extension, financial knowledge short fall amongst the grownups can be adverse for they most of the times make wrong financial decisions which will be reflected in the way of spending, wrong budgeting approaches and wrong attitude towards investment. In addition, the poor education of financial literacy will translate in to poor planning of finances by young athletes especially when they are away from their parents or (OECD, 2016). In this inquiry, the indicator to be used to gauge financial knowledge will be knowledge of financial instruments and knowledge of investing options that are available in the market.

Savings habit is the continuous practice an individual undertakes to accumulate funds/cash for being motivated by future retirement state, individual entrepreneurship desires or growth of revenue. As far as savings habits is concerned, people have options of either going the way of savings of either contract based or discretionary-based nature (Maseko and Surujlal (2018),). The current study will use saving habit as prompted by

athlete's saving motive of either retirement, individual entrepreneurship and growth of revenue or all the aspects aforementioned. On the other hand, investment opportunities awareness is the state of an individual being informed of the available and viable investment options. So, the measurement indicators used in the current study will be anchored on the aspects of type of investment and how to invest in the market in different assets as driven by the personal interest thereof.

The term athletics is general for it represents several aspects of game events. That is running, walk exercise, jumping and throwing amongst many. The international body responsible for all games is referred to as International Association of Athletics Federations (IAAF) and its jurisdiction is wide. That is, it covers players undertaking sprinting exercise, mild and long-distance covering exercises, hurdles, games associated with track relays, jumping and throwing of discuss, road distance running, walking races, long distance-cross country games, mountainous running games and ultra-running games (Burke Castell, Casa, Close, Costa, Desbrow and Stellingwerff ,2019 and Lanham, Hill, Gallagher and Vorster, 2019).

The North Rift side of Kenya will be the targeted locale for the data collection for this is where most of the most athletes of middle- and long-distance races camp during the training period and they have participated in national and international levels (Koske, 2020). The location is dominated by Baringo, Nakuru, Uasin Gishu, Turkana, Bungoma, Elgeyo Marakwet and Trans Nzoia. Counties. The athletes in this region have a history of walking long distances especially in their young age when they were in school attendance. As a result, hard exercises did an early preparedness for the current athlete competitions (Saltin, Terrados and Larsen, 2022 and Wabuyabo, Bukhala and Benoit, 2017).

Statement of the Problem

The future survival of athletes after retirement from active professional sports career has proven to be difficulty amongst many athletes in the world. The way financial literacy acquired by the athletes and their investment decisions is not conceptually resolved so far. Barno and Tuwei (2020) noticed that those people who are unschooled on matters of financial management find themselves in a quagmire as far as continuous cash flow or income is concerned. In addition, those people who are very rich through athletics and who constantly consult on financial management on their payroll status still find themselves in financial distress, landing in to huge debts and poor investment decisions (Moolman, 2019). It is not possible for an athlete to live normally with the wealth that they abruptly acquire which is a kind of golden investment opportunity. So, most of them engage in lavish lifestyle and as it is well known in this sports profession (Lewis, 2017). It has been discovered that statistics portray that more than one out of three netball and football league participants and three out of five basketballs undergo financial distress due to in appropriate investment plans within a time period of 2 years past retirement (Dudley, 2018).

Some athletes such as Scottie Pippen was actively involved in his professional athletics, he managed to generate around 120 million US dollars (Lynch Schaller, 2015). The owner's wealth generated during this time was short-lived for the amounts went down the drain due to wrong investment decision undertaken by this professional athlete. That is, his investment records portray that this athlete lost his capital from the aforementioned amount to a balance of 20 million USD. This was due to a major investment he did of purchasing a 5.3 million USD worth Gulfstream private jet amongst other divestments (Rawcliffe, 2022).

These conceptual concerns of how knowledgeable sports persons are for them to make viable investment decision with anticipation of bettering their future especially after retirement have been interrogated with little achievement in most of the past studies. In the study undertaken by Zhao and Zhang (2021) in USA, it was revealed that both financial literacy and experience in trading in

cryptocurrencies was directly associated with investment decision, the experience aspect was more influential. Shaik et al. (2022) realized financial literacy straight away influenced the Information Technology (IT) professionals' investment behavior in India. In Poland, financial literacy status amongst secondary school learners was high and in other cases averagely high too (Swiecka et al. 2020). A study caried out by Jaco (2022) in South Africa concluded that individual peer athletes continued to make decisions on investment matters without any influence from the others in the same network.

In Ethiopia, ELifneh (2021) surveyed the level of basic financial literacy young individuals who were high school students in Addis Ababa. It was noted that this group of students had low financial literacy levels. In Botswana by Solomon, Nhete and Sithole (2018) found that personal financial literacy subjects' curriculum at secondary school level was not well assimilated. In a study conducted by Oteng (2019) in Ghana, the researcher aimed to investigate the factors influencing investment decision-making among traders in the Techiman Municipality located in the Bono East area. It was observed that individuals such as friends and business partners who possess financial expertise play a significant role in providing guidance on investing strategies.

Locally, Kimaiyo, (2021) focused on financial knowledge and its influence on savings habits amongst athletes. Ndungu and Abdul (2022) in their study on investment decision amongst KPL players in Nairobi Kenya found financial literacy directly influenced investment decision making. Karanja (2019) study concerns was on investment behavior of individuals over the lifecycle. He concluded that the aged individuals' common shares of companies as compared to the young generation. There was also common mentality of laying strategies to be financial comfortable across all age levels.

Past studies (Zhao and Zhang, 2021; Shaik et al. 2022; Waheed, et al. 2020; Maseko and Surujlal, 2018 and Assefa and Rao, 2018) has portrayed dissimilar results as far as conceptual gaps are concerned. Although the aforementioned inquiries focused on correlation of financial literacy to decision pertaining investment, some utilized savings and other factors to estimate the commonly focused dependent variable, namely; investment decision. The study findings also were dissimilar. Again, the methodology used to explain variances in investment decision value was controversial for some studies (Waheed et al.; 2020; Waheed et al. 2020; Kumari, 2020; Hong and Fraser, 2021; Kimaiyo, 2021; Karanja 2019; Assefa and Rao, 2018) used diverse methodologies such as Chi-squire, regression, correlation, probit and Structural Equation Models just to mention but a few to estimate the outcome. Again, although most studies (Khan, Rabbani, and Kadoya; 2020; Oteng, 2019; Huml, Gellock and Lecrom, 2020 and Ndungu and Abdul, 2022) reviewed focused on the financial literacy to investment decision, some studies addressed financial literacy by focusing on athletes who were school or university student, football players, net ball and runners or players. Also, the physical location of the study subjects cut across from local to global perspective. Therefore, it is a timely intervention for this inquiry to investigate the influence of financial literacy levels of athletes on investment decision that they make over time. To achieve this main objective, the current study incorporated appropriate methodology of financial knowledge, saving habit and investment opportunities awareness to gauge financial literacy and establish the level of significance influence it has on investment decision.

