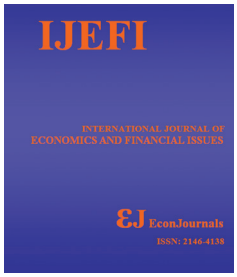

International Journal of Economics and Financial Issues

ISSN: 2146-4138

available at http: www.econjournals.com

International Journal of Economics and Financial Issues, 2024, 14(2), 111-119.

Demographic and Sociocultural Determinants of Financial Literacy in South Africa

Michael du Preez, SJ Ferreira-Schenk*

North-West University, South Africa. *Email: 23261048@nwu.ac.za

Received: 17 November 2023 **Accepted:** 19 February 2024 **DOI:** https://doi.org/10.32479/ijefi.15441

ABSTRACT

Financial literacy is rapidly becoming more important as financial markets continue to evolve and new and more complex financial products are introduced. This study investigates the relationship between demographic and sociocultural variables and the level of financial literacy of individual investors in South Africa. This study is significant as it provides policymakers with target areas to provide incentives towards financial education programmes. Secondary data were obtained from a private domain where a private investment company collected primary data using an electronic quantitative survey. The sample consisted of 1, 059 individual investors. The study found that people over 50 years of age, men, whites, people with common-law spouses, and people who owned homes without a mortgage payment reported the highest degree of financial and investment knowledge. Groups that reported a low degree of financial and investment knowledge were individuals between the ages of 35 and 49, females, coloureds, divorced individuals, and individuals living with relatives. Health status and education were positively correlated with the financial and investment knowledge of individual investors. Policymakers should aim to target the groups identified by the study that show a low degree of financial literacy with financial education to promote wealth creation, which could benefit the economy by promoting investment and economic participation while simultaneously trying to address structural issues such as poverty and inequality.

Keywords: Financial Literacy, Determinants, Demographic, Sociocultural, South Africa
JEL Classifications: D14, J10, J16, G53, I22

1. INTRODUCTION AND BACKGROUND TO THE STUDY

Financial literacy is of critical importance when making any investment decision. According to Refera et al. (2016:1), developments in the realm of economics and finance have made financial knowledge a necessity, and lack thereof may have undesirable consequences for private investors. These undesirable consequences may include poor financial planning, an inability to make ends meet, a lack of a retirement plan, uncomprehensive insurance, or simply the inability to meet your investment goals and objectives. Financial literacy is a very broad term that can refer to an individual's knowledge of financial products, institutions, and concepts, as well as basic financial skills such as financial planning and the calculation of interest payments (Xu and Zia, 2012:2). Starcek and Trunk (2018:30) consider investors financially literate if they are proficient in mathematics, can manage their money and debt effectively, grasp the concept of credit, can identify whether they have insurance needs or require financial protection, and can consider the potential risks and rewards involved in investments.

Lusardi and Mitchell (2014:5) state that global financial markets have become more accessible, and while this is largely advantageous as it promotes financial inclusion, it exposes the average investor to complex financial products that are difficult to comprehend and use. These developments emphasise the importance of financial training and education. Locally, financial education may be lacking. Louw et al. (2013:1) postulate that

financial education and training initiatives in South Africa are not successful in preparing individuals for future financial challenges they may face. Furthermore, Nanziri and Olckers (2019:2) argue that, based on South Africa's high degree of wealth and income inequality, financial literacy could become a major policy concern. According to Financial Literacy in South Africa (2020), 50% of the respondents scored below 50% in a test measuring financial literacy. Sibanda and Sibanda (2016:31) found that numerous stakeholders provide financial education and training programmes throughout the country; however, they discovered that these programmes were uncoordinated and did not meet the demand for much-needed financial training.

The continued development and increasing complexity of financial markets and products require a greater focus on creating effective policies and programmes to improve the level of financial literacy in South Africa. However, to design effective programmes and policies, there must be clarity regarding the significant variables that influence and determine the level of financial literacy of individuals. As iterated by Sibanda and Sibanda (2016:31), there is inadequate provision and a lack of standardisation in terms of financial education programmes, despite the participation of various stakeholders, such as government, private entities and donor organisations. To address these provisional problems, there must be certainty about the significant determinants of financial literacy to provide stakeholders with clear guidance as to the areas where policy or provision is currently lacking. This study aims to examine demographic variables that influence the level of financial literacy in South Africa. Furthermore, it aims to provide policymakers with guidance on the areas where action must be taken to improve the overall level of financial literacy in South Africa.

2. LITERATURE REVIEW

Despite a large body of existing research and the recent proliferation of research in the field of financial literacy (Goyal and Kumar, 2020:84), there is currently no widely accepted theoretical definition of financial literacy or consensus on a method with which it can be measured (Lyons and Kass-Hanna, 2021:2; Kimiyaghalam and Safari, 2015:81). However, certain scholars maintain that there are commonalities in different conceptual definitions of the subject. According to Remund (2010:279-281), scholarly definitions of financial literacy typically fall under five distinct categories related to an individual's financial abilities, namely their knowledge of financial concepts, their capacity to discuss financial concepts, their ability to manage personal finances, financial decision making skills and confidence in their future financial planning. Various sources and scholars seem to agree that financial literacy can be defined as the skills, knowledge, and attitude that individuals possess, related to finance and risk, that aid in effective decision-making to achieve financial well-being (Nicolini and Cude, 2021:1; OECD, 2011:3). Individuals are considered financially illiterate if they have financial knowledge but are unable to effectively apply their knowledge to make compelling financial and investment decisions (Lusardi and Mitchell, 2014:6), or when they cannot identify a need for financial protection or cannot manage money effectively (Starcek and Trunk, 2018:30). On the contrary, people would be considered financially literate if they have sufficient financial skills, knowledge, and confidence to implement those skills. Some degree of financial literacy is necessary to navigate the complex and ever-evolving world of economics and finance, but how do scholars measure levels of financial literacy?

