

# The Financial Concerns of South African Households Caused by the COVID-19 Pandemic: Towards Improved Resilience

**Derek Alexander**

<https://orcid.org/0009-0007-0990-0629>  
North-West University, South Africa

**Jaco Fouché**

<https://orcid.org/0000-0002-7791-5669>  
North-West University, South Africa

**Nico van der Merwe**

<https://orcid.org/0000-0003-4237-5495>  
North-West University, South Africa  
[nico.vandermerwe@nwu.ac.za](mailto:nico.vandermerwe@nwu.ac.za)

## Abstract

**Purpose/Objectives:** Through the lens of financial resilience theory, the primary objective of this study is to identify and understand the main financial concerns that South African households experienced during the COVID-19 lockdowns. Lessons can be learnt to soften the impact of future economic devastations, whether caused by a pandemic or not.

**Design/Methodology/Approach:** The study comprises a literature review and an empirical study following a quantitative methodology, in which a survey instrument was administered to Facebook users over the age of 18. A total of 406 valid responses were obtained and statistically analysed using non-parametric techniques.

**Findings:** The main financial concern was the investment value, especially for older individuals. The lower-income households were significantly more concerned about short-term financial challenges compared to higher-income households, who were also worried about their investment value.

**Practical implications:** Future efforts should focus on improving financial literacy, particularly for vulnerable households. Collaborative efforts between the government, the private sector, and non-profit entities are necessary to build such resilience.

**Originality/Value:** The study offers practical recommendations for a variety of stakeholders and contributes to the literature on financial resilience theory.

**Keywords:** behavioural finance; COVID-19; financial concerns; household finance;



Southern African Business Review  
Volume 29 | 2025 | #18374 | 24 pages

<https://doi.org/10.25159/1998-8125/18374>  
ISSN 1998-8125 (Online)  
© Author (s) 2025



Published by Unisa Press. This is an Open Access article distributed under the terms of the Creative Commons Attribution-ShareAlike 4.0 International License  
(<https://creativecommons.org/licenses/by-sa/4.0/>)

lockdown; pandemic; personal finance; South Africa

## Introduction

The COVID-19 pandemic emerged in late 2019 and quickly became a global health crisis, leading to unprecedented challenges for governments, businesses, and individuals worldwide (Hu et al. 2021). It inflicted economic damage on a previously unprecedented scale (Goodell 2020), which brought the world's economies to a standstill and had an unseen effect on financial markets by eroding a quarter of all wealth in one month (Ali et al. 2020). With the contraction of the world and South African economies (Deloitte 2024), the impact on the personal finances and financial well-being of households will be long lasting.

Before the COVID-19 pandemic, South Africa was already facing significant economic challenges, including high unemployment rates, widespread poverty, and income inequality (Biereenu-Nnabugwu and Ibeabuchi 2024, 50), as well as the crippling effects of power outages caused by the ineffectiveness of the state-owned monopoly electricity provider (De Villiers et al. 2020, 3). The COVID-19 lockdowns worsened these issues, leading to a sharp increase in job losses, reduced income opportunities, and financial uncertainty for many households. The informal sector, integral to the South African economy and employing a significant portion of the population, suffered greatly from the impact of the lockdowns (Bhorat and Köhler 2020, 4). The economic vestiges of the pandemic in South Africa are still visible, with real GDP growth of 0.6% in 2023 and a mere 1.3% in 2024 (AEO 2024).

In response to the economic challenges posed by the pandemic, the South African government implemented various relief measures, including social grants, unemployment benefits, and loan repayment holidays (Bhorat and Köhler 2020, 4). According to Davola (2020), “many governments introduced financial support measures for people affected by the economic fallout of the pandemic”; however, it did not address the area of consumer spending and consumer credit. Despite the government's efforts, there is a lack of comprehensive research on the specific financial concerns of South African households caused by the COVID-19 lockdowns. Goodell (2020) questioned how this will affect the costs of capital, pension planning, insurance, the role of governments in protecting financial systems, social trust, concomitant transaction costs, and political stability in societies.

## Purpose and Objectives

Through a review of the literature and with the aid of data collected from a survey distributed to South African Facebook users over the age of 18, this study aims to identify and understand the main financial concerns faced by South African households during the COVID-19 lockdowns, in order to propose sustainable measures to support and improve the financial resilience of households in the future. In achieving its aim, the study answers the following research question: What are the specific financial

concerns of South African households caused by the COVID-19 lockdowns, and what measures can be implemented to sustain the financial resilience of households post-pandemic? The following secondary objectives are addressed to answer the research question: 1) identify the major financial concerns of households; 2) establish whether a correlation exists between various major concerns identified; and 3) determine differences based on gender, age, and household income in respect of financial concerns.

Lessons learnt from experiences during the pandemic will inform economic policy and may enable the country to enhance households' resilience against future economic restrictions, whether or not they are caused by a pandemic. The study was examined through the lens of financial resilience theory, and its findings and recommendations aim to contribute to the literature on this theory. Financial resilience is the ability to face, adapt to, and recover from financial shocks using the right resources (Muir et al. 2016; Tengblad and Oudhuis 2018).

## Literature Review and Theoretical Basis

The literature review set the context for the study and was used to identify some of the financial concerns experienced by households in a post-COVID-19 world. The financial circumstances of families have been greatly affected by the COVID-19 pandemic, influencing their income, expenses, financial holdings, retirement funds, savings, bank accounts, emergency reserves, and debt. It even has psychosocial consequences, as unemployment, insecure job situations, and lower socio-economic status are some of the determinants of post-economic recession mental health issues (Frasquilho et al. 2015).

Afriforte (2020) found that personal finances were a major concern during the pandemic, especially for individuals over 50 years old. This was also the case for divorced individuals and part-time or self-employed individuals. Barrafreem et al. (2020) indicated overconfidence in individuals' own financial resourcefulness compared to others. Fallon and Lucas (2002) found that financial crises result in a decrease in production and employment and negatively impact currency values and real wages. Their study also suggests that wealthier families are better able to manage consumption, whereas rural families suffer greater losses during such times. In addition, studies have revealed that individuals with lower levels of education and those with lower incomes tend to exhibit lower levels of financial literacy in South Africa. Obtaining financial literacy can be costly, making it unaffordable for many citizens (Oke and Benedict 2024, 1).

Kansiime et al. (2021, 12) suggest that the assessment of households' financial situations largely depends on their reference point. In Europe, despite the effects of the pandemic, the financial situation is relatively good compared to Africa. As an example, in East Africa, the degree of poverty and food insecurity was already significant before

the pandemic due to concurrent crises such as desert locust invasions and extreme weather conditions. The pandemic has further exacerbated this situation.

Christl et al. (2024, 413) compared three different scenarios for 2020 (no COVID-19, COVID-19 with government intervention, and an extreme scenario, namely COVID-19 with no government intervention) to identify the role of tax-benefit systems and monetary compensation schemes on household income and demand. In 2020, the COVID-19 pandemic impacted labour markets across the European Union (EU) in various ways. Most EU member states saw a significant decrease in market incomes, particularly affecting low-income households. However, the tax-benefit systems in place were able to mitigate much of the negative impact of COVID-19 on market incomes in most countries. The results indicate that tax-benefit systems, particularly monetary compensation schemes, played a vital role in stabilising the economy by preventing a more severe economic downturn resulting from a further reduction in household demand.