Objectives of the Study

The main objective of this study was to investigate the influence of financial literacy on investment decision of middle- and long-distance elite athletes in Kenya. The study was guided by the following three specific objectives.

- To determine the influence of financial knowledge on investment decision among middle- and long-distance elite athletes in Kenya.

- To establish the influence of saving habit on investment decision among middle- and long-distance elite athletes in Kenya.
- To evaluate the effect of investment opportunities awareness on investment decision among middle- and long-distance elite athletes in Kenya.

This study was hypothesized as indicated below

- H_{01}: Financial knowledge has no significant influence on investment decision among middle and long-distance elite athletes in Kenya.
- H_{02}: Saving habit has no significant influence on investment decision among middle- and long-distance elite athletes in Kenya.
- H_{03}: Investment opportunities awareness has no significant effect on investment decision among middle- and long-distance elite athletes in Kenya.

LITERATURE REVIEW

Theoretical Review

Financial Literacy Theory

Gallery, Newton and Palm (2011) are the proponents of this theory. In their debate, the Centre stage focused on the role of financial literacy whereby they portrayed the necessity of training consumers of financial products so that they can make sound decision on investment and financing process of their business or when making any other kind of financial decision. They argued that the attitude of intuition and cognition is adopted by those who have acquired financial literacy or education and hence the same individuals operate according to dual-process. According to Evans (2008), they are in a position to be guided by instinct and reasoning to select the best investment opportunity. On the same breath, Evans (2008) categorized the instinct thinking as system (1) and the second aspect of cognitive thinking as system (2) as backed by the dual-process theory. To place any financial decision, Stanovich and West (2000) therefore gave the aforementioned process preeminence (Gilinsky and Jude, 1994).

In this aspect of cognitive, the consumer is cautious and careful. He or she takes moves with carefulness hence slow in decision making (Stanovich & West ,2000). Secondly, system 2 involves the consumer thinking critically using the financial literacy or knowledge acquired to be more rational in selection of options. It is in system 2 where the decision maker practices confidence in understanding how financial products work and the final decision made is the empirical evidence that this person is qualified in investing. This argument is supported by the Japelli &padula (2013) two-period model. the aforementioned model advocates that anyone with financial literacy skills straight forwardly make decisions such as investment and savings which are actualized at the end of the day. In addition, on the side of households, it was also theoretically proven by Van Rooij (2011) that those individuals have more wealth and savings due to acquisition of financial literacy.

This supposition is reflected in the investment behavior of many athletes for they are seen trying to reason on the investment choice they will select on one side and assessing the risks inherent. So, according to Atkinson and Messy, (2005) this theory acts as a pointer of the direction that the investor has to take. In this mood, it is crystal clear that financial literacy equips an investor to choose investments well for they are market players and need the knowledge for transacting purposes. in conclusion, the theory supports the equipping the market participant such as the athletes to take the right investment moves which in turn overcome financial crisis such as poor saving habits and mitigation of risks associated with investment decisions. Again, the theory supports the athletes who are also market players in any economy to tap arising investment opportunities in a timely manner, enabling them again to do proper financial management of debts.

Absolute Income Theory

The theory of absolute revenue was established by a classical author by the name John Keynes. This

was in the year 1036 (Keynes, 1936). In his supposition, he portrayed the fact that the level of marginal propensity to consume and to save by a household is pegged on the current disposable income which is directly connected and not the future income being anticipated.

The debate in this theory according to Keynes (Keynes, 1936) is that the disposable income which is the gross income of the household net of taxation directly influences the level of consumption and savings habit. Further, the assumption of the rate of consumption referred to as consumption rate and rate of saving dictates how the disposable income is channeled to each aspect of the household. The amount saved then is kept for the purposes of precautionary needs such as emergencies such as when an athlete gets a physical injury and hence becomes unemployed or and for spending after retirement a case which one can anticipate at the current time.

This theory is in support of the reserves and speculation affiliated variable quantity for the theory advocates of disposable gains which is income that remains after taxation takes place, then the balance is dividend in to two depending on the marginal propensity to consume. Such that if the MPC is less than one, then some of the income of the individual will be saved and what is saved dictates the amount invested. So, there is a direct link between the level of savings habit and the investment decision which are both the independent and the dependent variables in this study respectively.

Permanent Income hypothesis

The aforementioned supposition was an advancement on the absolute income theory by Keynes. The proponent of PIH was Friedman (1957) and he further went contrary to other theories aforementioned and suggested that the level of consumption and saving (hence savings habit) is directly influenced by the permanent income a household gets and not absolute or relative income viewpoint. According to Friedman (1957) permanent income is the wealth accumulation one

has on average and it strongly and directly influences consumption and saving habit in comparison to the other forms of household revenues.

Therefore, this theory is in support of level of income directly influencing the consumption and savings habit of the athletes based on permanency of the income. In other words, the theory supports the current study for the athlete's life is not a one-time life span but it cuts across several longer period from youth to adult then to the stage of retirement where one would like to utilize the wealth acquired at the young age. So, the permanent income hypothesis portrays the connection between advancement in years or age of the athlete and the accumulation of wealth through investment decisions.

Empirical Literature Review

Jaco (2022) sought to find out the degree of reliance on advisory services from a network of monetarist management experts by the end users in managing sports and leisure trade off scenario amongst professional athletes. The mainframe aim of the inquiry was to find out how well suiting the aspect of financial literacy had on financial decision-making process of those athletes. Data collection was undertaken from the selected sample size of 27 athletes by use of face-to-face interview schedules which was well structured and the process of research took the two-stage model where by the step of collecting face to face data was the first level. Then the second stage involved establishment of artefact with an aim of checking the impact of financial literacy acquired by the well-trained athletes who were professionals by all standards. The study relied on design science which availed overarching research methodology. As a result, 10 athletes were selected in the second round. This numbers were arrived at by use of purposive sampling method for the interviewer was to get in touch with the right player. The outcome of the study showed that individual peer athletes continued to make decisions on investment matters without any influence from the others in the same

network.

