KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI, GHANA

INSTITUTE OF DISTANCE LEARNING

Financial Literacy and Financial Behaviour of Postgraduate Students: The Moderating Effect of Financial Strain.

By

Yvonne Naa Atswei Adjei

(PG9355221)

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DECLARATION

I, Yvonne Naa Atswei Adjei, do declare that to the best of my knowledge, this work has never been accepted in parts or whole for the award of any other degree in this or any other University, except where acknowledgement has been duly made in the text.

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YVONNE NAA ATSWEI ADJEI **DATE**

PG9355221/20838855

…………………………………………. ……………………………

DATE

DR. KWASI POKU

(SUPERVISOR)

…………………………………………. ……………………………

PROF. K. O. APPIAH **DATE**
(SUPERVISOR)

DEDICATION

This dissertation is dedicated to my family especially my mother, Madam Josephine Nomo and my sister Mrs Phyllis Araba Forson-Ansah.

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My sincere gratitude goes first to God for His infinite mercies and wisdom given me for this work. My warmest regards to Dr. Kwasi Poku for accepting to supervise me. His passion for mentorship and supervision, coupled with his interest in the topic, was absolutely stunning. I say that this work would not have been complete without his guidance.

ABSTRACT

The study aimed to assess the levels of financial literacy and financial behaviour, explore the relationship between financial literacy and behaviour, and understand how financial strain moderates this relationship. A cross-sectional survey with 400 master's students from KNUST was conducted, using a structured questionnaire to collect data on demographics, financial literacy, financial behaviour, and financial strain. The findings indicate a diverse range of financial literacy levels among participants. While fundamental concepts like understanding ratios, investment, time value of money, and inflation impact received correct responses, there were mixed results in areas like simple interest, risk, and diversification. Overall, the study suggests that KNUST master's students possessed a reasonable level of financial literacy. In terms of financial behaviour, participants demonstrated positive trends, such as responsible bill payment and credit management. However, some areas, like cutting down on spending and debt record keeping, displayed lower scores. Furthermore, the study revealed a significant positive relationship between financial literacy and financial behaviour. Financial literacy was associated with favourable financial behaviours, while financial strain had a negative impact on financial behaviour. The moderating effect of financial strain on the relationship between financial literacy and behaviour indicated that the influence of financial literacy on behaviour is weakened by high levels of financial strain. Based on the findings the study recommends that educational institutions and financial organizations should collaborate to develop comprehensive financial literacy programs, focusing on both theoretical knowledge and practical application, to empower individuals with informed financial decision-making skills. Policymakers should prioritize the integration of financial education initiatives into national strategies.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The OECD (2017) considers financial literacy as comprising an individual's ability to combine one's knowledge, behaviour, skill, awareness and attitude to make decisions which are considered financially sound. Individuals who are financially literate may improve their financial lives as they become better equipped to process and understand financial information. From the foregoing arguments, it is clear that financial literacy results in an individual making a financial decision. This implies that financial literacy results in the individual expressing overt or covert behaviour (Singh & Kumar, 2017).

Financial literates tend to be better informed about savings, investment, budgeting and leveraging pecuniary products and services (Allgood & Walstad, 2016). One is better equipped to handle their personal money effectively if they have financial literacy. Owing to the growing sophistication of financial goods and services in this day and age, the capacity to handle one's own financial resources has emerged as an essential skill. Financial literacy, according to Kumari (2020), is essentially about comprehending money and how it is used on a regular basis.

Beyond individuals, financial literacy impacts the quality of the financial systems a country adopts. In a situation where a country's financial systems are fed by the rational behaviour of individuals, the country's financial systems improve (Kumari, 2020). However, national financial systems may collapse when individuals adopt irrational behaviour in making financial decisions (Cox, Brounen & Neuteboom, 2015). This incidence is common in both emerging and advanced countries. The financial market crash of 2008, as a case in point, was incited by the sale of subprime mortgages to individuals who were profiled as high-risk defaulters.

Irrational behaviour was observed by investors who pumped huge sums into the subprime mortgage market despite being aware that the buyers may default. In Ghana, the plummeting of the economy's sovereign debt ratings by international rating agencies in 2022 has been attributed to gross mismanagement of the economy by the leaders.

Following the mismanagement of the economy, Ghana has experienced financial distress. The nation's currency has depreciated against the dollar by at least 50 per cent in 2022. In the wake of recent developments within Ghana's economy, individuals and organizations have experienced dire financial strain. The financial strain has been bemoaned by the call for increased accountability and a commitment to austerity measures by the incumbent government. The financial strain is expressed in individuals' inability to put their financial condition to order. Individuals who are financially strained typically have no emergency fund, poor money management skills, and are in debt.

Financial literacy holds positive prospects for individuals and organizations beyond the current economic situation. Financial literacy and positive financial behaviour remain the way out of the country's current predicaments. Individuals and organizations must adopt healthy financial behaviour, on the back of financial literacy, in order to thrive in the current economic situation. This study hypothesizes that financially literate individuals may change their financial behaviour when they are experiencing distress. Financial strain possesses psychological impacts, including anxiety and depression, on individuals. This situation may induce individuals to take poor financial behaviour. The literature attests to the correlation between financial behaviour and financial literacy (Osman, Madzlan & Ing, 2018), and between financial literacy and financial strain (Ismail & Zaki, 2019).

1.2 Problem Statement

Scholars, such as Dzigbede and Pathak (2020), concur that COVID-19 significantly impacted the global economy. Its impact was also felt in Ghana's economy. Commodity exports sharply declined as the borders were closed down for months. The World Bank reports that national economic growth was stifled over the COVID-19 era (World Bank, 2020). The government's attempt to rebound the economy led to tightened fiscal policies including the introduction of the electronic levy. Meanwhile, the Russian-Ukraine war has complicated issues. Given Ghana's heavy reliance on foreign commodities, the country has experienced supply chain shocks, especially in relation to fertilizer and crude oil owing to the war (Dadzie, Nambie & Obobi, 2023). The high crude oil prices have also significantly contributed to the high inflation rate. Transportation, food, and energy prices have doubled in less than two years. Inflation has risen from 12.6 per cent as of December 2021 to 53.6 per cent as of January 2023 (Ghana Statistical Service, 2023).

To mitigate the impact of the strained economy, the government has implemented austerity measures, amidst negotiating a bailout with the International Monetary Fund (IMF) (AhinsahWobil, 2022). Ghanaians have also felt the full force of the poor performance of the economy. While the public sector workers have demanded a 30 per cent increment in salaries, the inflation rate negates any real growth in salaries. A number of civil demonstrations have been held by Ghanaians to register their displeasure with the current economic conditions. For selfsponsored postgraduate students, the economic conditions impose dire financial strain. These postgraduate students have to allocate their salary to academic fees and other financial responsibilities. In addition, these postgraduate students need to be financially literate and control their financial behaviour to make financial progress. The financial strain imposed by economic hardships would influence postgraduate students' financial literacy and financial behaviour. In particular, while some postgraduate students may be pressured by financial strain to put their financial situation in order, others will succumb to the psychological effects of financial strain and make poor financial decisions. Postgraduate students are the focus of this study since they bear the financial strain of sponsoring their studies and livelihood.

This study seeks to contribute to the literature by addressing two gaps. First, the study focuses on the influence of financial strain on financial wellness from a Ghanaian perspective, narrowing down to the experience of postgraduate students. Largely, similar empirical studies have been conducted outside Ghana (Ismail & Zaki, 2019, Osman et al., 2018). For instance, in Ismail and Zaki (2019), the authors focus on Malaysian university student earners and supporting staff. Their study considered financial literacy and financial strain as direct and significant predictors of financial wellness. Osman et al. (2018) conducted a similar study in Labuan, Malaysia. No study has focused on these concepts from Ghanaian postgraduate students' perspectives.

Second, the study seeks to address the lack of literature on the moderation effects of financial strain on the relationship between financial literacy and financial behaviour. To the best of the researcher's knowledge, no Ghanaian study has explored the moderating influence of financial strain on the nexus between financial literacy and financial behaviour.

1.3 Research Objectives

The study aims to examine how financial strain influences the link between financial behaviour and financial literacy. Considering the overarching research objective, the following specific objectives are set out:

i. To ascertain the financial literacy level of postgraduate students.

ii. To ascertain the impact of financial literacy on the financial behaviour of postgraduate students.

iii. To examine the moderating effect of financial strain on the relationship between financial literacy and the financial behaviour of postgraduate students.

1.4 Research Questions

To achieve the above specific research objectives, the following questions were posed:

i. What is the level of financial literacy of postgraduate students?

ii. What is the impact of financial literacy on the financial behaviour of postgraduate students?

iii. What is the moderating effect of financial strain on the nexus between financial behaviour and financial literacy of postgraduate students?