It is evident that the pandemic has raised concerns about financial security. The post-pandemic adjustments are anticipated to vary significantly among individuals and across populations in both developed and developing countries. Chronopoulos et al. (2020, 179) confirmed that variables such as age, gender, and income level influence the impact of the pandemic on different demographic groups.

### **Gender**

In a study on the early impact of the COVID-19 pandemic on household finances in Quebec, Achou et al. (2020, 222) revealed that spending by females and older respondents had increased. Fouché (2023) compared the financial well-being and personal finances of South African households using demographic variables such as age, gender, relationship status, employment status, household income, and geotype (rural versus urban) and found significant differences with respect to some of these variables. The findings indicated that a decrease of up to 20% was observed in the value of investments and retirement savings, and no significant differences were found in the size of the decrease between genders. However, male participants reported a significantly larger decrease in their expenditure during the lockdown compared to female participants (Fouché 2023).

A study by Walczak and Pienkowska-Kamieniecka (2018) has shown that the financial behaviours of men and women differ significantly. Men more frequently use the products and services available in the financial market, such as debit cards, or invest funds in shares or bonds. They are also more willing to take risks. Similarly, Hibbert et al. (2013) reported that among highly educated individuals, women are significantly more risk averse than men. Hira and Mugenda (2000) found significant gender differences in spending behaviour, with more women reporting a tendency to buy without need, but they discovered no statistically significant differences between men and women in terms of their financial concerns.

## Age

During the lockdown, some consumers and households chose to postpone debt payments as a way to cope with reduced income. Cherry et al. (2021) showed that approximately 60 million borrowers in the United States were expected to miss debt payments by the end of 2021. Achou et al. (2020, 224) indicated that 5.4% of homeowners failed to pay their mortgage instalments, and 13.4% elected to reschedule mortgage payments; however, with interest still being charged on the debt, the total outstanding debt continued to increase. The findings showed that older adults, individuals with higher incomes, and women were less inclined to skip payments (Achou et al. 2020, 226). Another approach to cope with a decrease in income was to take on new debt. Individuals who were laid off accumulated more credit card debt; however, once again, older individuals and women were less inclined to acquire new debt (Achou et al. 2020).

Eberhardt et al. (2018) reported that older age was correlated with better scores on each of the four financial decision-making measures, more experience-based knowledge, and fewer negative emotions about financial decisions, whereas numeracy and motivation were not significantly correlated with age. In a study by Henager and Cude (2016), subjective financial knowledge or confidence was more strongly related to long- and short-term financial behaviour than either objective financial knowledge or subjective financial management ability in the younger age groups. A comprehensive study on financial behaviour under economic strain over a 20-year period by Silinskas et al. (2021) found that young adults reported the lowest frequency of borrowing and gambling, and the highest frequency of increasing income. Participants aged 66 to 75 years scored the lowest in cutting expenses and increasing income compared to all other age groups.

## Household Income

The financial situation of households that were already vulnerable before the COVID-19 pandemic has worsened, particularly for low-income households (Cantor and Landry 2020). Cherry et al. (2021, 4) observed that in the United States, banks and other creditors offered more debt relief to higher-income households due to their larger debt balances. Ridhwan et al. (2024, 91) uncovered that lower-income households suffered more than higher-income ones. Their study also indicated a potential necessity for restructuring household debt due to declining incomes, which has compelled households to deplete their savings and accumulate debt. The study by Fouché (2023) also found that vulnerable groups, such as lower-income households, used more of their savings to cover shortfalls and reported a larger increase in outstanding debt during the COVID-19 pandemic.

Brewer and Gardiner (2020, 197) observed that lower-income families in various parts of the world were more inclined to accumulate new debts or seek financial assistance from friends or relatives. According to Martin et al. (2020, 453), the COVID-19 pandemic has compelled households to dip into their savings, potentially making them

more susceptible to future crises. Similarly, Szustak et al. (2021, 166) found that the level of savings decreased due to consumers' reluctance to take on debt during the pandemic, and Achou et al. (2020, 233) found that households used their savings to bridge the financial gaps caused by the pandemic. Financial planners usually suggest having three to six months' worth of income or expenses in an emergency fund, but few households follow this recommendation (Fox and Bartholomae 2020, 3). Before the COVID-19 crisis, a study found that nearly 40% of households did not have enough liquid savings to cover their living expenses for three months (Cantor and Landry 2020). Another study revealed that 77% of lower-income, 52% of middle-income, and 25% of upper-income households lacked sufficient liquid savings to cover three months of living expenses in the absence of income (Parker et al. 2020).

### **Financial Resilience Theory**

Financial resilience theory, the lens through which the current study views the research problem, has been explored in various fields, including social sciences in the context of households in developing countries (Salignac et al. 2021) and commerce research at the level of commercial institutions (Salter and Tarko 2017; Zahedi et al. 2021). A study conducted by Lusardi et al. (2020) found that financial fragility (lack of resilience) is particularly severe among specific demographic groups and those with low incomes, and that financial fragility is strongly linked to financial literacy necessary for making informed financial decisions during a crisis.

As can be seen from the preceding discussions, studies on the experiences and exact financial impact on households are limited, and some questions remain unanswered, especially in the South African economic context, which is typical of and relevant to most emerging economies around the world. This study sought to address this gap in the literature by investigating the impact of lockdowns on household finances and identifying strategies to support financial resilience in the future. The World Bank has predicted a steep global economic recession for decades following the COVID-19 pandemic (Kathirvel 2020, 1). In line with previous studies on this topic, this study considers differences in household financial concerns based on gender, age, and household income level. Differences in financial concerns are used as a proxy for resilience to draw conclusions and make recommendations for the future.

### **Research Design and Approach**

The study comprises a literature review and an empirical study that follows a quantitative methodology in which a survey instrument was used. The target population is individuals in South Africa over the age of 18. The sample focuses on Facebook users. Mirabeau et al. (2013) and Fouché (2023) believe that, while using social media platforms for data collection has potential pitfalls, the benefits may outweigh the risks, as these well-known platforms have millions of members and can provide a solid basis for a sampling frame that would otherwise be difficult or impractical to construct. In this study, 406 valid responses were obtained, which aligns with a study conducted by Adam et al. (2017), in which a sample of 400 respondents was used in Ghana.

## Data Collection and Analysis Methods

The measuring instrument is an existing survey comprising previously validated questions (FPI 2020) that focus on the major financial concerns of households and the relief measures used by them, to which biographical questions were added to allow for group comparison. A statistics expert was consulted on the additions and adjustments made to the survey to ensure the content and construct validity of the revised instrument. The instrument was administered using the QuestionPro tool, which provided the option to share the link on one or more social media platforms, with Facebook being the platform used in this case. The captured data were analysed using the statistical package SPSS Version 25 after performing structural integrity checks on the data, including checks for missing values, format and type, and range. As the sample was non-random, caution was exercised in the interpretation of the results, and non-parametric measures were used since the population distribution is unknown. The initial analysis was reviewed by a second researcher to ensure its reliability. Inter-item reliability measures were not calculated, as each item was reported separately.

The following hypotheses were formulated and tested regarding the analysis of demographic differences:

- H<sub>1</sub>: Differences in financial concerns (resilience) based on gender are significant.
- H<sub>2</sub>: Differences in financial concerns (resilience) based on age are significant.
- H<sub>3</sub>: Differences in financial concerns (resilience) based on household income are significant.

## Ethical Considerations

Ethical clearance for this study was obtained from the relevant research ethics committee at the institution where the study was conducted. The committee deemed the research to be of minimal risk. Informed consent to participate and for the results to be used for publication purposes was obtained from the participants. The survey was anonymous, participation was voluntary, and participants were able to withdraw from the study at any stage. The survey responses were encrypted using Secure Sockets Layer (SSL) encryption and stored in a secure environment.