Zhao and Zhang (2021) purposed to find out the degree of influence of both financial literacy and investment in cryptocurrency investment character. The aim was to discover the most influential explanatory variables. Data collection was emanating from a survey data of 2018 National Financial Capability composed of details of USA individual investors. Hierarchical research analysis was undertaken which was logistic by nature. Intermediation analysis was also conducted based on the commonly known Karlson Holm Breen (KHB) methodology. So, in this inquiry, investment experience in cryptocurrency was used as the mediating variable. The research outcome portrayed that there was a direct influence of financial literacy on the investment decision amongst the professional athletes. On the other hand, the investment experience in cryptocurrency portrayed an intervening effect of the relationship between financial literacy and investment decisions. Further clarification showed that the aspect of investment experience referred to as risky asset holding had statistically significant effect thereof.

This study was concern of the conceptual linkage between savings and decisions on investing in the future amongst middle- and long-distance elite athletes. The researcher was prompted to examine the findings of a study conducted by Maseko and Surujlal (2018) in order to assess the influence of financial literacy, particularly in relation to financial planning, on the financial management abilities of professional soccer players in South Africa. The study research question was concerns to justify why financial literacy is of paramount importance specifically to those sportsmen and women with a common characteristic of experiencing a short-term sports career. The inquiry fused a research design during the inquiry problem development referred to as quantitative research plan. Questionnaires were the main data collection instrument. After data analysis, it was established that minus financial literacy in the life of professional soccer player means no viable investment decision can be put in to place. Hence the process of transition to retirement is bound to be frustrating. This inquiry engrossed on the conclusion that most professional soccer players have poor investment plans due to lack of appropriate financial literacy. This calls for further interrogation to establish if financial literacy in terms of savings habits pegged on the individual's saving motive such as retirement in the future and individual initiative to carry out entrepreneurship for growth of revenue can significantly influence investment decision. Logistic regression will be utilized to achieve this objective.
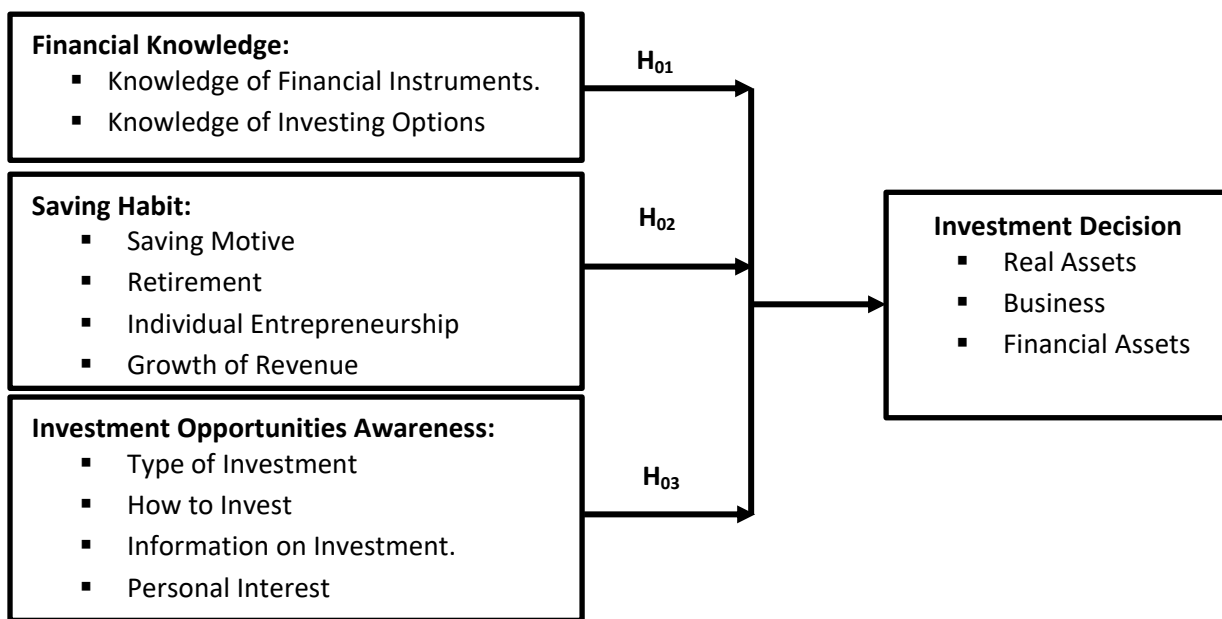
Kimaiyo, (2021) interrogated the financial literacy and savings conceptual concerns amongst the Kenyan based households. This was the mainstream reason. Other aims were to evaluate financial education penetration levels amongst households in the Kenyan context. Lastly to exploit the other causes of saving practices amongst the same group of participants. Data utilized was of secondary nature which was for the year 2019 of Fin access survey of the national level. To analyze data, the study considered regression model of probit nature. The study outcome showed that the households aforementioned had very low level of financial literacy especially those who save to repay their debts and the status could not help them manage their financial obligations such as debts. This was noted amongst those females aged 60 years and those with no education in general. The ones getting good salaries and living in cities and towns showed a high level of financial knowledge in comparison to the aforementioned counterparts. The study portrayed that the financial literacy level significantly and directly influenced the saving habits of the participants interrogated in this study. additional factors affecting savings habits were the individual's age level, level of education, the work one does, the size of the family one has, mobile money usage and the aggregate income.

In Ethiopia, the study by Assefa and Rao (2018) interrogated financial literacy and decisions related to individual's investment logic. The participants were the salaried people who were subjected to diverse avenues for investment. Covenant sampling

approach was utilized to come up with the sample size which was 209 workers located in Wolaita Sodo town, Ethiopia. Data of primary nature was collected relying on structured questionnaire. Again, data analysis was performed using Chi square approach. The study findings portrayed that the investment decisions to be made by an individual was driven by the degree to which financial literacy had influenced it. In this case, it was established that the level of literacy was too low to make any impact in convincing the salaried people to invest in the available opportunities. Further, the preference to invest in bonds which are government-based securities was directly associated with the literacy level.