1.5 Overview of Methodology

The methodology employed in this research was quantitative using survey and cross-sectional research designs. The population comprised KNUST postgraduate students in the School of Business are more likely to experience financial strain. The population size is 2,400 out of which a sample size of 400 postgraduate students were selected using a simple random sampling method. An online questionnaire was administered to gather the data which was analyzed using the PLS SEM with the SPSS Amos 26 software. Ethical considerations were also taken into account to ensure the voluntary involvement of participants, right to privacy, anonymity, and information confidentiality. This chapter will provide a detailed description of the methodology.

1.6 Significance of the Study

The significance of the study extends beyond the immediate context of postgraduate students, reaching into the broader realms of educational policy, financial regulation, and the advancement of financial literacy research. For educational institutions, the findings emphasize the crucial role of integrating financial literacy education into diverse academic programs. Recognizing the interconnection between financial literacy and behavior, institutions can tailor curricula to empower students with practical financial knowledge, fostering responsible financial habits that extend beyond their academic pursuits.

Moreover, the study contributes significantly to the existing literature on the nexus between financial literacy and behavior. By specifically contextualizing these dynamics within the Ghanaian setting, the research offers nuanced insights that can inform tailored interventions for emerging economies facing similar challenges. The implications of financial strain as a moderating factor add a layer of complexity to the understanding of this relationship, providing a more comprehensive framework for future studies.

University authorities can draw upon these findings to inform policies that promote financial well-being among students. Understanding the moderating effect of financial strain underscores the importance of targeted interventions to alleviate economic stressors, ensuring that financial literacy initiatives translate into tangible improvements in financial behavior of students. Ultimately, the study's significance lies in its potential to drive positive change in both educational practices and financial policies, fostering a more informed, resilient, and financially responsible student population.

1.7 Scope of the Study

Using postgraduate students at KNUST as the target demographic, the study aims to examine financial behaviour, financial literacy, and financial strain in an academic context. A significant proportion of postgraduate students are workers. However, the results of the study would be limited in its applicability or generalizability to other contexts and target groups.

1.8 Organization of the study

This study is composed into five chapters. The first chapter introduces the subject matter of the study. The second chapter presents a review of relevant literature to the subject under study. In the third chapter, the study`s methodology would be explained in detail. Chapter four would contain the discussion of results as the field data would permit. Chapter five would then give the study's summary, conclusion, and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

In this chapter, extant literature is reviewed to discuss financial behaviour and financial literacy. This chapter also reviews literature on the importance, effects and dangers of financial literacy. In addition, the literature review explains the Theory of planned behaviour, Behavioural Economics theory and Social Learning theory as the backing theories for the study. Next, the chapter reviews empirical literature on financial literacy. The empirical review is situated in Ghana, in Africa, and beyond Africa. Last, the chapter discusses the conceptual framework which guides the study's methodology and research design.

2.1 Review of Concepts

2.1.1 Financial Literacy

Financial institutions, government organisations, consumers like college of Education students, and international organisations like the Organisation for Economic Cooperation and Development, and World Bank and the have all recognised the importance of financial literacy. In this context, several financial literacy definitions exist in the literature (Philippas & Avdoulas, 2020). Basically, the capacity to rightly discern and decide on the use and handling of money is what is considered a core element of financial literacy (de Bassa, 2013; Khawar & Sarwar, 2021; Sarpong-Danquah, Gyimah, Poku & Osei-Poku, 2018). The concept may be extended to include the ability to render confident decisions on how to budget, save, spend and invest money (Khawar & Sarwar, 2021). More so, the concept is described to include a good understanding of the financial services and products offered by financial institutions to help individuals attain their current and future financial goals (Adewumi, 2022).

Consequently, financial literacy broadly focuses on the awareness of economics and how economic factors influence choices made by households (Atkinson & Messy, 2012). It is worth noting, however, that this study aligns with limited conceptualisations of financial literacy to concentrate on the basic methods of managing money, such as setting a budget, saving money, making investments, and buying insurance (Garg & Singh, 2018; Khawar & Sarwar, 2021). Although financial literacy is important for one's welfare, Sabri et al. (2021) noted that students often struggle to grasp the fundamental principles of money management because these topics are rarely covered in most educational institutions' curricula, particularly at the postgraduate level. According to Allgood and Walstad (2013), students must have the confidence and bravery to handle their personal money and make important financial decisions for their wellbeing in the future. This requires that they have a solid knowledge of basic financial concepts.

Despite the fact that different individuals and institutions have had varying perspectives on financial literacy, they are all focused on how people may handle the many financial resources that are at their disposal for their personal advancement and well-being (Garg & Singh, 2018; Saepuloh & Ahman, 2021). Additionally, according to Kaiser, Lusardi, Menkoff, and Urban (2022), financial literacy is essential on several levels. It is a crucial component in helping individuals to manage their finances and may have significantly influenced the performance of the economy, as well as the effectiveness and stability of the financial system. Financial literacy, according to Yu, Wu, Chan, and Chou (2015), includes the ability to perform simple calculations, comprehend the rewards and difficulties of financial choices, be familiar with basic financial management principles, be aware of resources available for advice and support, and be able to comprehend the suggestions made.

Overall, financial literacy entails the following three skills: broad understanding of personal financial management, accountability in financial management issues, and the acumen to accurately understand and effectively process financial information from various sources for one's financial advantage.

2.1.2 Financial Behaviour

Financial behaviour is considered to comprise planning, management, and controlling finances at the individual level (Khawar & Sarwar, 2021; Sarpong-Danquah, et al., 2018). In other words, a company's financial manager's duties might be tied to an individual's financial conduct (Stolper & Walter, 2017). A finance manager's primary responsibilities within an organization are to allocate funds wisely and choose resources wisely in order to increase the company's value. Financial managers often do the following tasks (Bakar & Bakar, 2020): (1) predict and plan money; (2) decide on growth, capitalization, and; investment and (3) control.

According to Letkiewicz and Heckman (2019), in planning funds, the financial manager must have the ability to anticipate future operations. He or she must thus create a financial budget in order to finish the tasks as viewed from the capitalization perspective. Through the use of loans, investments, and equity as feasible financing choices, the financial management must be able to get cash both rapidly and over a lengthy period of time. For the firm to operate in accordance with the intended financial budget, the management must be able to exert control over its financial operations (Sabri, Wijekom & Rahim, 2020). The aforementioned reasoning leads to the conclusion that financial behaviour is a personal financial management activity that includes planning, controlling, and managing financial resources (Stolper & Walter, 2017).

In this study, financial behaviour was defined as postgraduate students' actions in organising, regulating, and using financial resources, in this case, their salary and other sources of revenue (Peach & Yuan, 2017). Thus, unlike the framework adopted by Danes and Haberman (2007) which assumed students do not work, this study posits that postgraduate students’ financial literacy is dependent on how they plan, manage and control their salaries, primarily. Thus, the postgraduate students are expected to be working while studying.

2.1.3 Financial Strain

Financial strain among postgraduate students is a common problem that can have negative consequences on their academic performance and overall well-being (Philippas & Avdoulas, 2020). Many postgraduate students struggle to pay for tuition fees, textbooks, accommodation, food, and other basic needs, which can lead to stress, anxiety, and depression (de Bassa, 2013). In this study, we discuss the causes and effects of financial strain among postgraduate students, as well as strategies to help alleviate this problem.

Some of the main causes of financial strain among postgraduate students is the rising cost of education. Khalisharani, Johan and Sabri (2022) point out that tuition fees have increased significantly in recent years, and many postgraduate students struggle to afford them. In addition, Tat et al. (2023) lament that the cost of living has also increased, making it difficult for postgraduate students to pay for basic needs such as housing, food, and transportation. Another cause of financial strain is the lack of financial education (Oseifuah, Gyeke & Formadi, 2018). Many postgraduate students are not given financial management training effectively, which can lead to poor financial decisions and unnecessary debt (Lajuni, Bujang, Karia & Yacob, 2018). Last, postgraduate students may also be unaware of the resources available to them, such as scholarships, grants, and financial aid (Lajuni, Bujang, Karia & Yacob, 2017).

Financial strain can have a significant impact on postgraduate students' academic performance and mental health (de Bassa, 2013; Philippas & Avdoulas, 2020). Postgraduate students who are struggling to make ends meet may have to work long hours to pay for expenses, which can lead to fatigue and burnout (Tat et al., 2023). They may also have to skip classes or assignments to work, which can lead to poor grades and lower GPA. Financial strain can also cause stress, anxiety, and depression (Sabri & Aw, 2020). Postgraduate students may feel overwhelmed and hopeless about their financial situation, which can lead to a decline in their mental health. Moreover, financial strain can also strain relationships with family and friends, as postgraduate students may feel embarrassed or ashamed about their financial situation (Bhushan & Medury, 2014). In addition, financial strain can also impact postgraduate students' decision-making processes, causing them to prioritize short-term financial goals over long-term investments in their education and future careers (Hayei & Khalid, 2019). This can lead to postgraduate students taking on more debt or not pursuing opportunities that could benefit their long-term career prospects.