According to Hung et al. (2009:8), the most common method for measuring financial literacy levels is in the form of surveys or questionnaires. These surveys or questionnaires can take the form of individual performance tests or self-report questionnaires. Although these methods for measuring financial literacy are typically similar across various studies, the content of surveys and questionnaires may differ according to how a study defines financial literacy (Hung et al., 2009:8). Differences occur when conceptual definitions emphasise the different aspects that encompass the concept of financial literacy, such as numeracy, knowledge of financial concepts, the ability to diversify away risk, and financial attitude and behaviour (Lusardi and Mitchell, 2011:499; Garg and Singh, 2017:176-177). Consequently, these varied conceptual definitions of financial literacy and the bespoke nature of measurement employed in different studies pose a substantial problem in terms of the comparability of different empirical results (Lusardi and Mitchell, 2014:27). Current measurement methods were found to be inconsistent (Bongini et al., 2018:14). Furthermore, Folke et al. (2018:1) found that measurement methods in financial literacy studies were unreliable, misrepresentative and too theoretical to measure genuine ability. Numerous articles refer to different variables as significant in determining financial literacy levels. These variables include certain demographic variables such as gender, marital status, number of financial dependents, age, education, income, ethnicity, and homeownership (Yoshino et al., 2017:24; Sabri, 2011:4; Potrich et al., 2015:366). Sociocultural variables such as religion and health status are also cited as significant in explaining the level of financial and investment knowledge of individual investors (Agyei, 2018:4; Braun et al., 2009:51).

Each of these individual demographic variables can have a significant relationship with financial literacy. Age is positively associated with the level of financial literacy of individuals, in that objective and subjective knowledge of financial concepts tends to increase in proportion to age (Henager and Cude, 2016:8-9). According to Hasler and Lusardi (2017:2), women globally tend to exhibit lower levels of financial literacy and have less confidence in making financial decisions than men. Married individuals typically have higher levels of financial literacy as partners share and aggregate their financial knowledge (Bashir et al., 2013:396). Consequently, married individuals are more likely to be prepared for retirement (Oli, 2020:27-28). Individuals with a greater number of dependents will have to contend with strenuous budgetary constraints and will likely have lower levels of financial literacy (Potrich et al., 2015:365). The level of education of an individual has a positive impact on their financial literacy level (Lusardi et al., 2010:368). Lusardi and Tufano (2009:5) state that financial literacy corresponds to the level of income an individual receives. A study conducted by the HSRCA (2020) found that different ethnic groups reported varying levels of enjoyment

when participating in financial activities. Whites and Indians reported that they enjoyed engaging with financial matters much more than Black and Coloured respondents. According to Braun et al. (2009:51), poor people experience decreased earnings and exhaustion of financial resources, which can have a detrimental effect on personal and family finances. The act of attempting to secure financing to purchase a home can spur the development of basic financial and investment knowledge, while homeownership provides collateral to engage in other financing activities, which facilitates an improvement in financial and investment knowledge (Wang and Liu, 2023:19).

In a study by Potrich et al. (2015:362), quantitative data was collected using a survey. In this study, logit and probit regression models were constructed using demographic and socioeconomic explanatory variables to determine their significance in explaining the level of financial literacy level of 1,400 people living in Rio Grande, Brazil. This study found that men had higher levels of financial literacy than women, individuals with a larger number of dependents had lower levels of financial literacy, individuals with higher levels of education and income had higher levels of financial literacy and variables of marital status, occupation and age were not significant in influencing the level of financial literacy. Another study by Kartini et al. (2020:114) also collected quantitative data through a survey but employed structured equation modelling (SEM) techniques to design a behavioural model for financial literacy. This study (Kartini et al., 2020:114) found an interrelationship between financial literacy attitudes, financial literacy behaviour, and financial literacy levels in Indonesia. Isomidinova and Singh (2017:67-69) collected data using a self-report survey and used multiple regression, normality testing, and correlation testing to examine the relationship between financial education and the dependent variable of financial literacy, and found that financial education, along with socialisation agents, were significant determinants of financial literacy in Uzbekistan. The studies mentioned above illustrate the varying methodologies used when conducting research on financial literacy. Additionally, it shows that the context of a study is an important factor to consider when comparing results.