## Results

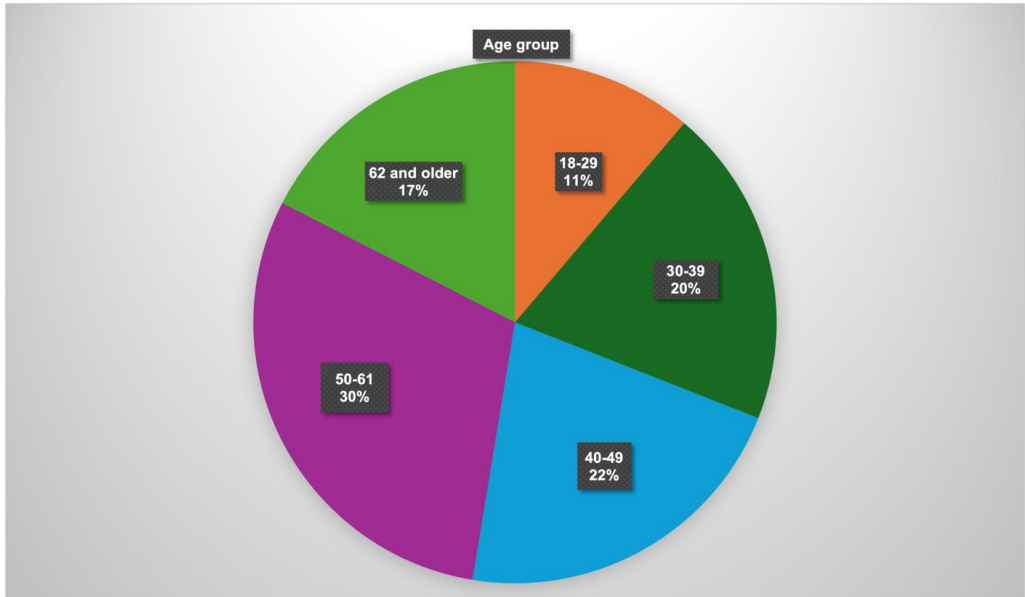
The captured data were analysed using the statistical package SPSS Version 25. The following statistical methods were used on the empirical dataset:

- Descriptive analysis;
- Spearman rank order correlations between different financial concern variables; and
- Comparison of biographical groups using non-parametric significance tests (Mann–Whitney U test and Kruskal–Wallis test).

## Descriptive Analysis

### *Demographic Distribution*

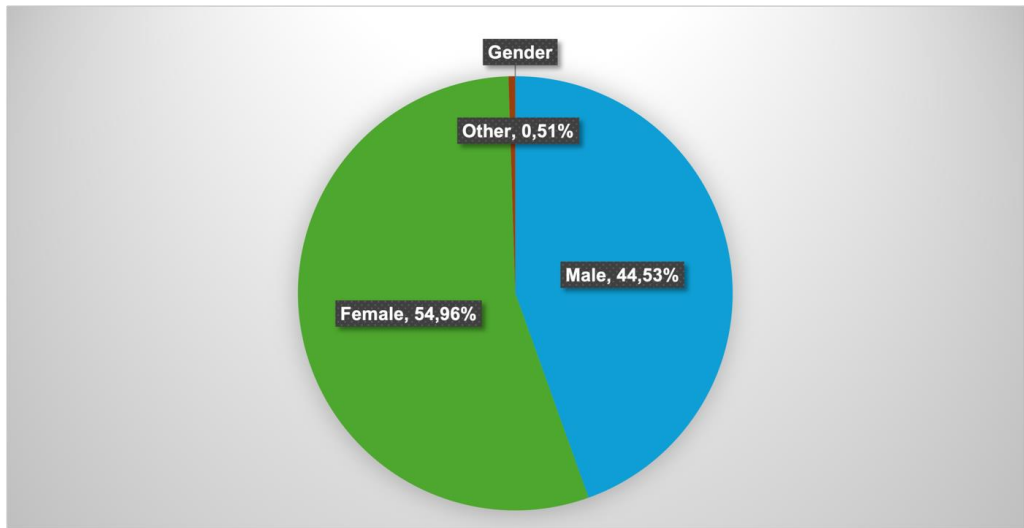
The data show that the most represented participant group was between 50 and 61 years old, while the age group with the fewest participants was 18 to 29 years old, as indicated in Figure 1. This may reflect the general demographic of Facebook users in South Africa.



**Figure 1:** Age groups of the participants on Facebook

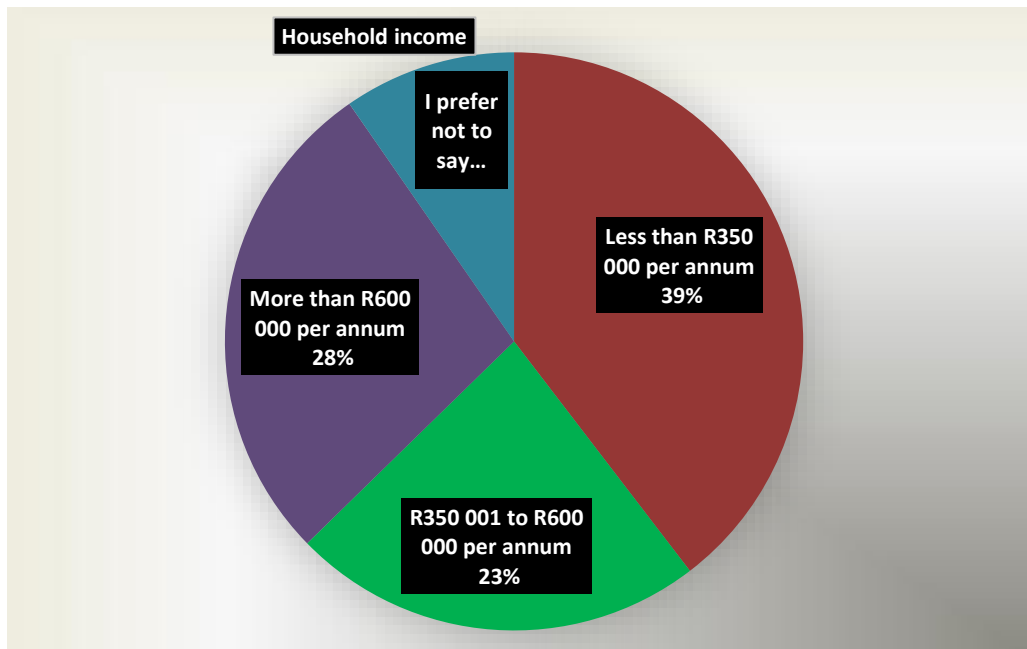
According to Ancu (2012, 9), older adults use Facebook more frequently for entertainment than for social connections. She discovered that gaming is a popular activity among older individuals who use Facebook, as well as their participation in promotions and contests. This indicates that older adults are becoming more active on Facebook than younger age groups and are more likely to complete surveys than younger individuals.





**Figure 2:** Gender of the participants on Facebook

From Figure 2, it is evident that there were more female participants than male participants, although not by a large margin. According to Sap et al. (2014, 4), females are generally more active on social media.



**Figure 3:** Household income of the participants on Facebook

From Figure 3, it is evident that individuals from households who received less than R350,000 per annum participated the most in this survey.