2.1.4 Benefits of Financial Literacy

The literature maintains that financial literacy is crucial because it gives individuals the knowhow and competence, they need to manage their finances, develop their financial intelligence, and access better pecuniary services (Rai, Dua & Yadav, 2019). According to research on the subject, financial literacy is essential for motivating people to exercise caution in all facets of their financial lives and activities (Rahman, Isa, Masud, Sarker & Chowdhury, 2021). The majority of individuals do not truly get what financial literacy is or how to use it in their everyday financial life. It is regrettable to know that a person's financial situation is unrelated to their level of education (Osman, Madzlan, & Ing, 2018). The management of the economy is directly impacted by having a strong understanding of personal financial literacy; thus, it is imperative that everyone pay attention to it (Karakara, Sebu & Dasmini, 2022).

Financial education remains among the most concerned issue confronting most economies (Sarpong-Danquah et al., 2018). This is due to the majority of people struggling to make wise financial decisions. There are many financial goods available on the market in various price ranges, and consumers generally expect to choose these items wisely in order to have the greatest level of satisfaction (Adewumi, 2022). This urges consumers to become more financially savvy in order to make better decisions and avoid being taken advantage of by dishonest people (Sabri et al., 2021). Since consumers must make engaging financial decisions or understand complex goods, financial literacy and related education become crucial (Khawar & Sarwar, 2011). In general, learning financial literacy early in life often has important longterm benefits since it equips people to handle any financial hardship they may face.

2.1.5 Dangers of Being Financially Illiterate

According to studies (Kaiser et al., 2022; Saepuloh & Ahman, 2021), poor financial literacy can cause marital stress, which may raise the likelihood that people would end their marriage.

Therefore, a couple's financial discipline is crucial to the longevity of their union. As a result, being able to stick to a set spending plan, pay off debt, and accumulate money supports marital satisfaction (Allgood & Walstad, 2013). This demonstrates that concerns with financial literacy affect marriages in general, and that in order for marriages to last, partners must be knowledgeable about money matters. Accordingly, being able to stick to a set spending plan, pay off debt, and accumulate savings all contribute to marital satisfaction (Bucher-Koenen Lusardi, Alessie & Van 2017).

Additionally, a thorough understanding of personal finance enables individuals as well as communities to make better decisions (Sabri & Aw, 2020). Individuals who lack financial literacy have unrealistic expectations of inflation, which limits the soundness of their decisions in relation to money matters and encourages impulse spending, as claimed by Sabri et al. (2021). Additionally, research reveals that those with poor financial literacy are more prone to make expensive monetary planning errors. According to Hayei and Khalid's research (2019), those who are less debt literate often pay a higher charge and have significantly greater loan amounts to settle. Once more, Bakar and Bakar (2020) contend that people's inability to make wise financial judgements is due to their lack of adequate personal financial education. Lack of financial literacy can have an impact on a person's capacity to manage their personal funds daily and to prepare for enduring objectives including a mortgage, retirement planning, investments, and paying for further education (Lajuni et al. 2018; Lajuni et al. 2017). One who is adept at managing their finances develops habits that leave them vulnerable to economic downturns (Rahman et al., 2021). Given the serious impact on people's wealth and health as well as the state of the country as a whole, the implications of financial illiteracy cannot be understated.

2.2 Review of Theories

2.2.1 Theory of Planned Behaviour

One key model of financial behaviour among postgraduate students is the Theory of Planned Behaviour (TPB), developed by psychologist Icek Ajzen. TPB suggests that people's behaviour is influenced by their intentions, which are in turn determined from a combination of three factors: perceived behavioural control, subjective norms, and attitudes (Ajzen, 1991).

Ajzen (1991) considers attitudes to relate to people's favourable or unfavourable disposition towards a matter of interest. For example, if a student has a positive attitude towards saving money, they may be more likely to engage in that behaviour. On the other hand, if they have a negative attitude towards budgeting, they may be less likely to do so.

Subjective norms refer to the social pressures that individuals perceive from others to engage in a behaviour (Ajzen, 1991). For example, if a student perceives that their peers value spending money on social activities, they may feel pressure to do the same. Alternatively, if they perceive that their family values saving money, they may be more likely to prioritize saving.

Perceived behavioural control refers to people's perceived ability to indulge in a behaviour (Ajzen, 1991). For instance, if a student feels confident in their ability to create and stick to a budget, they may be more likely to do so. However, if they feel that external factors (such as unexpected expenses or low income) limit their ability to save, they may be less likely to exhibit that disposition.

Overall, the TPB informs that financial behaviours among postgraduate students are influenced by a complex interplay of attitudes, social norms, and perceived control. By understanding these factors, educators and policymakers can develop interventions to promote positive financial behaviours among postgraduate students, such as providing financial education, promoting social norms around saving, and increasing postgraduate students' perceived control over their finances.

2.2.2 Behavioural Economics Theory

Behavioural economics integrates economics and psychology discussions to predict and comprehend people's tendencies towards making monetary decisions. The theory informs that people largely decide on financial matters by relying on a set of heuristics and cognitive fallacies, instead of relying on rationality (Xiao, 2008). For example, postgraduate students may be more likely to overspend when using credit cards, as the ease of swiping a card can make it feel less "real" than using cash. Additionally, postgraduate students may be more likely to spend money on instant indulgence, instead of saving for long-term goals, due to the tendency towards present bias.

However, understanding these biases and heuristics can also be used to promote positive financial behaviour among postgraduate students (Fan & Barbiarz, 2019). For example, implementing strategies such as pointing postgraduate students towards saving (such as automatically enrolling them in a savings plan) can help counteract the tendency towards present bias (Bhushan & Medury, 2014).

2.2.3 Social Learning Theory

Socialization is widely seen as a communal process in which a learner receives behaviours, attitudes, motives and norms from social agents who are within the society (Akers & Jennings, 2015). The process starts from birth and extends throughout one's life as the individual interacts with people in the society (Gutter, Garrison & Copur, 2010). Children who observe their parents and model their behaviour are excellent examples of social learning. Social learning is predicated on the idea that individuals may pick up external knowledge by seeing and imitating their emotions, attitudes, and behaviours (Allan, 2017; Hira, 2012).

Various authors have developed models of consumer socialization (Akers & Jennings, 2015; Hira, 2012; Kim, Russell & Schroeder, 2017). In general, consumer socialisation typically consists of three elements: background factors (such as age, sex, and socioeconomic status), socialisation agents-processes (such as parents, other family members, and peers), and the results of the learning mechanism (e.g., how parents educate their children on consumer skills). According to Ameliawati and Setivani (2018), childhood and adolescent experiences have an impact on certain adult consumer behaviour patterns. Therefore, studying these experiences can aid in our understanding of how adult behavioural patterns emerge as well as how young people behave.

In related studies, family structure is examined along with demographic and financial parameters including age, race, gender, and income, which are utilised as control variables whose effects are maintained constant in the study (Gutter et al., 2010; Letkiewicz & Heckman, 2019). In relation to this study, such models assume that postgraduate students acquire certain mental and behavioural outcomes through their interaction with various socialization agents.

The learning strategies that are most often used include operant learning, direct interaction, modeling, mediation, and reinforcement (Akers & Jennings, 2015). These socialisation procedures make reference to interactions between agents and learners, which include socialisation agents and teaching strategies.

The current study hypothesizes that student financial literacy and financial behaviour are learnt from their social interactions with family, friends, and channels dedicated to teaching these phenomena. These channels may include financial literacy programs organised by financial institutions, financial literacy courses taught in the university, and financial literacy nuggets offered on social media platforms.

2.3 Empirical Review

2.3.1 Related Studies in Africa

Sarpong-Danquah et al. (2018) used purposive sampling and primary data from selfadministered questionnaires to choose 480 students from universities throughout Ghana for the data analysis. They discovered that students' average level of financial literacy is low, particularly when it comes to insurance (mean = 40.54%). However, savings and borrowing showed the highest degree of financial knowledge among students (mean = 52.88 percent). Information technology has also had a positive impact on financial literacy for 95 percent of students. They advise academic institutions to implement instructional programmes on financial literacy to increase students' awareness of money-related concerns. For students who do not study business, policymakers should reform the curriculum to incorporate classes in financial literacy. Finally, financial speeches and seminars should concentrate on imparting pertinent financial knowledge, and young people should be informed about and motivated to use digital or technical platforms to expand their understanding of money.