In USA, a study was conducted by Khan, Rabbani, and Kadoya, (2020) to determine whether there exists any logic of financial literacy and investment connectivity of any logic in financial marketplaces located in America. Probit data analysis tool was of paramount importance in testing the null hypotheses. The model carried binary response for investment decision was gauged using measurement tools such as ordinary shares, investment trust instruments, futures options financial instruments, government bonds assets which are of foreign venture. Other financial instrument was corporate bond and foreign currency. The value of dependent variable is measured using dummy variables of one or zero. Such that if an individual has invested in one option the option of zero.

Conceptual Framework

Independent Variables

Dependent Variable

Figure 1: Conceptual Framework

Source: Researcher (2023)

METHODOLOGY

This study made use of descriptive research design. The plan entails data collection of primary data. The study targeted 1,695 elite athletes residing in Uasin Gishu and Nandi County camps located in North Rift, Kenya. From the sample gotten, the specific research participants were identified with use of Yamane equation, (Yamane formula, 1973). In this inquiry, the sample size of 318 athletes were used for data collection in the three Counties, namely; Elgeyo Marakwet Nandi and Uashi Ngishu. To achieve this sample size, stratified random sampling method were relied upon by the researcher to

select the athletes to participate out of the 1,695 which is the population total numbers.

The research involved collection of primary data using structured questionnaires as instruments which was issued to the corresponding elite athletes in the identified training camps. The questions engraved in the questionnaires were in tandem with the study variables.

The study considered testing whether the data collected had validity. This is where normality test was done which included homoscedasticity and multicollinearity being tested.

FINDINGS AND DISCUSSIONS

Descriptive Analysis

The data relevant to the various variables in the study were summarized using descriptive statistics, including measures such as the mean and standard deviation. This section presents the mean responses for each of the variables, with standard deviation numbers included to indicate the level of variability in the responses.

Financial Knowledge

The first objective was to determine the effect financial knowledge on investment decisions among middle and long-distance elite athletes in Kenya. The result on financial knowledge were analysed in Table 1.

Table 1: Financial Knowledge

	Mean	Std. Dev
I am very much aware of Nairobi securities exchange (NSE) market	2.7097	.63340
Ordinary shares for companies are bought and sold at the NSE	3.1000	.44850
Preference shares for companies are bought and sold at the NSE	3.1148	.35298
Bonds for companies are bought and sold at the NSE	3.0076	.33458
The government sell treasury bills and treasury bonds to the public	3.0455	.39588
I am very much aware of Foreign Exchange (FOREX) market	2.7651	.51184
FOREX market unlike NSE, deals with exchange of currency PAIRS for gain/profit	2.2839	.55446
I am legible to personally buy or sell ordinary shares that I hold at any time.	2.4677	.49997
I am legible to personally buy or sell preference shares that I hold at any time.	2.3710	.48404
I am legible to personally buy or sell bond that I hold at any time.	2.3456	.54344
I am legible to invest in government securities such as treasury bills and treasury bond.	2.3710	.48404
I am legible to personally buy or sell FOREX that I hold at any time. Eg USD/Yen, USD/kshs etc	2.3548	.51210
I can use a broker to trade for me either at the NSE or FOREX or both	3.0010	.48434
I can invest in Cryptocurrencies personally or using a broker	2.3886	.44504
Aggregate Score	**2.6662**	**0.4775**

Source: Research Data (2023)

The result in Table 1 indicated that the aggregate mean score of 2.6662 and standard deviation of 0.4775 indicates that the athletes disagreed with the statements presented to them relating to financial knowledge. The result indicated that the respondents disagreed that they were aware of Nairobi securities exchange (NSE) market operations (M=2.7), ordinary shares, preference shares and bonds for companies were moderately bought and sold at the NSE as represented by mean of 3.1, 3.1 and 3.0. The respondents had moderate knowledge on the government selling treasury bills and treasury bonds to the public (M=3.04). The athletes had little knowledge on deals with exchange of currency PAIRS for gain/profit, majority disagreed that they are eligible to participate in buying and selling of shares and bonds. Further, the respondents indicated that they had little financial knowledge on legibility to buy or sell FOREX, use a

broker to trade for them either at the NSE or FOREX or both and invest in Cryptocurrencies.

The study agrees with Jaco (2022) that that individual peer athletes continued to make decisions on investment matters without any influence from the others in the same network. Further, Zhao and Zhang (2021) study showed that there was a direct influence of financial literacy on the investment decision amongst the professional athletes. On the other hand, the investment experience in cryptocurrency was low. Further clarification showed that the aspect of investment experience referred to as risky asset holding had statistically significant effect thereof. In India, a study undertaken by Shaik, Kethan, Jaggaiah and Khizerulla (2022) showed that the deposits placed in the commercial banks, ordinary shares, funds from mutual organizations, savings placed with the post office, insurance covers, precious stones such as gold and silver contributed significantly to the patten of investing. The aspect of support from those who finance the games one plays or participates in such as parents and other interested firms creates skills for the athletes and the extra managerial skills were as a result of learning through trial and error and also self-training out of self-initiative.

Saving Habits

This section provides an analysis of the saving behaviors exhibited by the majority of the respondents. Table 2 presented the results.

Table 2: Saving Habits

	Mean	Std. Dev
I prefer to save some money from my earnings after every race I win or am paid (MPS)	2.3456	.48404
I prefer to consume a certain amount of some budget amount from my earnings after every race I win or am paid (MPC)	3.3548	.51210
I do some savings for I need financial support after retiring from active athletics	3.3387	.53821
I save some money from my athlete income in case I am forced to retire due to injury or sickness	3.4548	.47943
I save income to be able to support my family in case they are still dependents for the future is uncertain/on retirement	3.3657	.48404
I prefer to save some income to start a business in the future when I will not be in active athletics	3.4839	.50075
I save for I have some investment that require financial boosting once in a while	3.3711	.48465
I save in case an investment opportunity arises to be able to take advantage of it.	3.5484	.49866
I save to increase my wealth	3.7677	.49997
I like to save to ensure that my income has a continuous flow all the time	3.4800	.53275
I save for I need cash flow now and in the future to meet my bills	3.6677	.48888
Aggregate Score	**3.3799**	**0.5003**

Source: Researcher (2023)

The findings of the survey revealed that a significant proportion of the participants, as shown by a mean value of 2.34 and a standard deviation of 0.48404, expressed disagreement towards the notion of saving a portion of their winnings following each racing victory. The aggregate standard deviation indicates minimal variability across all responses pertaining to saving behaviors.. Further, the study indicated that majority of respondents moderately prefer to consume a certain amount of some budget amount from their earnings after every race they win (M=3.35, SD=0.51). As represented by mean of 3.33, 3.45, 3.36, 3.48 and 3.37 it was clear that majority of the respondents moderately agreed with statements relating consumption of savings, saving for retirement, savings in case they are forced to retire, saving to start some businesses and saving for investment. It is clear that saving habit was moderately done by athletes in Elgeyo Marakwet Nandi and Uashi Ngishu.