According to a South African study conducted by Van den Bergh-Lindeque (2021:296), in which data were collected using a closed-ended self-report questionnaire, certain demographic variables such as marital status, gender, number of dependents, age, ethnicity, household size, and homeownership had a significant impact on the risk tolerance of individual investors. Risk tolerance will subsequently influence the financial and investment decisions of individual investors. Both risk tolerance and demographic variables will have a significant impact on the financial decision-making process and the investment patterns of individual investors (Chavali and Mohanraj, 2016:174). Consequently, the demographic variables identified in Van den Bergh-Lindeque (2021:296) could also be significant in determining the level of financial literacy of individual investors. Although Van den Bergh-Lindeque (2021) provides a comprehensive overview of the demographic and sociocultural variables that influence tolerance to financial risk, the study fails to investigate the demographic variables that influence the financial and investment knowledge of individual investors.

As alluded to in the introduction, the ever-evolving global financial landscape, growing complexity of financial products, and increased ease of access to financial products and markets necessitate a focus on improving the financial literacy of individual investors (Lusardi and Mitchell, 2014:5). From a South African perspective, there is currently a lack of standardisation and under-provision in essential financial education and training initiatives, and the available education is not successful in preparing individual investors for the challenges they may face (Sibanda and Sibanda, 2016:31; Louw et al., 2013:1). Improving financial literacy can have a beneficial effect on a country in terms of fostering international competitiveness, improving financial inclusion, and generating liquidity for financial markets (Zait and Bertea, 2014:37). However, to create effective financial education schemes and policies to improve financial literacy, there must be clarity on the significant variables that influence and determine the level of financial and investment knowledge of individuals. To address the provision and standardisation problems that South Africa faces, more clarity needs to be provided on the significant determinants of financial literacy to provide stakeholders with clear guidance on the areas where policy and provision are currently lacking. This study aims to identify the demographic variables that influence the level of financial literacy in South Africa. Furthermore, it aims to provide policymakers with guidance on the areas where action must be taken to improve the overall level of financial literacy in South Africa.

3. METHODOLOGY

The following sections within the methodology represent the research approach and instrument used, the sample size, the hypothesis formulated, and the statistical analysis.

3.1. Secondary Data

Secondary data were obtained from a private domain where a private investment company collected primary data using an electronic quantitative survey. A quantitative research approach was used as it allowed the researcher to systematically and objectively collect numerical data from a sample of a population and generalise findings to the population as a whole (Maree, 2007:145). The research sample of this study consisted of a purposive (non-probability) sample of individual South African investors. Respondents were subjected to certain inclusion criteria:

- Investors must be 18 years and older; and
- A current investor.

The questionnaire was distributed electronically to 2,000 individual investors. A sample size of 1,059 individual investors was selected after subjecting the respondents to the inclusion criteria.

3.2. Measurement Instrument

Primary quantitative data were collected using a self-reporting questionnaire that was distributed electronically to individual investors in the database of a South African investment company. This study obtained access to company data within their private domain. The demographic section of the questionnaire was used for this study. According to Merriam-Webster (2023), demographics are the statistical characteristics of human

populations. Sociocultural information is related to the habits, traditions, and beliefs of different societal groups (Cambridge Dictionary, 2023). Demographical questions, namely gender, marital status, age, ethnicity, education, homeownership, number of financial dependents, annual income, net worth, household size, and employment status were included in the questionnaire. Additionally, sociocultural questions related to health awareness and religious beliefs were included. Both demographic and sociocultural factors can have a significant influence on the level of financial knowledge of individual investors.

3.3. Hypothesis Testing

To test the relationship between the demographic variables and financial and investment knowledge, the following hypotheses were formulated:

Null hypothesis ($H_0$1): There is no relationship between age and financial and investment knowledge.

Null hypothesis ($H_0$2): There is no relationship between gender and financial and investment knowledge.

Null hypothesis ($H_0$3): There is no relationship between homeownership and financial and investment knowledge.

Null hypothesis ($H_0$4): There is no relationship between education and financial and investment knowledge.

Null hypothesis ($H_0$5): There is no relationship between annual income and financial and investment knowledge.

Null hypothesis ($H_0$6): There is no relationship between the number of households and financial and investment knowledge.

Null hypothesis ($H_0$7): There is no relationship between health status and financial and investment knowledge.

3.4. Statistical Analysis

Quantitative data collected were analysed using various statistical methods. The statistical tests include reliability analysis, descriptive analysis, inferential statistics such as t-tests, ANOVA and correlation analysis, and regression analysis. Statistical methods will be further discussed in the following subsections.

According to Cooksey (2015:61), descriptive statistics are used to summarise and simplify the description of data, through graphical representation, or computing a specific value or index of values of the data itself. In this research study, descriptive statistics, such as measures of central tendency, frequencies, percentages, and measures of dispersion, were implemented to provide descriptive values for the demographic and sociocultural variables measured. In this research study, inferential statistics, namely t-tests, ANOVA, and correlation analysis, were implemented to determine whether there were statistically significant differences between groups of demographic variables and to determine the strength and direction of the relationships between the independent variables and the dependent variable of financial and investment knowledge.

T-tests are used to compare arithmetic mean scores for two different groups (Emerson, 2017:194) and analyse whether they significantly differ from one another. T-tests were used to determine whether there was a statistical difference between the arithmetic means of pairs of independent variables. Analysis of variance (ANOVA) is used when comparing the arithmetic mean of more than two groups (Kim, 2014:74). ANOVA was used to determine whether there are statistically significant differences between the different groups under the demographic variables of ethnicity, marital status, homeownership, religion, and age.