At a university in South Africa, Mudzingiri, Muteba and Keyser (2018) looked at the factors that influence students' financial decisions. It investigates whether university students' financial behaviours, time preferences, risk preferences, confidence, and perceptions of financial literacy vary according to financial literacy level. The data was collected through questionnaire, which also contained tasks for an experiment including numerous price lists, time preferences and risk preferences. The questionnaire asked about personal information, financial behaviour, perceptions, and knowledge. The research included a suitable total sample of 191 students (females=53%). Financial behaviour, time preferences, risk preferences, confidence levels, and perceptions of financial literacy among university students were all substantially different according to financial literacy level, according to a t-test study. The findings indicate that college students who lack financial literacy tend to be more impatient, risk-averse, and overconfident; these traits are important contributors to financial crises throughout the globe. The financial behaviour was significantly influenced by the confidence, risk preferences index, and perception of financial literacy index, of categorised university students, according to an examination of the OLS regression model. The risk preference index had a big impact on how financially responsible university students were with their debt. University students' preferences, financial literacy, self-assurance, and personality traits should all be considered in order to comprehend their financial conduct.

With regard to University of Lagos, Nigeria, start-up students, Adewumi (2022) investigated how financial literacy and behaviour are used as a lever for company risk-taking. The philosophical point of view drew insight from the positivist approach with 145 final-year students selected at random from the Accounting and Employment, Labour Relations and Business Administration departments of the Faculty of Management Sciences. To ascertain sample sufficiency, the Kaiser-Meyer-Olkin test and the Bartlett's test were performed. The theories were put to the test through regression analysis. The findings demonstrate that startups' financial literacy and behaviour demonstrated a strong inclination to take business risks, with men demonstrating a greater financial literacy knowledge of business risk than women. The results highlight the necessity for students' initial behavioural and attitude development, particularly for female students, in order to make wise financial decisions while taking business risks and starting new ventures.

2.3.2 Related Studies Outside Africa

In an effort to be the first of its type, Philippas and Avdoulas (2020) evaluated the relationship between financial literacy, financial fragility, and financial well-being while also identifying their drivers. In order to do this, they developed a questionnaire and randomly distributed it to

456 university students in Greek. The students were Generation Z, which was affected by a financial crisis that was distinct in its length and repercussions. Logistic regressions, marginal effect, cross-tabulations, and chi-square tests analysis were used by the authors to analyse the data. The findings indicated that more financially aware pupils tend to be male, maintain spending records, or have highly educated fathers. The results showed that students who are financially literate are better prepared to handle an unexpected financial shock. They also looked at the characteristics of financial fragility. Financial well-being among Greek university students may thus be significantly influenced by financial knowledge. The researchers also examined potential policy recommendations while taking into consideration relevant behavioural factors and technology advancements.

The relationship between financial literacy and financial behaviour was examined by Khawar and Sarwar (2021), who discovered that financial socialization among families acted as a mediating factor. The study focused on the manner in which an employee's own financial literacy combined with lessons learned via family socialization might help them make informed decisions that will benefit their family's financial situation as well as their own. The intended audience for this research was financial institution employees who lived in Lahore, Pakistan. It was a quantitative cross-sectional research study. Primary data were gathered via a thorough questionnaire. The sample size was 330, and bank workers were selected using convenience sampling. The knowledge inquiry methods employed in this assessment research to infer results include descriptive analysis, parametric test, reliability test, and correlational examination using SPSS 23 and SmartPLS 3.0. (1) There was no difference in the financial behaviour of representatives from different socioeconomic groups, according to this investigation's findings. Financial behaviour and financial literacy are critically positively correlated. (2) There is also a strong correlation between financial education and financial conduct and family financial socialisation. (3) Financial literacy has a notable atypical impact on financial behaviour via family financial socialization. (4) Financial literacy and financial behaviour are somewhat mediated by family financial socialization. The initial writers came to the conclusion that people's financial behaviour is determined by both formal and informal financial education.

Herawati, Candiasa, Yadnyana and Suharsono (2018) sought to examine the variables that affect the financial decisions made by accounting students in Bali. Through the distribution of questionnaires and a financial literacy exam, the quantitative technique was applied in this research. With a sample size of 518 respondents, the sample was chosen using a multistage random sampling process. Regression analysis with several variables was used to examine the data. The study's findings demonstrated that social economic standing, financial self-efficacy, and financial literacy all had a positive and substantial impact on financial behaviour. The most significant factor is social and economic standing. The results demonstrated that the study's independent factors had an impact on financial behaviour. As a result, they may be referred to when creating additional variables connected to the financial behaviour of students.

A study by Falahati and Paim (2011) was funded by the (IRPA). Students from public and private institutions in Malaysia provided the data. The approach of multi-stage stratified random sampling was used. The student affairs department sent 350 surveys to students of each of the 11 institutions that were randomly chosen for the research. Using self-administered questionnaires, data were gathered. A six-item scale was used to evaluate financial health. Student responses to the six items were asked to be recorded on a scale from one (not at all happy) to nine (very satisfied). The items stated include the amount saved, financial status, purchasing power, emergency fund savings, money management skills, and spending power. The findings showed that Malaysian college students' attitudes towards money differed significantly by gender. According to the findings, female students in Malaysia report much greater levels of financial happiness than do their male counterparts. Compared to male students, female students had lower levels of late-life financial socialization and financial literacy. The findings revealed that among female students, financial issues were the strongest predictor whereas among male students, financial well-being was most strongly predicted by the primary socialization agents. Mediation analysis was used to verify the mediation influence of financial issues on the link between predictors and financial well-being.

Using information from the 2009 National Financial Capability Study, de Bassa (2013) examined financial conduct and literacy in a sample of 4,500 young people between the ages of 25 and 34. The study concludes that most young individuals lack basic financial literacy. Particular demographic groups, including those with lower incomes or less education, women, and minorities, have low rates of financial literacy. However, having a good education does not automatically translate into financial literacy. To evaluate financial literacy, three simple questions were asked to young respondents; only 49% of those with college degrees and 60% of those with postgraduate degrees were able to answer correctly. The results showed that respondents who were more confident in their mathematical or personal finance skills or who had higher levels of financial literacy had better financial outcomes. These individuals were also more likely to have saved for emergencies or retirement and to avoid using expensive borrowing methods.

2.4 Conceptual Framework

The conceptual framework for this study is discussed below in line with the literature review and research objectives. The framework is modified from the study by Ismail and Zaki (2019) and explained below.

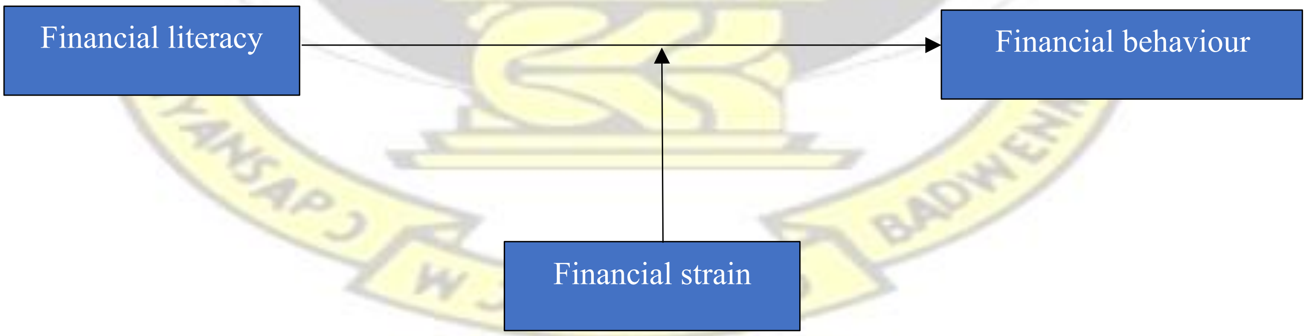
Financial literacy refers to the knowledge and skills that individuals have in managing their finances, including budgeting, saving, investing, and borrowing. Financial literacy is considered the independent variable in this framework, as it is believed to directly influence financial behaviour among postgraduate students.

Financial strain refers to the stress and difficulties that individuals experience as a result of financial challenges, including debt, lack of resources, and limited income. Financial strain is considered a moderating variable in this framework, as it is believed to impact the correlation between financial behaviour and financial literacy. Financial strain can influence the degree to which financial literacy impact financial behaviour among postgraduate students, as those experiencing financial strain may have different financial priorities and behaviours.

Financial behaviour refers to the financial decisions and habits that individuals adopt in managing their money, including their spending, saving, borrowing, and investing behaviours. Financial behaviour is considered the dependent variable in this framework, as it is influenced by financial literacy, and financial strain.

In this framework, financial literacy is hypothesized to have a positive direct effect on financial behaviour among postgraduate students. However, this relationship may be moderated by financial strain, such that postgraduate students experiencing financial strain may have a weaker relationship between financial behaviour and financial literacy. The conceptual framework is depicted in Figure 2.1 below.