The study agrees with Maseko and Surujlal (2018) that most professional soccer players have poor investment plans due to lack of appropriate financial literacy. Additionally, Kimaiyo (2021) agrees that ones getting good salaries and living in cities and towns showed a high level of financial knowledge in comparison to the aforementioned counterparts. In USA, a study was undertaken by Bayuk and Altobello (2019) showed that the following individual aspects were contributing to the savings habit. Ndungu and Abdul (2022) findings showed that the savings habit, knowledge in financial management, financial alertness and attitude had a direct link with investment decision which was significant. Moreover, Karanja (2019) revealed that one's age significantly influenced investment decisions. That is if one is for example of less than 25 years the main goal was academics and not investment. This is contrary to those of the age between 41-60 years. The target of these individuals is to save for retirement. Again, savings also dictated investment such that the more the savings the more the level of investment.

Investment Opportunities Awareness

The third objective aimed to determine the effect of investment opportunities awareness on investment decisions among middle and long-distance elite athletes in Kenya. The result on investment opportunities available to athletes were presented in Table 3.

Table 3: Investment Opportunities Awareness

	Mean	Std. Dev
I am aware of several investment opportunities in and out of the country	3.3089	.54362
I can identify for you the different type of investment opportunities am aware of from different sources	3.0088	.54321
I know of several physical and financial investment opportunities either in the country or outside the country or both that I can benefit from	2.3687	.53821
I know how to invest in either real estate, shares, bonds, government treasury bills and FOREX	2.4548	.47907
I know how to do online trading using currency assets, commodities such as gold, oil or Cryptocurrencies	2.4537	.43453
Am informed of local news affecting investment markets such as FOREX and NSE prices	2.4675	.53275
I know several sources where I can access investment information. Both local and international news	2.3434	.43246
Personally, I make efforts to learn about investment opportunities from relatives, peers and friends	3.2234	.44534
I personally, like trainings to do with investment from institutions such as MFI, banks and NGOs etc.	2.4357	.44536
I personally read investment materials to gain personal knowledge of the lucrative investment opportunities	2.4332	.52243
Aggregate Score	**2.6498**	**0.49171**

Source: Researcher (2023)

The aggregate result in Table 3 shows a mean of 2.6498 and a standard deviation of 0.49171 indicating that majority of the respondents had low level of investment opportunities awareness. The low variation indicates that majority of the responses were close to the mean. Majority of the respondents indicated that they were moderately aware of several investment opportunities in and out of the country (M=3.30). The respondents could moderately identify the different types of investment opportunities they are aware of from different sources (M=3.0). The athletes had little knowledge on several physical and financial investment opportunities either in the country or

outside the country or both that they can benefit from (M=2.34) and also potrayed little know how on investing in either real estate, shares, bonds, government treasury bills and FOREX (M=2.45). The results indicated that despite the availability of investment opportunities, the athletes chose few locally available investments.

The study agrees with Assefa and Rao (2018) findings portrayed that the investment decisions to be made by an individual was driven by the degree to which financial literacy had influenced it. It was established that the level of literacy was too low to make any impact in convincing the salaried people to invest in the available opportunities. Additionally, Oteng (2019) study found that the traders did not seem to understand the concepts of liquidity, inflation rate, interest rate or charge and risk and reward aspects and therefore it was concluded that they had low financial literacy levels on this issue. Moreover, Huml, Gellock and Lecrom (2020) results showed that investment in both academia and sports was a key driver to variations on the sense of belonging in school which was inverse. That is the more the students' athletes concentrated on investment in academia and sports, the less they felt the sense of belonging in campus. Biwott, Sakataka and Wanyonyi (2019) results portrayed that 63/100 of the professionals did not have savings with any financial institution.

The implication thereof is that the saving culture amongst the majority of the athletes was low and not impressive. Again, majority of the athletes did not have any plans for retirement and this was empirically proved due to lack of retirement accounts which was a 62% as compared to the whole population under study.

Investment Decisions

The respondents indicated their investment decisions in this section. The available invest decisions were real estate, businesses and financial assets. The result indicated that 11.30% of elite athletes invested in financial assets, 28.6% invested in businesses and only 14.9% invested in real estates. The result indicated that a majority of the professionals did not have any investment at all. The study agreed with Biwott et al., (2019) which revealed a poor saving and investment culture. Biwot study also revealed that majority of the respondents at 62% did not have retirement accounts against only 38% who had retirement accounts.

The participants were additionally asked to provide their opinions on the level of investment they want to allocate to different paths. The findings of this inquiry were then consolidated and presented in Table 4.

Table 4: Investment Decisions

	Mean	Std. Dev
Real assets (Land, buildings, residential or commercial houses)	2.3189	.55362
Business i.e family business, shares etc	2.9248	.44321
Financial assets (fixed bank accounts, insurance products, bonds or financial instruments)	2.0332	.52553
Aggregate Score	**2.6498**	**0.49171**

Source: Researcher (2023)

The result in the Table 4 indicated the number of the athletes who invested in businesses was the highest and the number that invested in financial assets were the lowest. However, the results indicated that the investment in real estates, business and financial assets were partially done and to some extent poorly done in the region under study.