## Financial Concerns of Households

Descriptive statistics on the main financial concerns of households are presented in Table 1. The survey required participants to rate their concerns on a 4-point scale, with 1 representing “no concern” and 4 representing “large concern.” The concerns listed in the survey included insufficient cash flow to cover basic expenses such as food, inability to pay for housing (including mortgages or rent), difficulties in meeting other debt payments, concerns about the value of investments, and the risk of job loss or reduced income.

**Table 1:** Descriptive statistics of household financial concerns

Category	N	Minimum	Maximum	Mean	SD
<b>Concerns as a whole</b>	<b>406</b>			<b>2.68</b>	
Cash flow for basic expenses	406	1	4	2.55	1.222
Pay for housing	406	1	4	2.50	1.241
Other debt payments	406	1	4	2.47	1.260
Value of investments	404	1	4	2.95	1.126
Job or income loss	403	1	4	2.93	1.192

The overall financial concern mean score of 2.68 is somewhat concerning. The main financial concern for the respondents was the value of their investments, which had a mean of 2.95. The second biggest concern was the risk of job loss or reduced income, with a mean of 2.93, which is not significantly different from the top concern. The smallest concern reported by the participants was their ability to make other debt payments, such as for clothing accounts and credit cards, with a mean score of 2.47.

**Table 2:** Frequency statistics of household relief measures

Category	N (total)	n of “Yes”	n of “No”	% Yes	% No
Payment holidays or relief	405	96	309	23.7	76.3
Debt holidays	403	87	316	21.6	78.4
Government support	403	80	323	19.9	80.1
Other (non-profit organisations [NPOs], family, etc.)	403	77	326	19.1	80.9
Living annuity withdrawals	401	42	359	10.5	89.5
Savings or investments	402	228	174	56.7	43.3

Frequency statistics of the main relief measures utilised by households are presented in Table 2. The survey required participants to indicate whether or not they made use of various measures listed by FPI (2020), namely payment holidays or relief (insurance, rent, etc.), debt holidays (including temporary relief from debt payments offered by banks), government support (unemployment insurance, grants, etc.), other support (from NPOs, family, etc.), changes to living annuity withdrawals (grace periods), and the use of savings or investments. The main relief measure for the respondents was the

use of their savings or investments, with 56.7% of the respondents indicating that they had used this measure. The least used relief measure was changes to their living annuity withdrawals, with 10.5% of the respondents making use of this measure.

### Correlations Between Different Financial Concerns

To explore the relationship between different financial concern variables and further explain the findings, correlation coefficients using Spearman's rho ( $r_s$ ) were calculated. To ensure that the assumptions in the data were not violated, Spearman's non-parametric coefficients were used. The correlation coefficients are presented in Table 3.

**Table 3:** Spearman correlation coefficients

Category		Cash flow for basic expenses	Pay for housing	Other debt payments	Value of investments	Job or income loss
Cash flow for basic expenses	Correlation	1.000	.822**	.820**	.392**	.649**
	Sig. (2-tailed)	.	<.001	<.001	<.001	<.001
Pay for housing	Correlation	.822**	1.000	.823**	.375**	.678**
	Sig. (2-tailed)	<.001	.	<.001	<.001	<.001
Other debt payments	Correlation	.820**	.823**	1.000	.377**	.650**
	Sig. (2-tailed)	<.001	<.001	.	<.001	<.001
Value of investments	Correlation	.392**	.375**	.377**	1.000	.438**
	Sig. (2-tailed)	<.001	<.001	<.001	.	<.001
Job or income loss	Correlation	.649**	.678**	.650**	.438**	1.000
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	.

\*\* Correlation is significant at the 0.01 level (2-tailed).

Perhaps unsurprisingly, the sample studied revealed strong relationships among most of the financial concerns of households. Moreover, all the correlations were positive. Based on Table 3, all the variables, except for the value of investments, had a strong effect on each other ( $r_s \geq 0.5$ ). This included not having cash flow for basic expenses, being unable to pay for housing, struggling to make other debt payments, and the concern of losing their job or facing reduced income. The only variable that was not strongly correlated with any other variable (although it was still statistically significant and had a medium effect size) was the value of investments. This signals that the concerns of participating households about the value of their investments were not strongly linked to their other, more short-term concerns.

## Comparison of Biographical Groups with Significance Tests

### *Differences Based on Gender*

A Mann–Whitney U test was performed based on gender, as shown in the table below. Effect sizes ( $r$ ) for the Mann–Whitney U test were calculated as  $Z / \sqrt{N}$ , with  $r = .1$  indicating a small effect,  $r = .3$  indicating a medium effect, and  $r = .5$  indicating a large effect (Christiansen and Jones 2025).

**Table 4:** Mann–Whitney U test based on gender

Category	<i>N</i> (total)	U	Z	Asymp. Sig. (2-tailed)	Effect size ( <i>r</i> )
Cash flow for basic expenses	391	17589.0	-1.227	.220	.062
Pay for housing	391	18094.5	-.755	.450	.038
Other debt payments	391	18045.5	-.803	.422	.041
Value of investments	389	18206.0	-.499	.618	.025
Job or income loss	388	33101.5	-.725	.469	.037

The difference in distribution between the two groups (male and female) was not statistically significant for any of the financial concerns, as indicated in Table 4. In terms of effect sizes, all  $r$ -values were lower than 0.1 (Christiansen and Jones 2025) and therefore none of the differences were practically significant. With no statistically or practically significant differences, it can be concluded that male and female participants studied did not differ significantly in their financial concerns. Hypothesis  $H_1$  is therefore rejected.

### *Differences Based on Age*

Due to the sample including many age groups with potentially significant generational differences, a Kruskal–Wallis test was performed on all the age groups.

**Table 5:** Descriptive statistics based on age group

Category	Age group	<i>n</i>	Median	Mean	SD	Min	Max
Cash flow for basic expenses	1) 19–29 years	43	2.00	2.28	1.182	1	4
	2) 30–39 years	76	2.00	2.08	1.105	1	4
	3) 40–49 years	83	3.00	2.58	1.241	1	4
	4) 50–61 years	115	4.00	3.00	1.170	1	4
	5) 62+ years	67	2.00	2.31	1.183	1	4
	Total	384	3.00	2.53	1.222	1	4
Pay for housing	1) 19–29 years	43	2.00	2.19	1.200	1	4
	2) 30–39 years	76	2.00	2.13	1.075	1	4
	3) 40–49 years	83	3.00	2.46	1.281	1	4
	4) 50–61 years	115	4.00	2.97	1.192	1	4
	5) 62+ years	67	2.00	2.25	1.223	1	4
	Total	384	2.00	2.48	1.237	1	4
Other debt payments	1) 19–29 years	43	2.00	2.09	1.171	1	4
	2) 30–39 years	76	2.00	2.20	1.120	1	4
	3) 40–49 years	83	3.00	2.51	1.310	1	4
	4) 50–61 years	115	3.00	2.90	1.221	1	4
	5) 62+ years	67	2.00	2.09	1.228	1	4
	Total	384	2.00	2.45	1.257	1	4
Value of investments	1) 19–29 years	43	2.00	2.49	1.242	1	4
	2) 30–39 years	75	3.00	2.87	1.095	1	4
	3) 40–49 years	83	3.00	2.82	1.139	1	4
	4) 50–61 years	115	4.00	3.12	1.101	1	4
	5) 62+ years	67	3.00	3.19	.973	1	4
	Total	383	3.00	2.95	1.120	1	4
Job or income loss	1) 19–29 years	42	3.00	2.69	1.220	1	4
	2) 30–39 years	76	3.00	2.76	1.094	1	4
	3) 40–49 years	83	4.00	3.04	1.152	1	4
	4) 50–61 years	114	4.00	3.22	1.111	1	4
	5) 62+ years	67	3.00	2.63	1.347	1	4
	Total	382	3.00	2.93	1.190	1	4

Based on the statistics presented in Table 5, a general observation is that older participants tended to have greater concerns than younger participants across all variables. The table below reports the significance of these differences based on the Kruskal–Wallis test performed. Effect sizes ( $\eta^2$ ) for the Kruskal–Wallis test were calculated based on eta-squared estimates as  $H / (N - 1)$ , with  $\eta^2 = .01$  indicating a small effect,  $\eta^2 = .06$  indicating a medium effect, and  $\eta^2 = .14$  indicating a large effect (Christiansen and Jones 2025).