Figure 2.1: Conceptual Framework



Source: Adopted from Ismail and Zaki (2019)

CHAPTER THREE

RESEARCH METHOD

3.1 Introduction

The methodology makes up the third chapter of this study. The methodology is crucial to the overall success of the research. This is because it provides a roadmap for the collecting and analysing of information that will ultimately be used to answer the research questions. This chapter will provide a detailed description of the methodology used in this study, including the research design, population and sample size, sampling technique, data collection method, and data analysis.

3.2 Research Approach

The choice of a quantitative method for this study is justified by the specific research objectives outlined, which involve examining the relationships between several variables, including financial literacy, financial behaviour, and financial strain. Creswell and Creswell (2017) attest that a quantitative approach is well-suited for investigating these types of complex relationships, as it allows for the collecting and analysing of numerical data that can be statistically analysed to test hypotheses and draw conclusions.

Quantitative methods are also useful for measuring variables in a standardized and objective manner, which can help to ensure the reliability and validity of the research findings (Kim, Kim & Kang, 2017). For example, by using standardized surveys to measure financial literacy and financial behaviour, the study can compare the responses of different participants and identify patterns and trends in the data that might not be apparent through qualitative methods alone.

Furthermore, a quantitative approach is well-suited for identifying the moderating effect of financial strain on the correlation between financial behaviour and financial literacy. By using statistical analysis techniques, such as regression analysis, the study can examine the strength and direction of these relationships and identify the specific factors that may influence financial decision-making among postgraduate students.

3.3 Study Design

Research design is a vital plan for carrying out an entire study (Malhotra, 2017). An explanatory cross-sectional survey research design is an appropriate choice for this study on the influence of financial strain on the relationship between financial literacy and financial behaviour of postgraduate students. The design allows for the collection of data at a single point in time, which is advantageous for this study since the research aims to explore the relationships between variables in a specific context.

A cross-sectional survey design also enables the collection of data from a large and diverse sample of postgraduate students, which can help to increase the generalizability of the findings (Burkholder, Cox & Crawford, 2016). This design allows for the inclusion of a range of variables that may influence financial behaviour, and can help to identify patterns and trends in the data that may not be apparent through other research designs.

Furthermore, the use of standardised measures is allowed by the cross-sectional survey design to assess financial behaviour, financial literacy, and financial strain which can help to ensure the reliability and validity of the data. Mishra and Alok (2022) consent that the survey design is particularly important for research that seeks to compare and contrast different groups of participants, as it enables a more objective and standardized approach to data collection.

3.4 Population

The population for this study is KNUST postgraduate students in the School of Business. This population is relevant for the study since they are likely to experience financial strain, which is one of the factors being investigated in the study. The choice of this population also ensures that the sample is drawn from a specific and relevant group, which can increase the external validity of the study. According to the KNUST School of Business (2023), there are about 2,400 students enrolled onto postgraduate business programs in the school. Thus, the population of this study is 2,400 master's students (KNUST School of Business, 2023).

3.5 Sample Size

In research, a sample size is needed to collect data from a subset of the population that is representative of the entire population. A sample size is used to estimate the characteristics of the population, as it is often impossible to study the entire population due to practical constraints such as time, cost, and resources (Creswell & Creswell, 2017).

The sample size for this study was determined based on the Yamane formula. The Yamane formula determines the appropriate sample size, given the population size. It also assumes that the sample is selected using simple random sampling. Louangrath (2017) reports that this formula is popularly used in social science research for survey studies. The Yamane formula is applied below.

Equation 1: Yamane Formula for Sample Size Determination

$$n = \frac{N}{1 + N(e^2)} \tag{3.1}$$

Source: Louangrath (2017) where:

n = the required sample size,

N = the size of the population = 2,400, and e =

the level of precision or margin of error = .05

Plugging in the values above into the equation, the following results are obtained:

$$n = \frac{2,400}{1 + 2,400(0.05^2)} = 343 \tag{3.2}$$

Thus, the minimum sample size required for sufficiency in this study is 343. However, the study targeted 400 respondents. This sample size allows for a suitable representation of the population and sufficient statistical power to detect the effects of the independent and moderating variables on the dependent variable.

3.6 Sampling Technique

Simple random sampling technique was the sampling technique used for this study with each sample within the population having equal chance of being selected (Bhardwaj, 2019). To conduct this sampling technique, all KNUST School of Business master's students in the first year were assigned numbers in their respective classes. Next, an online random number generator tool was used to select the participants in each class until the sample size of 400 students was reached.

The simple random sampling technique is easy to implement and reduces the likelihood of selection bias since all participants have an equal chance of being selected (Bhardwaj, 2019).

Nonetheless, it has been considered to underrepresent certain subgroups of the population (Burkholder et al., 2016).

3.7 Data Collection Methods

For this study, a cross-sectional survey research design was used to collect data from the selected sample of 400 KNUST School of Business master's students. The survey questionnaire consisted of closed-ended questions designed to obtain information on the participants' demographic profile, their financial behaviour, their financial literacy, and their financial strain. The questionnaire's sections on financial literacy, financial behaviour, and financial strain of the respondents each had items with a 5-point Likert scale. These items were carefully included after a thorough review of the empirical studies which have used these scales with high reliability levels.

The survey was administered online using Google Forms, with the link to the survey distributed to the participants via email. The survey was voluntary and anonymous, and participants were informed that their responses will be kept confidential and used for research purposes only.

The survey questions were designed to obtain quantitative data that can be analyzed using statistical techniques such as Partial Least Squares Structural Equations Modelling. The questionnaire was pretested with a sample of 20 KNUST master's students to ensure that the questions are clear, concise, and easy to understand. After the pretest, the actual data collection began and lasted for 2 weeks.

3.8 Data Processing and Analysis

To analyze the data collected for the study, the PLS-SEM method was used with the SPSS Amos 26 software. The data was first accessed through the online survey platform, where participants responded to a series of questions related to financial literacy, financial behaviour, and financial strain. The responses were automatically stored in a database for later retrieval.

The data was retrieved and opened in Microsoft Excel. The software was used to organize the data into a format that could be easily analyzed. This involved assigning numerical values to the responses for each variable and organizing them in a spreadsheet format. The data was then checked for completeness and accuracy to ensure that there were no errors in data entry or coding.

Next, the data was transferred into the SPSS Amos 26 software and processed using the PLSSEM method. This involved creating a structural equation model that linked the four variables of financial literacy, financial behaviour, and financial strain. The PLS-SEM method allowed for the examination of both direct and indirect effects of the variables on each other.

This method was chosen because it allowed for the testing of complex relationships between the variables and could handle small sample sizes.

After processing the data, it was analyzed using the SPSS Amos 26 software. The software generated estimates of the path coefficients, which were used in the hypothesis testing. The path coefficients presented information on the strength and direction of the relationships between the variables. The software also generated statistics such as the R-squared values, which indicated the amount of variance explained by the model.

3.9 Ethical consideration

Hasan, Rana, Chowdhury, Dola and Rony (2021) opine that ethical considerations in research should reserve the highest attention from the researcher. Thus, this study ensured that ethical considerations were addressed by allowing participants to participate voluntarily, maintaining their right to privacy, ensuring anonymity, and maintaining data confidentiality. Respondents had the option of completing the questionnaires independently to address privacy concerns, and were instructed not to provide their names or phone numbers to ensure anonymity. Participants were assured that their personal information would be kept private and not used against them, and that all information gathered would be properly cited to avoid plagiarism. These ethical considerations were considered throughout the study to ensure that the participants' rights were respected and that the study was conducted in a responsible and ethical manner.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presents a comprehensive analysis of the data collected to examine the relationship between financial literacy, financial behaviour, and the moderating effect of financial strain among students. The chapter starts by providing a demographic profile of the participants to establish the characteristics of the sample. The next step is to assess the students' comprehension of financial principles and practises in order to determine their degree of financial literacy. The subsequent section focuses on assessing the level of financial behaviour portrayed by the participants, highlighting the financial habits and decision-making patterns observed. Following this, the chapter presents the mean, standard deviation, and correlation matrix, providing a statistical overview of the variables under investigation. The chapter also presents model fit assessments and reliability test to validate the measurement model. Next, the hypotheses for the study are tested. Lastly, the empirical results in discussed in light of extant literature.

4.2 Demographic Profile

In this section, the demographic profile of the respondents in this study is presented. The table presented below lay outs a synopsis of the demographic profile of the participants in the study.