Analysis via Inference

Correlation Analysis

Correlation Analysis is a statistical technique used to measure the strength and direction of the relationship between two or more variables. The

correlation values were derived using the Pearson correlation coefficient, where a value near to +1 or - 1 indicated a high positive or negative correlation between the variables, respectively

Table 5: Correlation Analysis

		Financial Knowledge	Saving Habits	Investment Opportunities Awareness	Investment Decisions
Financial Knowledge	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	248			
Saving Habits	Pearson Correlation	.476**	1		
	Sig. (2-tailed)	.606			
	N	248	248		
Investment Opportunities Awareness	Pearson Correlation	.244**	-.023	1	
	Sig. (2-tailed)	.601	.754		
	N	248	248	248	
Investment Decisions	Pearson Correlation	.637**	.753**	.699**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	248	248	248	248

Source: Researcher (2023)

The findings presented in Table 5 demonstrate a statistically significant positive association (P=0.637, sig<0.05) between financial knowledge and investing decisions. The correlation between opportunity saving behaviors and investment decisions was found to be very significant (P=0.753, Sig=0.000), indicating a strong and positive association between the two variables. The study found a positive, substantial, and statistically significant association (P=0.699, sig<0.05) between awareness of investment prospects and investment decisions.

Regression Analysis is a statistical technique used to examine the relationship between a dependent variable and one or more independent variables. The regression analysis demonstrated the existence of a linear relationship between the variables examined in the study. This study elucidated the impact of manipulating an independent variable on the corresponding alterations observed in the predicted variable. The findings demonstrated a significant correlation between the variables.

CONCLUSIONS ANDRECOMMENDATIONS

The findings revealed that the participants exhibited a lack of awareness regarding the functioning of the Nairobi Securities Exchange (NSE). Moreover, it was observed that athletes engaged in moderate buying and selling of ordinary shares, preference shares, and bonds for various firms inside the NSE. The athletes possessed limited understanding regarding transactions involving the exchange of currency pairs for financial advantage. The majority expressed disagreement with their eligibility to engage in the buying and selling of shares and bonds. Moreover, the participants expressed a limited understanding of financial concepts related to the eligibility for purchasing or selling foreign exchange, utilizing a broker for trading activities either at the National Stock Exchange (NSE) or in the foreign exchange market, and investing in cryptocurrencies.

The study findings revealed that a significant proportion of the participants expressed a tendency to infrequently allocate a portion of their winnings following each successful race towards savings.

Moreover, the study revealed that a significant proportion of participants exhibit a moderate inclination towards allocating a specific portion of their winnings following each victorious race towards a predetermined budget. The data indicates that a significant proportion of the participants expressed a moderate level of agreement with regards to statements pertaining to the utilization of savings, saving for retirement, setting aside funds in the event of forced retirement, saving for entrepreneurial endeavors, and saving for investment purposes. It is evident that athletes in Elgeyo Marakwet, Nandi, and Uashi Ngishu counties exhibited a modest level of adherence to saving habits. This stands in contrast to persons aged 41-60, whose primary objective is to save savings for their retirement. Furthermore, it should be noted that the level of investment is directly influenced by the amount of savings available. In other words, a higher level of savings corresponds to a higher level of investment.

The findings of the study revealed that a significant proportion of the participants had a limited level of awareness regarding investment alternatives. The findings of the survey revealed that a significant proportion of the participants expressed a modest level of awareness regarding various investment prospects both domestically and internationally. The participants exhibited a moderate level of ability to discern various investment opportunities based on their knowledge acquired from diverse sources. The athletes had limited awareness of various physical and financial investment alternatives, both domestically and internationally. Additionally, they demonstrated a lack of expertise in investing in real estate, shares, bonds, government treasury bills, and the foreign exchange market (FOREX). The findings of the study revealed that, despite the presence of several investment options, the athletes had a tendency to select only a limited number of investments that were accessible within their immediate vicinity.

The investment options that were accessible were real estate, enterprises, and financial assets. The findings reveal that the athletes who allocated their investments in businesses exhibited the highest proportion, while those who invested in financial assets demonstrated the lowest proportion. However, the findings of the study revealed that the allocation of resources towards real estate, commercial, and financial assets in the examined region was only partially executed and, to a certain degree, exhibited suboptimal performance.

The findings of the research indicated that the level of literacy among the participants was significantly low. These individuals are the younger generation. The team had a limited understanding of fundamental concepts in financial literacy, including the general inflationary trend in the economy, the time worth of money, and the illusion surrounding cash holdings. Firstly, it is important to consider the role of coping techniques employed by peers in the decision-making process. The topic under consideration is to the provision of financial support from individuals or entities, such as parents and interested corporations, towards the games in which one engages or participates. Another contributing factor is to the formation of financial literacy, while the final aspect concerns the post-retirement phase in the realm of sports. Consequently, the study reached the conclusion that the factors contributing to financial distress among athletes included insufficient scholarships, inadequate funding, and limited participation chances. Consequently, the acquisition of additional managerial skills can be attributed to a combination of experiential learning and self-directed training.

There exist certain elements that contribute to an athlete's financial vulnerability which are inherent and unalterable. Athletes consistently uphold familial, social, and interpersonal relationships, which need them to actively participate in personal financial considerations. The proposed approach involves offering educational opportunities to athletes, with the objective of enhancing their capacity to make informed financial decisions. This would be achieved by promoting financial literacy as a core skill that is relevant to athletes of different

ages and skill levels. Athletes who demonstrate a comprehensive comprehension of financial concerns will be better prepared to make well-informed financial decisions and execute efficient money management tactics, hence facilitating the achievement of their desired financial goals.

Based on the facts, analysis, discussion, and conclusions elucidated in this study, a number of recommendations were posited. It is recommended that professional athletes from Kenya prioritize the development of a robust understanding of financial literacy and demonstrate responsible financial conduct. This will enable them to successfully oversee their current and future financial affairs, ultimately leading to the achievement of financial contentment. Additionally, it is recommended that team management of Kenyan professional athletes should prioritize the provision of counseling or training programs that aim to improve financial literacy and cultivate positive financial behaviors. This will provide athletes with the opportunity to gain the requisite knowledge and abilities to make well-informed decisions pertaining to their financial management, hence aiding the attainment of financial contentment.

There are countless cases in which athletes have made uninformed and poorly educated investment decisions, leading to the destruction of their financial resources. The commencement of 2012 was characterized by a significant economic crisis that had occurred in the previous year, resulting in increased levels of inflation and thus impacting the aforementioned unprofitable investment. Therefore, it is imperative that athletes acquire the necessary knowledge that will serve as the fundamental basis for an effective investing strategy. Through the acquisition of such knowledge, athletes will be able to strengthen their capacity to formulate a comprehensive investment strategy that exhibits resilience in the face of inflationary pressures.