According to Gogtay and Thatte (2017:78), correlation analysis is used to determine the type of relationship (positive or negative), and the strength of relationships between quantitative variables. Correlation analysis was used to measure the direction and strength of the relationships between variables and to determine the degree to which changes in demographic and sociocultural variables are associated with changes in the variable of financial and investment knowledge. Chatterjee and Hadi (2013:1) define regression analysis as a data-analysis technique that can be used to investigate the interrelationships between sets of variables. In this research article, regression analysis was used to determine the significance of the independent demographic and sociocultural variables of age (1), education (2), annual income (3), health status (4), male (5), homeownership (6) and number of dependents in the household (7) in determining the dependent variable of financial and investment knowledge (Y). The following regression model was estimated:

$$Y = B_1AGE + B_2EDUCATION + B_3ANNUAL\ INCOME + B_4HEALTH\ STATUS + B_5MALE + B_6HOMEWONERSHIP + B_7 NR.\ OF\ DEPENDENTS\ IN\ HOUSEHOLD \quad (1)$$

4. EMPIRICAL RESULTS AND DISCUSSION

4.1. Correlation Analysis

This section uses Spearman's rho correlation as a method of determining the strength and direction of the relationship between the demographic variables identified in Section 3.5 and the dependent variable of financial and investment knowledge. The direction of the relationship may be either a positive correlation (as x increases, y will increase) or a negative correlation (as x increases, y will decrease). The coefficient values in Table 1 indicate the strength of the relationship and may range between −1.0 and +1.0. A value of 0 indicates that there is no relationship between variables, a value of +1.0 indicates a perfect positive relationship between variables and a value of −1.0 indicates that there is a perfect negative relationship between variables (Field, 2013:281). The strength of the relationship between demographical factors and financial and investment knowledge can be interpreted using a set of guidelines (Pallant, 2020:140):

- If r = 0.10 – 0.29 the relationship is small/weak
- If r = 0.30 – 0.49 the relationship is medium/moderately strong
- If r = 0.50 – 1.0 the relationship is large/strong

A correlation analysis was performed to determine the relationship between demographic variables and financial and investment knowledge. Table 1 depicts the results of said analysis.

Table 1: Depicts the results of said analysis

Variable	Correlation coefficient	Financial and investment knowledge
Age	Correlation coefficient	0.158**
	Significant (two-tailed)	0.000
Male	Correlation coefficient	0.250**
	Significant (two -tailed)	0.000
Homeowner	Correlation coefficient	0.256**
	Significant (two -tailed)	0.000
Education	Correlation coefficient	0.326**
	Significant (two-tailed)	0.000
Annual income	Correlation coefficient	0.339**
	Significant (two-tailed)	0.000
Number in household	Correlation coefficient	−0.097**
	Significant (two-tailed)	0.002
Health status	Correlation coefficient	0.223**
	Significant (two-tailed)	0.000

Regarding the relationship between age and financial and investment knowledge, Table 1 shows that there is a weak, positive statistically significant relationship between age and financial and investment knowledge ($r = + 0.158$, $P = 0.000 < 0.01$). Therefore, the null hypothesis ($H_0 1$) may be rejected and the alternative hypothesis ($H_a 1$) can be confirmed at a significance level of 1%. The positive relationship between age and financial and investment knowledge indicates that financial and investment knowledge of individual investors increases with age. This relationship corresponds to the expected outcome of financial and investment knowledge increasing as individuals age. In Section 2 it is also supported that individuals become more knowledgeable in terms of finances and investment as they age (Henager and Cude, 2016:8-9).

Regarding the relationship between gender and financial and investment knowledge, it is clear from Table 1 that the male dummy variable has a weak, positive statistically significant relationship with financial and investment knowledge ($r = 0.250$, $P = 0.000 < 0.01$). The null hypothesis ($H_0 2$) can be rejected, and the alternative hypothesis ($H_a 2$) is concluded at a 1% significance level. This positive relationship between male and financial and investment knowledge indicates that male individual investors report having a higher degree of financial and investment knowledge as compared to females. These findings are in line with the original postulation that males tend to have higher financial and investment knowledge than females and also coincide with the findings of Hasler and Lusardi (2017:2), as referred to in Section 2.

Concerning the relationship between homeownership and financial and investment knowledge, Table 1 indicates that homeownership has a weak and positive statistically significant relationship with financial and investment knowledge ($r = 0.256$, $P = 0.000 < 0.01$). The null hypothesis ($H_0 3$) can be rejected and the alternative hypothesis ($H_a 3$) is concluded at a 1% significance level. The positive relationship indicates that individuals who own homes reported a higher level of financial and investment knowledge as compared to those who did not. These results coincide with the findings of Wang and Liu (2023:19), as iterated in Section 2, that individuals who own homes had higher levels of financial and investment knowledge compared to those who did not.

Regarding the relationship between education and financial and investment knowledge, the findings of Table 1 indicate that education has a moderately strong and positive statistically significant relationship with financial and investment knowledge ($r = 0.326$, $P = 0.000 < 0.01$). The null hypothesis ($H_0 4$) can be rejected and the alternative hypothesis ($H_a 4$) is concluded at a 1% significance level. This positive relationship indicates that individuals with a higher degree of education reported higher levels of financial and investment knowledge.