**Table 6:** Kruskal–Wallis test based on age group

Category	Kruskal–Wallis H	df	Assymp. Sig. (2-tailed)	Effect size ( $\eta^2$ )
Cash flow for basic expenses	31.458	4	<.001*	.082
Pay for housing	28.351	4	<.001*	.074
Other debt payments	25.707	4	<.001*	.067
Value of investments	13.540	4	.009*	.035
Job or income loss	15.645	4	.004*	.041

\* Significant at the 0.01 level (2-tailed).

The differences between the age groups were statistically significant for all variables and hypothesis H<sub>2</sub> is accepted. Differences in financial concerns regarding the value of respondents' investments ( $\eta^2 = .035$ ), as well as concerns for job or income loss ( $\eta^2 = .041$ ), were practically significant, but had small effect sizes. Compared to this, the following differences in financial concerns based on age group showed medium effect sizes: not having cash flow for basic expenses ( $\eta^2 = .082$ ); not being able to pay for housing ( $\eta^2 = .074$ ); and not being able to make other debt payments ( $\eta^2 = .067$ ).

To identify the age groups between which statistically significant differences existed, pairwise comparisons were performed for each variable using Dunn's Test with Bonferroni correction. Regarding the value of investments, age groups 1, 2, and 3 were similar, while age groups 4 and 5 were also similar. This shows that the older age groups were more concerned about their investments, which could be explained by their proximity to retirement age. For Group 4, the frightening prospect of retirement makes them particularly sensitive to market downturns, as they have limited time to recover and are heavily reliant on their investments to secure a stable retirement. Group 5, which is already in retirement, depends on these investments for ongoing income and financial stability.

For the job or income loss variable, the age group that expressed the most concern was 50 to 61 years, as this age range is closest to retirement. If individuals in this age group lose their jobs, it is unlikely that they will be rehired and it will be difficult for them to find another job. The age group with the least concern was Group 5, which comprised individuals aged 62 years and older. This is logical, as most individuals in this group are likely retired and not actively employed. Many people in this group are living off their savings and pension funds. Similarly, regarding cash flow for basic expenses, housing, and other debt payments, age groups 1, 2, and 3 were more similar to Group 5, whereas Group 4, which includes individuals aged 50 to 61 years, was the most concerned about lacking the cash flow to cover these expenses. They were also the most concerned about job loss and reduced income. At that stage in their lives, individuals may have accumulated various forms of debt, including mortgages, credit card debt, and vehicle financing. The burden of multiple debt payments can be overwhelming, especially for individuals approaching retirement age, unlike younger individuals who have more time to pay off their debts.

### Differences Based on Household Income

As seen in the literature review, income levels also influenced households' resilience during challenging times. A Mann–Whitney U test was performed to compare the data distributions of the lowest and highest household income groups that participated in the survey. This approach was followed because the literature review indicated that differences are most significant between the lowest and highest income groups.

**Table 7:** Mann–Whitney U test based on household income

Category	N (total)	U	Z	Asymp. Sig. (2-tailed)	Effect size ( <i>r</i> )
Cash flow for basic expenses	265	3374.0	-8.701	<.001*	.534
Pay for housing	265	4050.5	-7.568	<.001*	.465
Other debt payments	265	10134.0	-7.457	<.001*	.458
Value of investments	263	13382.0	-1.537	.124	.095
Job or income loss	263	10977.5	-5.989	<.001*	.369

\* Significant at the 0.01 level (2-tailed).

Table 7 shows the size of statistical and practical differences between the two selected household income groups, namely Group 1 (income of less than R350,000 per annum) and Group 3 (income of more than R600,000 per annum). The following differences in financial concerns based on household income were practically significant and had a medium effect: not being able to pay for housing ( $r = .465$ ), not being able to make other debt payments ( $r = .458$ ), and concern over losing their job or reduced income ( $r = .369$ ). The only statistically significant financial concern difference with a large effect was the lack of cash flow for basic expenses ( $r = .534$ ). Differences based on household income regarding the value of investments were not statistically significant ( $p = .124$ ) and had a small effect size ( $r = .095$ ). Therefore, the differences between the two household income groups were both statistically and practically significant, except for concerns regarding the value of investments. Hypothesis H<sub>3</sub> is therefore partially accepted.

**Table 8:** Descriptive statistics based on household income

Category	Household income	N	Median	Mean	SD
Cash flow for basic expenses	Group 1	156	3.00	3.04	1.092
	Group 3	109	1.00	1.69	.988
Pay for housing	Group 1	156	3.00	2.96	1.177
	Group 3	109	1.00	1.75	1.001
Other debt payments	Group 1	156	3.00	2.92	1.221
	Group 3	109	1.00	1.72	1.001
Value of investments	Group 1	155	4.00	3.08	1.143
	Group 3	108	3.00	2.94	1.044
Job or income loss	Group 1	154	4.00	3.25	1.123
	Group 3	109	2.00	2.41	1.099

Table 8 indicates that Group 1 (with an income of less than R350,000 per annum) was the most concerned about job loss or reduced income, with a mean of 3.25 (median = 4.00). The group with the lowest concern was Group 3 (income of more than R600,000 per annum), with a mean of 1.69 (median = 1.00), relating to not having the cash flow to pay for basic expenses. As expected, lower-income households were more concerned about their finances than higher-income households in the studied sample.

## Discussion

The first objective of this study was to identify the major financial concerns of households. When considering the overall mean scores of financial concerns, it is evident that the respondents favoured the value of their investments over other shorter-term concerns, such as cash flow for their basic expenses. This may signal that households have a futuristic outlook in which they want to protect their financial well-being over the long term. It could also show that the participants in this study were educated in personal finance. This links to financial resilience theory, as households can adapt their lifestyle choices during times of hardship. Many people recovered from the financial setbacks of the COVID-19 pandemic without jeopardising long-term goals, such as selling long-term investments or using retirement savings; thus, they demonstrated financial resilience (Wiatt et al. 2024, 7). The second objective was to establish whether a correlation exists between the various major concerns identified. Strong, positive correlations were found for all the concerns, except for concerns regarding the value of their investments, which only had a medium correlation with the other, more short-term concerns.

In addressing the third objective, this study found no notable differences in financial concerns between different genders. However, the study showed that younger participants were less concerned than older participants. The heightened concern for older participants might stem from their proximity to retirement age and the possibility of receiving diminished income compared to what they currently earn. In most instances, the peak of one's work life is between 30 and 39 years of age (Stahl 2021). Older age groups often face the dual pressures of saving for retirement while still meeting significant ongoing expenses, such as housing. Concerns about whether their retirement savings will be sufficient can lead to anxiety regarding housing stability.