In addition to demonstrating experience in the field of investing, athletes must also exhibit a comprehension of the crucial function that inflation plays within the context of investment. Therefore, it is crucial for athletes to actively seek financial guidance, as there are numerous advisors available who can provide them with the essential support, guidance, and expertise needed to develop a strong investment plan that ensures long-term sustainability, while also protecting against potential financial challenges arising from the current economic conditions.

Recommendations for Future Research

The research focused on Kenyan athletes, with particular emphasis on the regions of Elgeyo Marakwet, Nandi, and Uasin Gishu. The research primarily examined the signs of financial literacy, specifically focusing on savings behaviors, financial knowledge, and awareness of investment opportunities. The study additionally suggests exploring and examining other characteristics pertaining to financial literacy. The focus of the study was on investment decisions, with the dependent variable being the primary area of interest. The utilization of secondary data was deemed necessary for the research.

REFERENCES

Abdeldayem, M.M. (2016). "Is There a Relationship between Financial literacy and Investment Decisions in the Kingdom of Bahrain?" Volume 5, Issue 4 Pages: 203-221.

Assefa, M., & Rao, D. (2018). Financial literacy and investment behavior of salaried individuals: a case study of Wolaita Sodo Town. *Int. J. Bus. Manage. Invent*, *7*(10), 43-50.

Atkinson, A. & Messy, F. (2005), assessing financial literacy in 12 countries an OECD Pilot Exercise, Paris: OECD Financial Affairs Division.

Balliauw, M., & Van Den Spiegel, T. (2018). Managing professional footballers' finances to avoid financial

problems: A Belgian survey. *Sport, Business and Management: An International Journal*, *8*(4), 318-334.

Barno, L. J. and Tuwei, J. K. (2020). Effect of Prospecting Bias on Investment Decision Making among Small and Medium Enterprise in Nairobi County. *Journal of Business Management and Economic Research, 4*(3), 253-266.

Barth, M., Güllich, A., Forstinger, C. A., Schlesinger, T., Schröder, F., & Emrich, E. (2021). Retirement of professional soccer players – A systematic review from social sciences perspectives. *Journal of Sports Sciences*, *39*(8), 903–914.

Bayuk, J., & Altobello, S. A. (2019). Can gamification improve financial behavior? The moderating role of app expertise. *International Journal of Bank Marketing*, *37*(4), 951-975.

BBC. (2018). The BBC's State of Sport 'Life after Sport' Special. February 6. Available online: https://www.bbc.co.uk/sport/42956938 (accessed on 15 May 2019).

Biwott, E., Sakataka, W., & Wanyonyi, W. E. (2019). Influence of Investment Skills on Long Term Performance of Athletes in Elgeyo Marakwet County, Kenya. *Business, Management and Economics Research, 5*(10), 142-145.

Burke LM, Castell LM, Casa DJ, Close GL, Costa RJ, Desbrow B and T Stellingwerff (2019). International association of athletics Federations consensus statement Nutrition for athletics. *International Journal of Sport Nutrition and Exercise Metabolism, 29*(2):73-84.

Cronin, L & Allen, J 2017, 'Development and initial validation of the Life Skills Scale for Sport', Psychology of Sport and Exercise, vol. 28, pp. 105–19.

Dudley, C. (2018). Money lessons learned from pro athletes' financial fouls.

Elifneh, Y. W. (2018). Financial Literacy: What Can We Learn from the Literature. In accelerating Financial Inclusion with Innovative Financial Services for Sustainable Development in Ethiopia. Papers and Proceedings of the Tenth Biennial Conference, Association of Ethiopian Microfinance Institutions (AEMFI), Mekele.

Evans, J. S. B. (2008). Dual-processing accounts of reasoning, judgment, and social cognition. *Annu. Rev. Psychol.*, *5*(9), 255-278.

Friedman, M. (1957). The permanent income hypothesis. In *A theory of the consumption function* (pp. 20-37). Princeton University Press.

Gallery, N., Newton, C., & Palm, C. (2011). Framework for Assessing Financial Literacy & Superannuation Investment Choice Decisions, *Australasian Accounting Business and Finance Journal, 5*(2), 3-22.

Gilinsky, E. (1984). The role of fish predation and spatial heterogeneity in determining benthic community structure. *Ecology*, *65*(2), 455-468.

Glidden, M. D., & Brown, T. C. (2017). Separated by bars or dollar signs? A comparative examination of the financial literacy of those incarcerated and the general population. *American Journal of Criminal Justice, 42*(3), 533-553.

Hong, H. J., & Fraser, I. (2021). My sport won't pay the bills forever': High-performance athletes' need for financial literacy and self-management. *Journal of Risk and Financial Management*, *14*(7), 324.

Huml, M. R., Gellock, J. L., & Lecrom, C. W. (2020). College athletes and the influence of academic and athletic investment on sense of belonging. *Journal of Amateur Sport*, *6*(2), 43-72.

Irungu, E. M. (2017). The Factors Influencing the Savings Decisions Among Kenyan Professional Football Players (Doctoral dissertation, United States International University-Africa).

Jaco, M. (2022). Proposing a network of advisors that could guide a professional athlete's financial decisions in pursuit of sustainable financial well-being, Managing Sport and Leisure, 27:6, 577-592, DOI: 10.1080/23750472.2020.1842791

Karanja, J. N. (2019). Investment preferences over the individual lifecycle: a case of private universities in Kenya (Doctoral dissertation, Strathmore University).

Keynes, J. M. (1936). The General Theory of Employment, Interest and Money.

Khan, M. S. R., Rabbani, N., & Kadoya, Y. (2020). Is financial literacy associated with investment in financial markets in the United States?. *Sustainability*, *12*(18), 7370.

Kimaiyo, F. C. (2021). *Financial Literacy and household savings in Kenya* (Doctoral dissertation, University of Nairobi).

Koske SC. (2020). Perceptions on the Use of Performance Enhancing Drugs by Athletes in Selected Counties of North Rift, Kenya (Doctoral dissertation, University of Nairobi).

Kumari, D. T. (2020). The impact of financial literacy on investment decisions: With special reference to undergraduates in Western Province, Sri Lanka. *Asian Journal of Contemporary Education*, *4*(2), 110-126.

Lanham-New, S.A, Hill, T.R, Gallagher, A.M. and Vorster, H.H. (2019). Introduction to human nutrition. Garsington Road, Oxford, OX4 2DQ, United Kingdom, Blackwell Publishers 2 nd Ed.