These findings align with the postulation that there is a positive relationship between education and financial and investment knowledge. As outlined in Section 2 and confirmed by Lusardi et al. (2010:368), financial and investment knowledge increases as individuals receive greater levels of education.

Regarding the relationship between annual income and financial and investment knowledge, Table 1 indicates that annual income has a moderately strong, positive statistically significant relationship with financial and investment knowledge ($r = 0.339$, $P = 0.000 < 0.01$). The null hypothesis ($H_0 5$) can be rejected, and the alternative hypothesis ($H_a 5$) is concluded at a 1% significance level. This positive relationship indicates that as annual income increases, the level of financial and investment knowledge also increases.

These findings agree with the postulation in Section 2 that financial and investment knowledge increases as income increases (Lusardi and Tufano, 2009:5).

In terms of the relationship between the number of people in a household and financial and investment knowledge, Table 1 shows that the number of people in a household has a weak, negative statistically significant relationship with financial and investment knowledge ($r = -0.097$, $P = 0.002 < 0.01$). The null hypothesis ($H_0 6$) can be rejected and the alternative hypothesis ($H_a 6$) is concluded at the 1% significance level. This negative relationship posits that as the number of individuals in a household increases, the level of financial and investment knowledge will decrease.

This relationship coincides with the theoretical postulation made in Section 2, that as the number of dependent individuals in a household increases, the financial and investment knowledge will decrease (Potrich et al., 2015:365).

Regarding the relationship between health status and financial and investment knowledge, Table 1 indicates that health status has a weak, positive statistically significant relationship with financial and investment knowledge ($r = 0.223$, $P = 0.000 < 0.01$). The null hypothesis ($H_0 7$) can be rejected and the alternative hypothesis ($H_a 7$) can be concluded at the 1% significance level. This positive relationship suggests that as an individual's health status improves, their level of financial and investment knowledge increases.

These findings coincide with the theoretical postulation of Braun et al. (2009:51), as alluded to in Section 2, that health

status has a positive relationship with financial and investment knowledge, and as an individual's health improves, so will their financial literacy.

4.2. ANOVA

An analysis of variance was conducted between groups to investigate the impact of ethnicity, marital status, homeownership, religion and age on the financial and investment knowledge of individual investors.

Table 2 illustrates the results of the analysis of variance:

The respondents were divided into four different age groups (Group 1: 18-24 years; Group 2: 25-34 years; Group 3: 35-49 years; Group 4: 50+ years). Table 2 indicates that there was a statistically significant difference, at the level of $P < 0.05$ level, in financial and investment knowledge between the four different age groups: F (3, 1055) = 12.42. Table 2 also indicated an effect size of 0.05, as calculated by the eta squared. Among the four age groups, the highest mean was recorded for the 50+ year category. The mean of 2.226 for this category denotes slightly higher than average financial and investment knowledge for individual investors aged 50+ compared to other age groups. This mean also indicates that individuals in the 50+ year category reported the highest financial and investment knowledge compared to other age categories. The three remaining age categories varied slightly around average financial and investment knowledge, with the 18-24 year category reporting average financial and investment knowledge(2.000), the 25-34 year category reporting slightly higher than average financial and investment knowledge (2.064) and the 35-49 year category reporting slightly lower than average financial and investment knowledge (1.966).

The respondents were divided into two groups according to their reported gender (Group 1: Male; Group 2: Female). Table 2 indicates a statistically significant difference, at $p < 0.05$, in financial and investment knowledge between the two different gender groups $F = 38.83$. The effect size for gender was measured using Cohen's d and resulted in a point estimate of 0.527, which indicates a medium effect size. The highest mean score, 2.328, was recorded for males and denotes slightly higher than average financial and investment knowledge compared to females, who recorded a mean score of 1.946 denoting slightly lower than average financial and investment knowledge.

For the variable of ethnicity, respondents were divided into five different groups according to their self-identified racial or cultural backgrounds (Group 1: African; Group 2: Asian/Indian; Group 3: Coloured; Group 4: White; Group 5: Other). Table 2, indicates that there was a statistically significant difference, at the level of $P < 0.05$ level, in the financial and investment knowledge of the five ethnicity groups: F (4, 1054) = 5.85, P = 0.00. Despite this statistical significance, the difference in mean scores between groups was relatively small. The effect size, as informed by eta squared, was 0.02. Of the five different categories for ethnicity, the highest recorded mean was for the Other category (2.750), however, this category only comprised 8 of the 1, 059 respondents, which may have skewed the results of the survey responses. Omitting the Other category, the White category had the highest recorded mean of 2.176, indicating that individual investors belonging to the White category reported