Regarding concerns about being unable to make other debt payments, the researchers posit that older individuals are typically trying to maximise their retirement savings; however, high levels of debt can interfere with their ability to contribute to retirement accounts. The tension between paying off debt and saving for the future can create financial stress. Many people in the 18 to 29 age group might still receive financial support from their families, either through direct monetary assistance or by living at home. In the 62+ age group, retirees often simplify their lifestyles by reducing expenses and financial commitments. This may involve downsizing their homes, cutting back on



discretionary spending, and prioritising essential expenses, which helps to lower the burden of debt payments.

The study results also suggest that households with lower income levels experienced more cash flow problems or struggled to keep up with large debt payments and, therefore, had greater financial concerns, such as not having the cash flow for basic expenses, being unable to pay for housing, and not being able to make other debt payments. Lower-income households tend to be more vulnerable to disruptions in their financial ability to meet daily needs, as they usually do not have sufficient emergency savings in place, which makes them more susceptible to financial stress. Individuals tend to be present-biased, preferring immediate rewards, such as spending, and delaying difficult tasks for future rewards, such as saving (Laibson 1997). Owing to the high interest rates during the COVID-19 pandemic (Burger and Calitz 2021, 15), which continue to remain elevated (Kriek 2024), the South African economy may lead individuals to become overwhelmed with increasing debt balances, resulting in financial strain.

Lower-income households are more vulnerable to job loss or reduced income because, in many cases, they do not have financial resources to fall back on (Rozynek et al. 2022, 8). A lot of lower-income households live from “paycheck to paycheck” (Mammen et al. 2017, 16). The value of investments was not a significant financial concern for lower-income households that participated in this study, possibly because they are less likely to have substantial investments, which makes these individuals less concerned about any changes in the market, especially those caused by the COVID-19 pandemic. Higher-income households typically have greater financial flexibility and can, therefore, cover basic expenses much more easily than lower-income households. Although higher-income households likely have larger housing costs than lower-income households, they have greater access to credit and are more likely to refinance their mortgages, thereby reducing their financial concerns. Financial resilience theory is, therefore, more prevalent in higher-income households.

## Limitations and Strengths

The limitations of this study include the fact that the survey was conducted on Facebook. It may, therefore, not accurately reflect all demographic groups, especially those who do not have internet access or access to social media. As such, results from this sample cannot be generalised, as complete representativeness of the target population would probably not be obtained. Nevertheless, the results offer useful insights into the financial concerns of South African households. In the future, it will be important for research to focus on a more diverse group of people. Moreover, the study pointed out concerns about the value of investments but did not thoroughly examine specific investment types. Future research could address this aspect. Tracking financial resilience over time will provide deeper insights into how households adapt to financial shocks and which strategies prove to be the most effective in maintaining financial stability. Future studies

should investigate specific financial behaviours, such as the saving habits of households, spending patterns, and investment strategies. This will provide more insights into how these households can improve their financial resilience in the long term.

## Conclusion

The study identified and analysed the primary financial concerns of South African households during the COVID-19 lockdowns, highlighting challenges such as income loss, increased basic expenses, and limited savings. These findings align with financial resilience theory, emphasising the importance of adaptive financial planning to mitigate economic shocks and maintain household financial stability. The results of this study support the notion that lower-income households face greater financial vulnerability and have little margin for error in managing their finances. This is a phenomenon likely to be repeated during any period of stress on the economy, not only during a pandemic, as many families do not have enough liquid savings (Bhutta and Dettling 2018). Higher-income households tend to be more financially resilient (Koudalo and Toure 2023, 13) owing to a number of factors, namely that they have more disposable income, greater savings, better access to credit, more diversified investments, and engage in superior financial planning, likely because they are better educated about personal finances. Higher-income households also have the ability to cut non-essential expenses as they typically have more discretionary income available for luxury goods, entertainment, or vacations.

In this study, the investment value was the primary concern for households overall. This could be explained by the fact that 69% of the participants were over the age of 40 and, therefore, were expected to care about their investments. They are closer to retirement age compared to younger individuals and are likely counting on using these investments when they retire.

## Recommendations

Households should, therefore, focus on diversifying their investment portfolios by spreading their investments across different asset classes to mitigate risks. This will protect the total investment value of individuals against market volatility and mitigate the risk of losing significant value during periods of economic stress (Munizu et al. 2024, 212). Individuals should frequently review and adjust their portfolios based on current market conditions.

It is recommended that the financial education of households be prioritised. Financial literacy programmes are educational initiatives aimed at enhancing people's understanding of fundamental financial principles. Having a thorough knowledge of personal financial management is crucial for households to make sound financial decisions. Enhanced financial literacy has a direct effect on building financial resilience, ensuring that individuals can handle complex and unexpected financial challenges, such

as those caused by a pandemic and economic lockdown, while also extending beyond that (Ariana et al. 2024, 999). The South African and other governments should invest more in financial literacy educational initiatives. Universities, especially economics faculties, are also poised to make an impact on this level through their community engagement initiatives. This should be accelerated.

## Contribution and Practical Implications

Third parties, such as the government and other stakeholders, also play a crucial role in promoting financial resilience, as they can offer tax incentives for retirement savings and investment accounts. They can also provide financial support services to assist households in making better long-term financial decisions, including debt management, financial planning, and crisis management. Mortgage and rent were major concerns for individuals, and the government could have assisted these households by providing housing subsidies, especially to low-income households. The private sector and businesses also have a social responsibility to consider the provision of relief measures during times of general economic hardship. However, true financial resilience cannot be built when households become complacent and await financial aid from external sources; they must also take charge of their finances and manage them responsibly so that they are cushioned against unexpected financial woes that may come their way.

Even though companies were under a lot of pressure during the COVID-19 pandemic, some employers could have offered more flexible work arrangements, such as adjustable working hours and locations. This would provide a better work–life balance and increase productivity, especially during a pandemic when individuals are restricted in their activities. It is recommended that all employers adopt an ethic of care toward employees as part of their corporate values and explicitly consider providing relief during times of economic struggle.

## References

- Achou, B., D. Boisclair, P. D'Astous, R. Fonseca, F. Glenzer, and P. C. Michaud. 2020. "Early Impact of the COVID-19 Pandemic on Household Finances in Quebec." *Canadian Public Policy* 46 (S3): S217–35. <https://doi.org/10.3138/cpp.2020-087>.
- Adam, A. M., S. Frimpong, and M. O. Boadu. 2017. "Financial Literacy and Financial Planning: Implication for Financial Well-Being of Retirees." *Business and Economic Horizons* 13: 224–36. <https://doi.org/10.15208/beh.2017.17>.
- African Economic Outlook (AEO). 2024. "South Africa Economic Outlook." Accessed September 30, 2024. <https://www.afdb.org/en/countries/southern-africa/south-africa/south-africa-economic-outlook>.
- Afriforte. 2020. "Life with COVID-19 Dashboard." Accessed June 1, 2020. <https://lifewithcovid19.co.za/dashboard>.