Lewis, C. (2017). SA Rugby must 'Boks' clever. SA Rugby Magazine, 26 September 2017 [online]. Available from: http://www.sarugbymag.co.za/blog/details/sa-rugbymust-boks-clever [Accessed 15 January 2018].

Lin, A. F. C., Chu, E. C. P., Chu, V. K., Chan, V., Leung, A. C., Lau, R. P., ... & Ng, L. L. W. (2023). Recognizing Hong Kong chiropractors' sick leave Authority: valuing a conservative approach to workers' compensation. *Cureus*, *15*(3), 234-248.

Lusardi, A., Michaud, P. C., & Mitchell, O. S. (2017). Optimal financial knowledge and wealth inequality. *Journal of political Economy*, *125*(2), 431-477.

Lynch Schaller, W. (2015). Scottie Pippen's Airball: On the Role of Fiduciary Duty Law in Illinois Professional Liability Cases, 48 J. Marshall L. Rev. 777 (2015). *UIC Law Review*, *48*(3), 5-21.

Maseko, J., & Surujlal, J. (2018). Financial planning for retirement amongst South African professional soccer players. Challenges of service delivery in three community service centres of south african police service in east rand policing area of Gauteng, South Africa, 690.

McCole, D., Malete, L., Tshube, T., Mphela, T., Maro, C., Adamba, C. & Ocansey, R. (2022). Sparking entrepreneurial tendencies in youth: Lessons from sport and life skills education in three African cities. *Gateways. International Journal of Community Research and Engagement*, *15*(2), 1-10.

Mengie Ayele, T., & Abebe Zewdie, E. (2021). A Comparative Study of Hematological Parameters of Endurance Runners at Guna Athletics Sport Club (3100 Meters above Sea Level) and Ethiopian Youth Sport Academy (2400 Meters above Sea Level), Ethiopia. *Journal of Sports Medicine*, *2021*.

Moolman, J. (2019). *A framework for the financial literacy skills required by professional athletes in pursuit of*

sustainable financial well-being (Doctoral dissertation).

Mugenda, O. M. & Mugenda, A. G. (2009). Research methods: Quantitative and Qualitative approaches. Nairobi: ACTS.

National Bureau of Statistics, (2018). China Sport Yearbook [EB/OL]. (2019/10/1). http ://www.stats.gov.cn.

Ndungu, J. M., & Abdul, F. (2022). Influence of Financial Literacy on Personal Investment Decisions Among Kenya Football Premier League Players in Kenya.

Organization for Economic Co-operation and Development. (2016). G20/OECD INFE Core Competencies Framework on Financial Literacy for Adults (online).

Oteng, E. (2019). Financial literacy and investment decisions among traders in the Techiman Municipality. *Research Journal of Finance and Accounting*, *10*(6), 50-60.

Rawcliffe, T. (2022). How does Scottie Pippen's net worth now compare to his Chicago Bulls teammates of their dominant era.

Remund, D. L. (2010). Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of consumer affairs*, *44*(2), 276-295.

Rice, M. S., Rosemary, P., Stefanie D., Daveena M., Patrick, D. McGorry, and Alexandra

Saltin, B, Terrados, N., Larsen, H. (2022). Morphology, enzyme activities and buffer capacity in leg muscles of Kenyan and Scandinavian runners. *Scand J Med Sci Sports, 5*(7), 222–230.

Schlesinger, T., Barth, M., Bartsch, M., & Pitsch, W. (2023). An analysis of precautionary savings practices of professional football players. *Sport, Business and Management. An International Journal*, *13*(3), 354-375.

Shaik, M. B., Kethan, M., Jaggaiah, T., & Khizerulla, M. (2022). Financial Literacy and Investment Behaviour of IT Professional in India. *East Asian Journal of Multidisciplinary Research*, *1*(5), 777-788.

Shi, J., Li, G., Xue, S., & Nie, Q. (2022). From zero to hero: the spatio-temporal patterns and migration influence mechanism of world-class athletes in China. *Heliyon*, *8*(11).

Solomon, G. E., Nhete, T., & Sithole, B. M. (2018). The case for the need for personal financial literacy education in Botswana secondary schools. *SAGE Open*, *8*(1), 2158244017753867.

Stanovich, K. E., West, R. F., & Zizzo, D. J. (2000). Individual differences in reasoning: Implications for the rationality debate? -Open Peer Commentary-Implicit learning of (boundedly) rational behavior.

Swiecka, B., Yeşildağ, E., Özen, E., & Grima, S. (2020). Financial literacy: The case of Poland. *Sustainability*, *12*(2), 700.

Van Rooij, M. C., Lusardi, A., & Alessie, R. J. (2011). Financial literacy and retirement planning in the Netherlands. *Journal of Economic Psychology, 32*(4), 593-608.

Wabuyabo, I. W., Bukhala, P. W., & Benoit, G. (2017). Socio-Cultural Determinants of Athletics Abilities Among Kenyan Elite & Sub-Elite Middle- and Long-Distance Runners.

Waheed, H., Ahmed, Z., Saleem, Q., Din, S. M. U., & Ahmed, B. (2020). The mediating role of risk perception in the relationship between financial literacy and investment decision. *International Journal of Innovation, Creativity and Change*, *14*(4), 112-131.

Wang, Y.K., Han, X.W., Li, X.T., (2019). A study of the evolution of worldwide competition in winter events from the approach of spatial autocorrelation. *J. Shenyang Sport Univ. 38* (6), 115–122.

Wu, L., Li, X.G., Ma, L.N., et al., (2018). A study on the regional differences of Chinese competitive sports. *Econ. Geogr. 38*(1), 52–60.

Yamane, Taro. (1973), Statistics: An Introductory Analysis. London: John Weather Hill, Inc.

Yang, T.X., (2019). A study of age features and winning factors of Olympic men's weightlifting champions. Sichuan Sports Sci. 38 (1), 54–58.

Yu, B. (2017). The Moderating Effect of Country of Origin on Athlete Brand Equity.

Zhang, S., Yu, X., et al., 2014. The study of men's basketball athlete during the London olympic games: height, weight, BMI, age features. Sports Res. Educ. (29), 137–141.

Zhao, H., & Zhang, L. (2021). Financial literacy or investment experience: which is more influential in cryptocurrency investment?. *International Journal of Bank Marketing*, *39*(7), 1208-1226.