Table 2: Illustrates the results of the analysis of variance

Variable	Category	Mean	Significant	Eta squared
Age (years)	18–24	2.000	0.000	0.034
	25–34	2.064		
	35–49	1.966		
	50+	2.266		
Gender	Male	2.328	0.000	*
	Female	1.946		
Ethnicity	African	2.030	0.000	0.021
	Asian/Indian	2.125		
	Coloured	1.889		
	White	2.176		
	Other	2.750		
Marital status	Single	2.009	0.019	0.011
	Common-law spouse	2.189		
	Married	2.177		
	Divorced	2.000		
	Widowed	2.077		
Homeownership	Living with relatives	1.835	0.000	0.074
	Renting	1.882		
	Homeownership with mortgage	2.166		
	Homeownership without mortgage	2.375		
Religion	None	2.203	0.096	0.008
	Christianity	2.098		
	Judaism	2.333		
	Hinduism	2.121		
	Islam	2.000		
	Other	2.359		

*That the effect size for gender was calculated using Cohen's d and not eta squared

the highest financial and investment knowledge slightly higher than average. The Asian/Indian and African categories had similar means of 2.125 and 2.030, respectively, denoting slightly higher than average financial and investment knowledge. The lowest mean score was recorded for the Coloured category with 1.889, indicating slightly below-average financial and investment knowledge.

Respondents were separated into five different groups according to their marital status (Group 1: Single; Group 2: Common law spouse; Group 3: Married; Group 4: Divorced; Group 5: Widowed). There was a statistically significant difference in financial and investment knowledge of the five marital status groups at the level of $P < 0.05$ level (Table 2): $F(4, 1054) = 2.97$, $P = 0.02$. The difference in the mean scores between groups was relatively small, despite being statistically significant. Table 2 indicates an eta-squared value of 0.01. The highest mean score was recorded for individual investors who had common-law spouses (2.189) who reported slightly above average financial and investment knowledge. A mean of 2.177 was recorded for married individuals, denoting a slightly higher than average level of financial and investment knowledge. Widowed individuals recorded a mean of 2.077 indicating slightly higher than average financial and investment knowledge. Mean scores of 2.009 and 2.000 were recorded for divorced and single individuals, respectively. The 2.009 score of 2.009 denotes slightly higher than average financial and investment knowledge, while the score of 2.000 indicates average financial and investment knowledge.

The respondents were divided into four different groups according to their status as homeowner (Group 1: Living with relatives; Group 2: Renting; Group 3: Homeownership with mortgage; Group 4: Homeownership without mortgage). Financial and investment knowledge varied significantly, at the level of $P < 0.05$ level, between the four homeownership groups (Table 2): $F(3, 1055) = 28.3$, $P = 0.00$. There were moderate differences in the actual mean scores between the groups. The effect size, as calculated by eta squared, was 0.07. The highest mean score of 2.375 was recorded for homeownership without a mortgage, this mean indicates moderately higher than average financial and investment knowledge. The second highest mean score for homeownership was recorded with a mortgage (2.166) denoting slightly higher than average financial and investment knowledge. Means of 1.882 and 1.835 were recorded for renting and living with relatives, respectively. Both means were slightly lower than average financial and investment knowledge.

Respondents were also divided into six different groups according to their respective religious beliefs and orientations (Group 1: None; Group 2: Christianity; Group 3: Judaism; Group 4: Hinduism; Group 5: Islam; Group 6: Other). Table 2 shows that there was no statistically significant difference, at the $P < 0.05$ level, in financial and investment knowledge between the six different religious groups: $F(5, 1053) = 1.87$. The effect size was 0.00, as shown by eta squared. Although the means were recorded for the variable of religion, they were found to be statistically insignificant at the $P < 0.05$ level.

4.3. Regression Analysis

Several regression models were estimated using different configurations of independent variables to explain their individual and aggregate influence on the dependent variable of financial and investment knowledge. The model that included the independent variables of age, education, annual income, health status, male, homeownership, and number in household was chosen, as it represented the best fit to the data set.

Of the independent variables that influence the financial and investment knowledge of individual investors, Table 3 shows that education (standardised regression coefficient = 0.18), annual income (standardised regression coefficient = 0.11), health status (standardised regression coefficient = 0.16), male (standardised regression coefficient = 0.13) and homeowner (standardised regression coefficient = 0.10) contributed significantly to explaining the level of financial and investment knowledge of individual investors at the level of $P < 0.01$ level. Age (standardised regression coefficient = 0.04) and number in household (standardised regression coefficient = −0.03) were found to be insignificant in explaining the financial and investment knowledge of individual investors, even at the $P < 0.1$ level. An adjusted r-square of 0.202 indicates that 20.2% of the variation in the dependent variable of financial and investment knowledge can be explained by the independent variables. The regression model as a whole is significant at a $p < 0.001$ level.