- Ali, M., N. Alam, and S. A. R. Rizvi. 2020. "Coronavirus (COVID-19) — An Epidemic or Pandemic for Financial Markets." *Journal of Behavioral and Experimental Finance* 27: e100341. <https://doi.org/10.1016/j.jbef.2020.100341>.
- Ancu, M. 2012. "Older Adults on Facebook: A Survey Examination of Motives and Use of Social Networking by People 50 and Older." *Florida Communication Journal* 40 (2): 1–12.
- Ariana, I., I. Wiksuana, I. Candraningrat, and I. Baskara. 2024. "The Effects of Financial Literacy and Digital Literacy on Financial Resilience: Serial Mediation Roles of Financial Inclusion and Financial Decisions." *Uncertain Supply Chain Management* 12 (2): 999–1014. <https://doi.org/10.5267/j.uscm.2023.12.008>.
- Barrafrem, K., D. Västfjäll, and G. Tinghög. 2020. "Financial Well-Being, COVID-19, and the Financial Better-Than-Average-Effect." *Journal of Behavioral and Experimental Finance* 28: e100410. <https://doi.org/10.1016/j.jbef.2020.100410>.
- Bhorat, H., and T. Köhler. 2020. "Social Assistance During South Africa's National Lockdown: Examining the COVID-19 Grant, Changes to the Child Support Grant, and Post-October Policy Options." UCT Development Policy Research Unit. Accessed May 7, 2024. [https://africaportal.org/wp-content/uploads/2023/05/Social\\_assistance\\_during\\_South\\_Africas\\_national\\_lockdown-1.pdf](https://africaportal.org/wp-content/uploads/2023/05/Social_assistance_during_South_Africas_national_lockdown-1.pdf).
- Bhutta, N., and L. Dettling. 2018. "Money in the Bank? Assessing Families' Liquid Savings Using the Survey of Consumer Finances." FEDS Notes. Board of Governors of the Federal Reserve System, November 19, 2018. <https://doi.org/10.17016/2380-7172.2275>.
- Biereenu-Nnabugwu, M., and U. M. Ibeabuchi. 2024. "Poverty and Unemployment Conditions of Black South Africans in Post-Apartheid Xenophobic Violence and Crisis of Development in South Africa." *Journal of Public Administration and Social Welfare Research* 9 (2): 1–10.
- Brewer, M., and L. Gardiner. 2020. "The Initial Impact of COVID-19 and Policy Responses on Household Incomes." *Oxford Review of Economic Policy* 36 (S1): S187–99. <https://doi.org/10.1093/oxrep/graa024>.
- Burger, P., and E. Calitz. 2021. "Covid-19, Economic Growth and South African Fiscal Policy." *South African Journal of Economics* 89 (1): 3–24. <https://doi.org/10.1111/saje.12270>.
- Cantor, G., and S. Landry. 2020. "How Are the Most Vulnerable Households Navigating the Financial Impact of COVID-19?" Prosperity Now. Accessed November 2, 2024. <https://prosperitynow.org/resources/how-are-most-vulnerable-households-navigating-financial-impact-covid-19>.

- Cherry, S. F., E. X. Jiang, G. Matvos, T. Piskorski, and A. Seru. 2021. *Government and Private Household Debt Relief During COVID-19*. NBER Working Paper 28357. National Bureau of Economic Research. <https://doi.org/10.3386/w28357>.
- Christl, M., S. De Poli, F. Figari, T. Hufkens, C. Leventi, A. Papini, and A. Tumino. 2024. “Monetary Compensation Schemes During the COVID-19 Pandemic: Implications for Household Incomes, Liquidity Constraints and Consumption Across the EU.” *The Journal of Economic Inequality* 22 (2): 411–31. <https://doi.org/10.1007/s10888-023-09596-4>.
- Chronopoulos, D.K., M. Lukas, and J. O. Wilson. 2020. “Consumer Spending Responses to the COVID-19 Pandemic: An Assessment of Great Britain.” *SSRN*. Accessed November 5, 2024. <https://doi.org/10.2139/ssrn.3586723>.
- Christiansen, P., and A. Jones. 2025. *A Practical Guide to Data Analysis: Using R and IBM SPSS Statistics*. 1st ed. Sage.
- Davola, A. 2020. “From the Black Swan, to the Snowball: Risks of COVID-19 Pandemic for Consumer Credit Scores in the Lack of a Harmonized Regulatory Intervention.” *Opinio Juris in Comparatione*, Special Edition. <https://doi.org/10.2139/ssrn.3604031>.
- De Villiers, C., D. Cerbone, and W. Van Zijl. 2020. “The South African Government’s Response to Covid-19.” *Journal of Public Budgeting, Accounting and Financial Management* 32 (5): 797–811. <https://doi.org/10.1108/JPBAFM-07-2020-0120>.
- Deloitte. 2024. “South Africa’s Economic Outlook, May 2024.” Accessed May 9, 2024. <https://www2.deloitte.com/us/en/insights/economy/emea/africa-economic-outlook.html>.
- Eberhardt, W., W. Bruine de Bruin, and J. Strough. 2019. “Age Differences in Financial Decision Making: The Benefits of More Experience and Less Negative Emotions.” *Journal of Behavioral Decision Making* 32 (1): 79–93. <https://doi.org/10.1002/bdm.2097>.
- Fallon, P. R., and R. E. Lucas. 2002. “The Impact of Financial Crises on Labor Markets, Household Incomes, and Poverty: A Review of Evidence.” *The World Bank Research Observer* 17 (1): 21–45. <https://doi.org/10.1093/wbro/17.1.21>.
- Fouché, J. P. 2023. “COVID-19 and the Financial Well-Being and Personal Finances of South African Households.” *Journal of Economic and Financial Sciences* 16 (1): a830. <https://doi.org/10.4102/jef.v16i1.830>.
- Fox, J., and S. Bartholomae. 2020. “Household Finances, Financial Planning, and COVID-19.” *Financial Planning Review* 3 (4): e1103. <https://doi.org/10.1002/cfp2.1103>.
- Financial Planning Institute of Southern Africa (FPI). 2020. “The Impact of COVID-19 on CFP® Professionals and Their Clients.” Accessed May 9, 2024. <https://bluechipdigital.co.za/insights/the-impact-of-covid-19-on-cfp-professionals-and-their-clients/>.

- Frasquilho, D., M. G. Matos, F. Salonna, D. Guerreiro, C. C. Storti, T. Gaspar, and J. M. Caldas-de-Almeida. 2015. "Mental Health Outcomes in Times of Economic Recession: A Systematic Literature Review." *BMC Public Health* 16: 115. <https://doi.org/10.1186/s12889-016-2720-y>.
- Goodell, J. W. 2020. "COVID-19 and Finance: Agendas for Future Research." *Finance Research Letters* 35: e101512. <https://doi.org/10.1016/j.frl.2020.101512>.
- Henager, R., and B. J. Cude. 2016. "Financial Literacy and Long- and Short-Term Financial Behavior in Different Age Groups." *Journal of Financial Counseling and Planning* 27 (1): 3–19. <https://doi.org/10.1891/1052-3073.27.1.3>.
- Hibbert, A. M., E. R. Lawrence, and A. J. Prakash. 2013. "Does Knowledge of Finance Mitigate the Gender Difference in Financial Risk-Aversion?" *Global Finance Journal* 24 (2): 140–52. <https://doi.org/10.1016/j.gfj.2013.07.002>.
- Hira, T. K., and O. Mugenda. 2000. "Gender Differences in Financial Perceptions, Behaviors and Satisfaction." *Journal of Financial Planning* 13 (2): 86–93.
- Hu, B., H. Guo, P. Zhou, and Z. L. Shi. 2021. "Characteristics of SARS-CoV-2 and Covid-19." *Nature Reviews Microbiology* 19 (3): 141–54. <https://doi.org/10.1038/s41579-020-00459-7>.
- Kansiime, M. K., A. T. Justice, I. Mugambi, M. Bundi, A. Kara, and C. Owuor. 2021. "COVID-19 Implications on Household Income and Food Security in Kenya and Uganda: Findings from a Rapid Assessment." *World Development* 137: 105199. <https://doi.org/10.1016/j.worlddev.2020.105199>.
- Kathirvel, N. 2020. "Post Covid-19 Pandemic Mental Health Challenges." *Asian Journal of Psychiatry* 53: 102430. <https://doi.org/10.1016/j.ajp.2020.102430>.
- Koudalo, Y. M. A., and M. Toure. 2023. "Does Financial Inclusion Promote Financial Stability? Evidence from Africa." *Cogent Economics and Finance* 11 (2): 2225327. <https://doi.org/10.1080/23322039.2023.2225327>.
- Kriek, R. 2024. "The True Cost of Borrowing: South Africans Are Losing Their Homes Due to High Interest Rates." Accessed November 26, 2024. <https://www.iol.co.za/business-report/economy/the-true-cost-of-borrowing-south-africans-are-losing-their-homes-due-to-high-interest-rates-d97a90db-c612-45eb-824e-1101491f0547>.
- Laibson, D. 1997. "Golden Eggs and Hyperbolic Discounting." *The Quarterly Journal of Economics* 112 (2): 443–78. <https://doi.org/10.1162/003355397555253>.
- Lusardi, A., A. Hasler, and P. J. Yakoboski. 2020. "Building Up Financial Literacy and Financial Resilience." *Mind and Society* 20: 181–7. <https://doi.org/10.1007/s11299-020-00246-0>.