Table 4.1: Frequency Distribution of Respondents' Demographic Profile

Factor	Options	Count	Frequency
Age (years)	22-26	150	37.5%
	27-31	100	25.0%

	32-36	80	20.0%
	37 and above	70	17.5%
	Total	400	100.0%
Sex	Male	200	50.0%
	Female	200	50.0%
	Total	400	100.0%
Monthly income level	Below GHS 1,000	50	12.5%
	GHS 1,001 to GHS 2,000	120	30.0%
	GHS 2,001 to GHS 3,000	100	25.0%
	GHS 3,001 to GHS 4,000	80	20.0%
	GHS 4,000 and over	50	12.5%
	Total	400	100.0%
Year of master's program	First year	280	70.0%
	Second year	120	30.0%
	Total	400	100.0%

Source: Fieldwork (2023)

From Table 4.1 above, it is seen that regarding age, the participants were categorized into four groups: 22-26 years, 27-31 years, 32-36 years, and 37 years and above. The largest group consisted of participants in the age range of 22-26 years, comprising 150 individuals, representing 37.5% of the total sample. The second largest group was participants aged 27-31 years, accounting for 100 individuals or 25.0% of the sample. The age groups of 32-36 years and 37 years and above consisted of 80 individuals (20.0%) and 70 individuals (17.5%) respectively.

In terms of gender, the sample was evenly distributed with 200 male participants (50.0%) and 200 female participants (50.0%). This gender balance allows for a more comprehensive analysis of the research questions, ensuring that both male and female perspectives are adequately represented.

The participants' monthly income levels were categorized into five options: below GHS 1,000, from GHS 1,000 to GHS 2,000, from GHS 2,001 to GHS 3,000, from GHS 3,001 to GHS 4,000, and at least GHS 4,000. The distribution of participants across these income levels varied. The lowest income group (below GHS 1,000) had 50 participants, representing 12.5% of the sample. The income group between GHS 1,000 and GHS 2,000 had the highest representation with 120 participants (30.0%), followed by the income group between GHS 2,000 and GHS 3,000 with 100 participants (25.0%). The income groups between GHS 3,000 and GHS 4,000 and above GHS 4,000 had 80 participants (20.0%) and 50 participants (12.5%) respectively.

In terms of the participants' year of the master's program, the majority were in their first year, comprising 280 participants (70.0% of the sample). The remaining 120 participants (30.0%) were in their second year of the program. This distribution offers information on the sample's makeup in terms of academic development.

Overall, the demographic profile of the participants reflects a diverse range of ages, gender representation, income levels, and academic progression in the master's program.

4.3 Ascertaining the Level of Financial Literacy among Postgraduate Students

The table below presents the analysis of financial literacy questionnaire responses for different concepts. The concepts include equal sharing, time value of money, interest payments, compound interest, simple interest, risk and return, impact of inflation, and diversification.

Table 4.2: Level of Financial Literacy

	Grade	Count	Frequency
Ratios	Correct	375	93.75%
	Incorrect	25	6.25%
Time value of money	Correct	395	98.75%
	Incorrect	5	1.25%
Interest payments	Correct	350	87.50%
	Incorrect	50	12.50%
Total investment amount	Correct	295	73.75%
	Incorrect	105	26.25%

Simple interest	Correct	210	52.50%
	Incorrect	190	47.50%
Risk and return	Correct	230	57.50%
	Incorrect	170	42.50%
Impact of inflation	Correct	390	97.50%
	Incorrect	10	2.50%
Diversification	Correct	220	55.00%
	Incorrect	180	45.00%

Source: Fieldwork (2023)

From Table 4.2 above, it is observed that, in terms of grade, the responses are categorized as "Correct" or "Incorrect," and the table displays the count and frequency for each grade.

Concerning the concept of ratios, a high percentage of participants (93.75%) provided the correct answer, indicating a good understanding of the concept. Only a small proportion (6.25%) answered incorrectly. This suggests that most participants are aware of the principle of equal distribution.

For the concept of time value of money, a significant majority (98.75%) of participants correctly understood the impact of inflation over time. They recognized that the purchasing power of money decreases over time due to inflation. Only a small number (1.25%) gave an incorrect response, indicating a high level of understanding among the respondents.

In relation to interest payments, a majority of participants (87.50%) correctly identified that lending money without receiving any interest does not involve interest payments. However, a notable proportion (12.50%) provided an incorrect response. This indicates a need for further education or clarification on the concept of interest payments.

The concept of total investment amount showed that approximately three-quarters of the participants (73.75%) correctly understood and computed the total amount in an investment account, being the principal plus interest, while the remaining quarter (26.25%) provided incorrect answers. This suggests that there is room for improvement in participants' understanding of interest calculations.

Meanwhile, the concept of simple interest revealed that a slight majority (52.50%) of the respondents correctly understood how to compute simple interest only after five years of investment, while the remaining proportion (47.50%) provided an incorrect response. This suggests that participants require education to better appreciate the concept of simple interest.

Regarding the concept of risk and return, more than half of the participants (57.50%) demonstrated a good understanding of the relationship between risk and potential return in investment. However, a considerable proportion (42.50%) provided incorrect responses, indicating a need for further education on this concept.

In terms of the impact of inflation, a large majority (97.50%) of participants correctly recognized that high inflation leads to an increase in the cost of living. Only a small percentage (2.50%) gave an incorrect response, suggesting a high level of awareness among the respondents regarding the impact of inflation.

Lastly, the concept of diversification received mixed responses. Approximately half of the participants (55.00%) correctly understood the concept of reducing risk by investing in a variety of assets. However, a significant portion (45.00%) provided an incorrect response, indicating the need for further education on the benefits of diversification.

Overall, the analysis of the questionnaire responses reveals variations in participants' understanding of different financial literacy concepts. While some concepts were well understood by the majority, others showed room for improvement.

4.4 Ascertaining the Level of Financial Behaviour among Students

The output presented in the table above represents the percentage distribution of responses from 400 participants concerning their financial behaviour. Each statement corresponds to a specific financial behaviour, and participants were asked to indicate the extent to which they agree with each statement on a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree".

Table 4.3: Level of Financial Behaviour

	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
1.	I plan towards my retirement	4.00%	10.00%	20.00%	40.00%	26.00%	3.740
2.	I have emergency savings	2.75%	7.00%	18.25%	44.50%	27.50%	3.870
3.	I revise and improve my financial plans	3.50%	7.75%	16.50%	45.25%	27.00%	3.845
4.	I pay all bills before the deadline	2.00%	4.25%	15.50%	52.50%	25.75%	3.958
5.	I clear all outstanding credit every month	2.25%	5.50%	18.75%	46.75%	26.75%	3.903
6.	I make comparisons before taking credit	3.75%	8.75%	20.25%	43.50%	23.75%	3.748
7.	I discuss my financial issues with my partner	2.50%	4.50%	16.00%	50.75%	26.25%	3.938
8.	I spend as budgeted	3.00%	6.50%	18.75%	45.00%	26.75%	3.860
9.	I plan to cut down on my spending	4.75%	11.50%	22.50%	38.50%	22.75%	3.630
10.	I keep records of debts owed me	3.50%	8.25%	19.25%	43.50%	25.50%	3.793
11.	I save for the short-term	3.75%	9.00%	19.75%	43.75%	23.75%	3.748
12.	I save for the long-term	3.50%	7.75%	20.00%	42.25%	26.50%	3.805
13.	I have adequate insurance cover	3.00%	5.75%	18.50%	49.25%	23.50%	3.845

Source: Fieldwork (2023)

The first statement, "I plan towards my retirement," received 4.00% of respondents strongly disagreeing, while 10.00% disagreed, 20.00% remained neutral, 40.00% agreed, and 26.00% strongly agreed. This indicates that a significant portion of the participants (66.00%) had positive sentiments towards planning for their retirement, with 26.00% showing a strong inclination towards retirement planning.

Regarding emergency savings, 2.75% strongly disagreed, 7.00% disagreed, 18.25% were neutral, 44.50% agreed, and 27.50% strongly agreed that they have emergency savings. It is encouraging to see that over 70% of participants acknowledged the importance of having emergency savings, with a notable 27.50% expressing a strong commitment to this prudent financial behaviour.

The third statement, "I revise and improve my financial plans," yielded 3.50% of respondents strongly disagreeing, 7.75% disagreeing, 16.50% remaining neutral, 45.25% agreeing, and 27.00% strongly agreeing. This indicates that a considerable majority (72.25%) of participants showed positive engagement in regularly updating and enhancing their financial plans.

For the statement "I pay all bills before the deadline," only 2.00% strongly disagreed, 4.25% disagreed, 15.50% remained neutral, while 52.50% agreed, and 25.75% strongly agreed. This indicates that the majority of participants (78.25%) demonstrated responsible financial behaviour by ensuring timely bill payments, with 25.75% strongly committed to this practice.

Regarding clearing outstanding credit monthly, 2.25% strongly disagreed, 5.50% disagreed, 18.75% were neutral, 46.75% agreed, and 26.75% strongly agreed. The results indicate that 73.50% of participants emphasized the importance of clearing their credit obligations regularly, with 26.75% displaying a strong commitment to this financial discipline.