Table 3: Best-fit model according to R-squared

Model	Unstandardised coefficients		Standardised coefficients	t	Significant
	B	SE	Beta		
Constant	0.891	0.195		4.579	0.000
Age	0.047	0.035	0.048	1.351	0.177
Education	0.067	0.013	0.189	5.021	0.000
Annual income	0.029	0.010	0.114	2.825	0.005
Health status	0.129	0.025	0.166	5.105	0.000
Male	0.210	0.051	0.139	4.076	0.000
Homeownership	0.167	0.056	0.106	2.970	0.003
Number of dependents in the household	−0.018	0.018	−0.033	−1.000	0.318

SE: Standard error

5. CONCLUSION

As financial markets continue to evolve and new financial products are developed, it has become increasingly important to have some degree of financial literacy to stave off the undesirable consequences that poor financial decision-making could bring. Despite there being no clear agreement on the measurement methods or conceptual definitions of financial literacy in the extant literature, scholars do agree that research in this field is important. This study identified demographic and sociocultural variables that appear commonly in the available literature on financial literacy, to determine whether these variables were significant in explaining the level of financial and investment knowledge of individual investors in South Africa. Secondary, quantitative data was used to test the empirical relationship between the identified demographic and sociocultural variables and the dependent variable of financial and investment knowledge. This study found that the variables of age, male, homeownership, education, annual income, and health status all had a positive, statistically significant relationship with financial and investment knowledge. Although the number of financial dependents in the household had a negative, statistically significant relationship with the dependent variable. There were significant differences between the categories under the demographic variables of age, gender, ethnicity, marital status, and homeownership. Individuals aged 50+ had the highest financial and investment knowledge compared to other age categories. Males had greater financial and investment knowledge than females. Whites had higher financial and investment knowledge compared to other ethnicities. Individuals with common-law spouses had higher financial and investment knowledge compared to individuals with a different marital status. Finally, people who owned homes but did not have a mortgage had a greater degree of financial and investment knowledge than those who owned homes with a mortgage and those who did not own homes at all. A regression model was constructed using the identified demographic and sociocultural variables. The regression revealed that the variables of education, annual income, health status, male (dummy variable) and homeownership were significant determinants of the level of financial and investment knowledge of individuals. The regression model also found that age and the number of financial dependents were not significant determinants of financial and investment knowledge. The latter findings of the regression model were interesting as they contradict the theoretical relationship between these variables and the dependent variable.

These findings are significant, as they provide stakeholders with guidance on areas to target to improve financial and investment knowledge. Stakeholders can invest in programmes and create policies that promote and incentivise education initiatives among groups that the study identified as typically exhibiting lower levels of financial and investment knowledge.

Some limitations of the study include the nature of the survey question used to determine the degree of financial and investment knowledge of individuals and the possible omission of demographic factors that could further explain the variation in financial and investment knowledge of individual investors. To address these limitations an individual performance test of financial and investment knowledge can be used instead of a self-report question. The model could also be expanded to include other potentially significant variables. Future research in this field could aim to establish a taxonomy for levels of financial literacy, investigate the efficacy of policy aimed at improving financial literacy, or create an innovative method to improve financial literacy.

6. ACKNOWLEDGEMENT

North-West University for funding this research study and the National Research Foundation (NRF). The views of this paper is purely those of the authors and not those of these institutions.

REFERENCES

Agyei, S.K. (2018), Culture, financial literacy, and SME performance in Ghana. Cogent Economics and Finance, 6(1), 1463813.

Bashir, T., Arshad, A., Nazir, A., Afzal, N. (2013), Financial literacy and influence of psychosocial factors. European Scientific Journal, 9(28), 384-404.

Bongini, P., Iannello, P., Rinaldi, E.E., Zenga, M., Antonietti, A. (2018), The challenge of assessing financial literacy: Alternative data analysis methods within the Italian context. Empirical Research in Vocational Education and Training, 10(1), 1-22.

Braun, B., Kim, J., Anderson, E.A. (2009), Family health and financial literacy-forging the connection. Journal of Family and Consumer Sciences, 101(3), 51.

Cambridge Dictionary. 2023. Sociocultural. https://dictionary.cambridge.org/dictionary/english/sociocultural Date of access: 20 Aug. 2023.

Chatterjee, S., Hadi, A.S. (2013), Regression Analysis by Example. 5th ed. New Jersey, NJ: John Wiley and Sons.

Chavali, K., Mohanraj, M.P. (2016), Impact of demographic variables and risk tolerance on investment decisions-an empirical analysis. International Journal of Economics and Financial Issues, 6(1), 169-175.

Cooksey, R.W. (2020), Illustrating Statistical Procedures: Finding Meaning in Quantitative Data. 3rd ed. Singapore: Springer.

Emerson, R.W. (2017), ANOVA and t-tests. Journal of Visual Impairment and Blindness, 111(2), 193-196.

Field, A. (2013), Discovering Statistics Using IBM SPSS Statistics. 4th ed. Newbury Park, CA: Sage.

Folke, T., Gjorgjiovska, J., Paul, A., Jakob, L., Ruggeri, K. (2021), Asset: A new measure of economic and financial literacy. European Journal of Psychological Assessment, 37(1), 65.

Garg, N., Singh, S. (2018), Financial literacy among youth. International Journal of Social Economics, 45(1), 173-186.

Gogtay, N.J., Thatte, U.M. (2017), Principles of correlation analysis. Journal of the Association of Physicians of India, 65(3), 78-81.

Goyal, K., Kumar, S. (2021), Financial literacy: A systematic review and bibliometric analysis. International Journal of Consumer Studies, 45(1), 80-105.

Hasler, A., Lusardi, A. (2017), The Gender Gap in Financial Literacy: A Global Perspective. Washington, D.C: Global Financial Literacy Excellence Center, The George Washington University School of Business.