- Mammen, S., A. Berry, C. Bird, and K. D. Chandler. 2017. "Rural Low-Income Families' Quest for Economic Security: It Takes More Than a Paycheck." *Family Science Review* 22 (1): 9–25. <https://doi.org/10.26536/FSR.2018.22.01.01>.
- Martin, A., M. Markhvida, S. Hallegatte, and B. Walsh. 2020. "Socio-Economic Impacts of COVID-19 on Household Consumption and Poverty." *Economics of Disasters and Climate Change* 4 (3): 453–79. <https://doi.org/10.1007/s41885-020-00070-3>.
- Mirabeau, L., M. Mignerat, and C. Grange. 2013. "The Utility of Using Social Media Networks for Data Collection in Survey Research." In *Reshaping society through information systems design*. Paper presented at the International Conference on Information Systems (ICIS), Curran, Red Hook, NY.
- Muir, K., R. Reeve, C. Connolly, A. Marjolin, F. Salignac, and K. Ho. 2016. "Financial Resilience in Australia 2015." Centre for Social Impact, University of New South Wales (for National Australia Bank). Accessed May 7, 2024. <https://apo.org.au/sites/default/files/resource-files/2016-08/apo-nid67094.pdf>.
- Munizu, M., S. Mulyati, and N. Zikirullaeva. 2024. "Portfolio Diversification Strategy and Its Influence on Investment Risk and Return in the Capital Market." *Multifinance* 1 (3): 211–20. <https://doi.org/10.61397/mfc.v1i3.117>.
- Oke, O. O., and O. H. Benedict. 2024. "A Literature Review of the Level of Financial Literacy in South Africa." In *Towards Digitally Transforming Accounting and Business Processes*. Proceedings of the International Conference of Accounting and Business (iCAB 2023), Springer, Johannesburg, South Africa. [https://doi.org/10.1007/978-3-031-46177-4\\_25](https://doi.org/10.1007/978-3-031-46177-4_25).
- Parker, K., J. M. Horowitz, and A. Brown. 2020. "About Half of Lower-Income Americans Report Household Job or Wage Loss Due to COVID-19." Accessed November 26, 2024. <https://www.pewresearch.org/social-trends/2020/04/21/about-half-of-lower-income-americans-report-household-job-or-wage-loss-due-to-covid-19/>.
- Ridhwan, M. M., J. F. Rezki, A. Suryahadi, A. Ramayandi, and A. Ismail. 2024. "The Impact of COVID-19 Lockdowns on Household Income, Consumption and Expectations: Evidence from High-Frequency Data in Indonesia." *Bulletin of Indonesian Economic Studies* 60 (1): 67–94. <https://doi.org/10.1080/00074918.2023.2167930>.
- Rozynek, C., S. Schwerdtfeger, and M. Lanzendorf. 2022. "The Influence of Limited Financial Resources on Daily Travel Practices: A Case Study of Low-Income Households with Children in the Hanover Region (Germany)." *Journal of Transport Geography* 100: 103329. <https://doi.org/10.1016/j.jtrangeo.2022.103329>.
- Salignac, F., J. Hanoteau, and I. Ramia. 2021. "Financial Resilience: A Way Forward Towards Economic Development in Developing Countries." *Social Indicators Research* 160: 1–33. <https://doi.org/10.1007/s11205-021-02793-6>.

- Salter, A. W., and V. Tarko. 2017. "Governing the Financial System: A Theory of Financial Resilience." Mercatus Working Paper, November 2017. Accessed May 9, 2024. <https://doi.org/10.2139/ssrn.3084352>.
- Sap, M., G. Park, J. Eichstaedt, M. Kern, D. Stillwell, M. Kosinski, L. Ungar, and H. A. Schwartz. 2014. "Developing Age and Gender Predictive Lexica Over Social Media." In *Proceedings of the 2014 Conference on Empirical Methods in Natural Language Processing (EMNLP)*: 1146–51. <https://doi.org/10.3115/v1/D14-1121>.
- Silinskas, G., M. Ranta, and T. A. Wilska. 2021. "Financial Behaviour Under Economic Strain in Different Age Groups: Predictors and Change Across 20 years." *Journal of Consumer Policy* 44 (2): 235–57. <https://doi.org/10.1007/s10603-021-09480-6>.
- Stahl, A. 2021. "Millennials' High-Earning Years Have Arrived — Here's How to Prepare." Accessed October 29, 2024. <https://www.forbes.com/sites/ashleystahl/2021/09/10/millennials-high-earning-years-have-arrived-heres-how-to-prepare/#:~:text=Although%20it%20can%20be%20tough%20realizing%20you%20are,from%20the%2025-to-34%20to%20the%2035-to-44%20age%20bracket>.
- Szustak, G., W. Gradoń, and Ł. Szewczyk. 2021. "Household Financial Situation During the COVID-19 Pandemic with Particular Emphasis on Savings — Evidence from Poland Compared to other CEE States." *Risks* 9 (9): 166. <https://doi.org/10.3390/risks9090166>.
- Tengblad, S., and M. Oudhuis. 2018. "The Resilience Framework." In *Work, Organization, and Employment*, edited by T. Dundon and A. Wilkinson. Springer. <https://doi.org/10.1007/978-981-10-5314-6>.
- Walczak, D., and S. Pieńkowska-Kamieniecka. 2018. "Gender Differences in Financial Behaviours." *Engineering Economics* 29 (1): 123–32. <https://doi.org/10.5755/j01.ee.29.1.16400>.
- Wiatt, R., M. I. Marshall, G. Haynes, and Y. G. Lee. 2024. "In the Depths of Despair: Lost Income and Recovery for Small Businesses During COVID-19." *International Journal of Disaster Risk Reduction* 101: 104251. <https://doi.org/10.1016/j.ijdrr.2024.104251>.
- Zahedi, J., M. Salehi, and M. Moradi. 2021. "Identifying and Classifying the Contributing Factors to Financial Resilience." *Foresight* 24 (2): 177–94. <https://doi.org/10.1108/FS-10-2020-0102>.