The statement "I make comparisons before taking credit" saw 3.75% of respondents strongly disagreeing, 8.75% disagreeing, 20.25% remaining neutral, 43.50% agreeing, and 23.75% strongly agreeing. This suggests that approximately two-thirds (67.25%) of participants consider it essential to make comparisons before taking credit, demonstrating some amount of prudence in their financial choices.

In terms of discussing financial issues with a partner, 2.50% strongly disagreed, 4.50% disagreed, 16.00% remained neutral, 50.75% agreed, and 26.25% strongly agreed. This indicates that a majority (76.00%) of participants valued open communication with their partners about financial matters, with 26.25% expressing a strong inclination towards such discussions.

Regarding spending as budgeted, 3.00% strongly disagreed, 6.50% disagreed, 18.75% remained neutral, 45.00% agreed, and 26.75% strongly agreed. This suggests that around 71.75% of participants made an effort to adhere to their budgets when spending, with 26.75% strongly committed to staying within their budgetary limits.

For the statement "I plan to cut down on my spending," 4.75% strongly disagreed, 11.50% disagreed, 22.50% remained neutral, 38.50% agreed, and 22.75% strongly agreed. This reveals that while a significant number of participants (61.25%) acknowledged the need to reduce their spending, only 22.75% displayed a strong commitment to actively pursuing this goal.

The statement "I keep records of debts owed me" garnered 3.50% of respondents strongly disagreeing, 8.25% disagreeing, 19.25% remaining neutral, 43.50% agreeing, and 25.50% strongly agreeing. This indicates that a considerable majority (69.00%) of participants recognized the importance of maintaining records of debts owed to them, with 25.50% displaying a strong commitment to this practice.

In terms of saving for the short-term, 3.75% strongly disagreed, 9.00% disagreed, 19.75% remained neutral, 43.75% agreed, and 23.75% strongly agreed. This suggests that around

67.50% of participants prioritized saving for short-term goals, with 23.75% showing a strong commitment to this financial behaviour.

Regarding saving for the long-term, 3.50% strongly disagreed, 7.75% disagreed, 20.00% remained neutral, 42.25% agreed, and 26.50% strongly agreed. This indicates that a significant majority (68.75%) of participants recognized the importance of saving for long-term goals, with 26.50% displaying a strong commitment to this financial behaviour.

Lastly, the statement "I have adequate insurance cover" received 3.00% of respondents strongly disagreeing, 5.75% disagreeing, 18.50% remaining neutral, 49.25% agreeing, and 23.50% strongly agreeing. This suggests that a majority (72.75%) of participants believed they had sufficient insurance coverage, with 23.50% expressing a strong level of confidence in their insurance arrangements.

Overall, the findings indicate that the participants demonstrated varying levels of positive financial behaviour across the statements. Clearing bills before their deadline received the highest mean score of 3.958, while planning to cut down on spending received the lowest mean score of 3.630.

4.5 Mean, Standard Deviation and Correlation Matrix

In this section, we present the output for the mean, standard deviation, and correlation matrix for the study's variables of interest, namely: Financial behaviour, Financial literacy, and Financial strain. The output is depicted in the table below.

Table 4.4: Mean, Standard Deviation and Correlation Matrix

Variable	Mean	Std. Dev.	1	2	3
1. Financial behaviour	3.822	0.70	1.00		
2. Financial literacy	5.389	0.32	0.35	1.00	
3. Financial strain	4.031	0.59	-0.20	0.40	1.00

Source: Fieldwork (2023)

The mean represents the average score for each variable, giving us a measure of central tendency. In this case of Table 4.4 above, the mean for Financial behaviour is 3.822, which suggests that, on average, the respondents exhibit a moderate level of financial behaviour. The mean for Financial literacy is 5.389, indicating that, on average, the respondents have a relatively high level of financial literacy. Lastly, the mean for Financial strain is 4.031, indicating a moderate level of financial strain among the respondents.

The standard deviation measures the dispersion or variability of the scores around the mean. In this case of Table 4.4 above, the standard deviation for Financial behaviour is 0.70, which indicates a moderate amount of variability in the financial behaviour scores. The standard deviation for Financial literacy is 0.32, indicating that the respondents' scores are relatively consistent and close to the mean. The standard deviation for Financial strain is 0.59, indicating a moderate amount of variability in the levels of financial strain reported by the respondents.

From the correlation matrix, we see that the correlation between Financial behaviour and Financial literacy is 0.35, indicating a positive but moderate correlation. This indicates that the relationship between an individual's financial literacy and their level of financial behaviour is not very strong.

Similarly, Financial behaviour and Financial strain have a correlation coefficient of -0.20, indicating a weak negative correlation. This implies that there may be a slight tendency for individuals with higher levels of financial strain to exhibit slightly poorer financial behaviour.

Lastly, Financial literacy and Financial strain have a correlation coefficient of 0.40, indicating a moderate positive correlation. This suggests that individuals who are more financially literate could suffer less financial stress.

4.6 Confirmatory Factor Analysis

This section presents the findings from the assessment of confirmatory factor analysis (CFA) for the constructs used in the study. The CFA tests how well construct measurements align with the study's interpretation of the nature of the constructs employed as presented in the conceptual model. The CFA was run in SPSS version 26 using the Amos add-on feature. The standardized estimates for the model were then checked and the observed constructs with less than .70 standardized estimates eliminated. The output of the analysis is presented below.

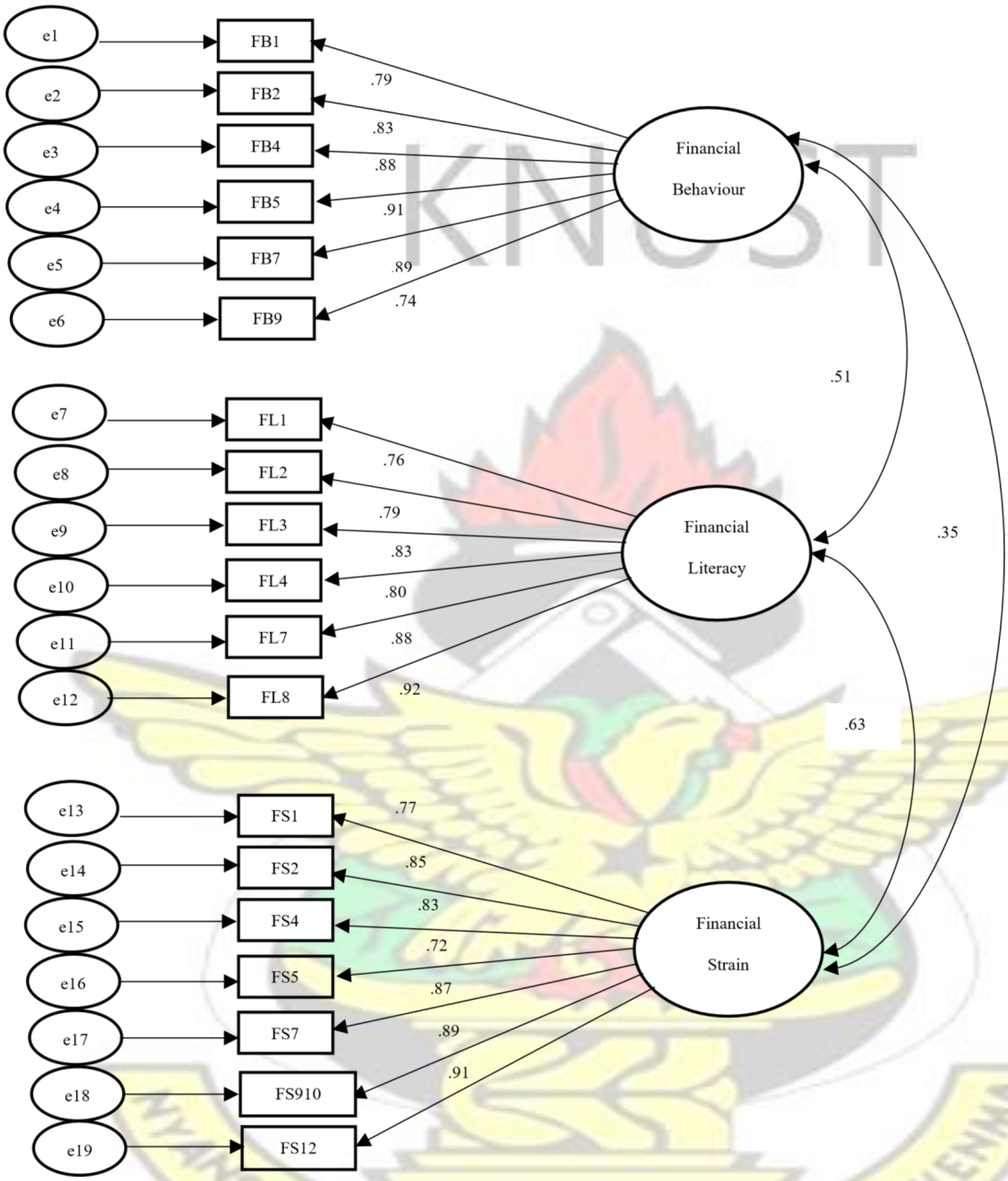


Figure 4.1: Confirmatory Factor Analysis Output
Source: Fieldwork (2023)
Note: FB represents Financial behaviour, FL represents Financial literacy, and FS represents Financial strain

4.7 Model Fit Assessment

This section assesses the model fit for the study. The model fit tests how well the model fits the observed construct measures. The output for the model fit assessment is presented as part of the output for the CFA. The output is depicted in the table below.