Henager, R., Cude, B.J. (2016), Financial literacy and long-and short-term financial behavior in different age groups. Journal of Financial Counseling and Planning, 2(1), 3-19.

HSRC (Human Sciences Research Council). (2020), Financial Literacy in South Africa: Results from the 2020 Baseline Survey. Available from: https://repository.hsrc.ac.za/handle/20.500.11910/19334 [Last accessed on 2023 May 10].

Hung, A., Parker, A.M., Yoong, J. (2009), Defining and Measuring Financial Literacy. Working Paper, No. WR-708. Labour and Population Working Paper Series. Santa Monica: Rand Corporation.

Isomidinova, G., Singh, J.S.K., Singh, K. (2017), Determinants of financial literacy: A quantitative study among young students in Tashkent, Uzbekistan. Electronic Journal of Business and Management, 2(1), 61-75.

Kartini, K., Fitri, F., Rabiyah, U., Anggraeni, D. (2021), Analysis of the financial literacy behavior model. Golden Ratio of Finance Management, 1(2), 114-122.

Kim, H.Y. (2014), Analysis of variance (ANOVA) comparing means of more than two groups. Restorative Dentistry and Endodontics, 39(1), 74-77.

Kimiyaghalam, F., Safari, M. (2015), Review papers on definition of financial literacy and its measurement. SEGi Review, 8(1), 81-94.

Louw, J., Fouche, J., Oberholzer, M. (2013), Financial literacy needs of South African third-year university students. International Business and Economics Research Journal, 12(4), 439-450.

Lusardi, A., Mitchell, O.S. (2011), Financial literacy around the world: An overview. Journal of Pension Economics and Finance, 10(4), 497-508.

Lusardi, A., Mitchell, O.S. (2014), The economic importance of financial literacy: Theory and evidence. Journal of Economic Literature, 52(1), 5-44.

Lusardi, A., Mitchell, O.S., Curto, V. (2010), Financial literacy among the young. Journal of Consumer Affairs, 44(2), 358-380.

Lusardi, A., Tufano, P. (2009), Teach workers about the perils of debt. Harvard Business Review, 87(11), 22-24.

Lyons, A.C., Kass-Hanna, J. (2021), A methodological overview to defining and measuring "digital" financial literacy. Financial Planning Review, 4(2), 1113.

Maree, K., editor. (2007), First Steps in Research. Pretoria, PTA: Van Schaik.

Nanziri, L.W., Olckers, M. (2019), Financial Literacy in South Africa. Cape Town: SALDRU, UCT. (SALDRU Working Paper Number 242 Version 1/NIDS Discussion Paper 2019/9).

Nicolini, G., Cude, B.J., editors. (2021), The Routledge Handbook of Financial Literacy. New York: Routledge.

OECD INFE. (2011), Measuring Financial Literacy: Core Questionnaire in Measuring Financial Literacy: Questionnaire and Guidance Notes for Conducting an Internationally Comparable Survey of Financial literacy. Paris: OECD.

Oli, S.K. (2018), The influence of financial literacy on a personal financial planning: A case of Nepal. Afro-Asian Journal of Economics and Finance, 1(1), 25-38.

Potrich, A.C.G., Vieira, K.M., Kirch, G. (2015), Determinants of financial literacy: Analysis of the influence of socioeconomic and demographic variables. Revista Contabilidade and Finanças, 26(4), 362-377.

Refera, M.K., Dhaliwal, N.K., Kaur, J. (2016), Financial literacy for developing countries in Africa: A review of concept, significance and research opportunities. Journal of African Studies and Development, 8(1), 1-12.

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.

Sabri, M.F. (2011), Pathways to Financial Success: Determinants of Financial Literacy and Financial Well-being among Young adults. (Dissertation-PhD). Iowa: Iowa State University.

Sibanda, S., Sibanda, T. (2016), Financial education in South Africa: Overview of key initiatives and actors. Geneva: International Labour Organisation Innovative Finance for Social Justice, p1-36.

Starcek, S. & Trunk, A. 2018. In: Trunk, A., Dermol, V. & Nada, T., eds. Financial Literacy among the Young. Bangkok: ToKnowPress. pp. 27-42.

Trunk, A., Dermol, V., Nada, T. (2018), Financial Literacy among the Young. Bangkok: ToKnowPress.

Van den Bergh-Lindeque, A. (2021), The Influence of Endogenous and Exogenous Factors on Investor Risk-tolerance Behaviour. (Thesis-PhD). Vanderbijlpark: North-West University.

Wang, S., Liu, Y. (2023), Homeownership and Financial Literacy: Evidence from China in the Perspective of 'Learning by Doing'. Housing Studies, 38(6), 1-25.

Xu, L., Zia, B. (2012), Financial Literacy Around the World: An Overview of the Evidence with Practical Suggestions for the Way Forward. World Bank Policy Research Working Paper, (6107). World Bank. p. 2-56.

Yoshino, N., Morgan, P.J., Trinh, L.Q. (2017), Financial Literacy in Japan: Determinants and Impacts. ADBI Working Paper, (No. 796). Asian Development Bank Institute.

Zait, A., Bertea, P.E. (2014), Financial literacy-conceptual definition and proposed approach for a measurement instrument. The Journal of Accounting and Management, 4(3), 37-42.