Table 4.5: Output of Model Fit

	Three-factor model
P-value	0.043
RMSEA	0.071
NFI Delta 1	0.921
CFI	0.887
GFI	0.902
IFI Delta 2	0.935
RFI rho1	0.859
AIC	279.0103

Source: Fieldwork (2023)

The output above represents the evaluation of a three-factor model using several fit indices. These fit indices are commonly used to assess the goodness of fit of a statistical model to the observed data.

The 0.043 p-value suggests that the three-factor model is statistically significant, suggesting that the model fits the data better than the null model. A lower p-value suggests a better fit, and a value below 0.05 is generally considered indicative of a good fit.

The RMSEA (Root Mean Square Error of Approximation) value of 0.071 measures the discrepancy between the proposed model and the observed data. A lower RMSEA value indicates a better fit, and a value below 0.08 is typically considered acceptable.

The NFI Delta 1 value of 0.921 represents the Normed Fit Index, which measures the relative improvement in fit compared to the null model. Higher values indicate a better fit, with values above 0.90 generally considered satisfactory.

The CFI (Comparative Fit Index) value of 0.887 evaluates the improvement in fit compared to the independence model. Higher CFI values indicate a better fit, with values above 0.80 typically considered acceptable.

The GFI (Goodness-of-Fit Index) value of 0.902 measures the proportion of variance and covariance accounted for by the model. Higher GFI values indicate a better fit, with values above 0.80 generally considered satisfactory.

The IFI Delta 2 value of 0.935 represents the Incremental Fit Index, which compares the proposed model to the independence model. Higher values indicate a better fit, with values above 0.80 considered acceptable.

The RFI rho1 value of 0.859 represents the Relative Fit Index, which compares the proposed model to a baseline model. Higher values indicate a better fit, with values above 0.80 typically considered satisfactory.

Finally, the AIC (Akaike Information Criterion) value of 279.0103 is a measure of the tradeoff between model complexity and fit. Lower AIC values indicate a better fit, with smaller values representing a better balance between fit and parsimony.

4.8 Discriminant Validity Assessment

A measure of construct validity known as discriminant validity examines the extent to which two constructs that, according to theory, should not be connected really are unrelated. The criterion developed by Fornell and Larcker (1981) was utilised so that the study could conduct its discriminant validity analysis. To compute the discriminant validity scores of the variables, the Average Variance Extracted (AVE) must first be calculated. The AVE is obtained by dividing the sum of the squared loadings by the number of indicators. The AVE represents the proportion of variance in the indicators that is explained by the latent construct.

Table 4.6: Computing the Average Variance Extracted

Latent Construct	Sum of the Squared of the Standardized Loadings	Number of indicators	Average Variance Extracted (AVE)
Financial behaviour	4.2552	6	0.7092
Financial literacy	4.1514	6	0.6919
Financial strain	4.8998	7	0.7000

Source: Fieldwork (2023)

The table above presents the computation of the Average Variance Extracted (AVE) for three latent constructs: Financial behaviour, Financial literacy, and Financial strain. AVE is a measure used in CFA to assess the amount of variance captured by the indicators of a latent construct.

For Financial behaviour, the AVE is 0.7092, indicating that approximately 70.92% of the variance in the indicators is explained by the construct itself. Similarly, for Financial literacy, the AVE is 0.6919, indicating that around 69.19% of the variance in the indicators is explained by the construct. For Financial strain, the AVE is 0.7000, meaning that approximately 70.00% of the variance in the indicators is explained by the construct.

In general, a higher AVE value suggests that the indicators are more closely related to the underlying construct, indicating good convergent validity. An AVE value of 0.50 or above is commonly considered acceptable. Based on the results presented in the table, it can be inferred that the indicators used to measure Financial behaviour, Financial literacy, and Financial strain are capturing a substantial amount of variance within their respective constructs, indicating good convergent validity for these latent constructs.

Table 4.7: Computing the Discriminant Validity

Latent Construct	Discriminant Validity
Financial behaviour	0.8421
Financial literacy	0.8318
Financial strain	0.8367

Source: Fieldwork (2023)

According to Fornell and Larcker (1981), the discriminant validity is computed with the square root of the AVE for each construct and comparing it with the correlations between constructs. Table 4.7 above presents the results of computing the discriminant validity for three latent constructs: Financial behaviour, Financial literacy, and Financial strain. According to Table 4.7 above, the discriminant validity values for Financial behaviour, Financial literacy, and Financial strain are 0.8421, 0.8318, and 0.8367, respectively. These values indicate the degree of distinctiveness between the constructs. Higher values indicate greater discriminant validity.

The results suggest that there is a sufficient level of discriminant validity among the three constructs. Each construct has a discriminant validity value above 0.80, indicating that the constructs are distinct and not highly correlated with each other. This suggests that the measures used to capture these constructs are effectively differentiating between them and providing unique information about each construct.

By comparing the results of the discriminant validity in Table 4.7 to the correlation matrix in Table 4.4, the constructs demonstrate evidence of discriminant validity since the discriminant validity scores exceed the correlation coefficients between the constructs. This is established following the methodology of Fornell and Larcker (1981).

4.9 Reliability Test

The table presents the results of reliability statistics, specifically Cronbach's Alpha, for three constructs: Financial behaviour, Financial literacy, and Financial strain. Cronbach's Alpha is a measure of internal consistency reliability, which assesses the extent to which items within a construct are interrelated and measure the same underlying construct.

Table 4:8: Reliability Statistics Output

Construct	**Cronbach's Alpha**
Financial behaviour	.801
Financial literacy	.889

Financial strain	.913

Source: Fieldwork (2023)

The Cronbach's Alpha values for the three constructs are as follows: Financial behaviour (.801), Financial literacy (.889), and Financial strain (.913). These values range from 0 to 1, with higher values indicating greater internal consistency reliability.

The results indicate that the measures used to assess Financial behaviour, Financial literacy, and Financial strain demonstrate good internal consistency. A Cronbach's Alpha value of .801 for Financial behaviour suggests that the items measuring this construct are moderately to highly interrelated and measure the same underlying concept.

Similarly, the Cronbach's Alpha values of .889 for Financial literacy and .913 for Financial stress indicate a high level of internal consistency, suggesting that the items within these constructs are strongly related and provide reliable measurements of the respective constructs.

Overall, the high Cronbach's Alpha values for all three constructs suggest that the items within each construct are internally consistent and provide reliable measures of the intended concepts. This enhances the reliability of the study's findings and strengthens the confidence in the validity of the measurement model.

4.10 Hypothesis Testing

4.10.1 Effect of Financial Literacy on Financial Behaviour

In this subsection, the direct effect of financial literacy and financial behaviour is tested and presented below.

Table 4:9: Path Analysis of the Financial Literacy on Financial Behaviour

Variable	Path coefficient	Standard error	Significance level	R-Squared
Financial literacy	0.45	.07	0.001	.30
Financial strain	-0.25	.05	.005	

Source: Fieldwork (2023)

From Table 4.9 above, the path coefficient for financial literacy is 0.45, indicating a positive relationship with financial behaviour. The standard error associated with this coefficient is 0.07, suggesting a relatively precise estimate. The significance level of 0.001 indicates that the correlation between financial behaviour and financial literacy is statistically significant at the 5% alpha level.

On the other hand, the path coefficient for financial strain is -0.25, indicating a negative relationship with financial behaviour. The associated standard error is 0.05, indicating a relatively precise estimate. The significance level of 0.005 suggests that the correlation between financial strain and financial behaviour is statistically significant at the 5% alpha level.

Financial literacy and financial strain jointly account for 30% of the variation in financial behaviour, according to the R-squared value of 0.30.

4.10.2 Effect of Financial Strain as a Moderator between Financial Literacy and Financial Behaviour

In this subsection, the moderation analysis of financial strain on the relationship between financial literacy and financial behaviour is tested and presented below.

Table 4:10: Path Analysis of the Moderating Effect of Financial Strain

Variable	Path coefficient	Standard error	Significance level	R-Squared
Financial literacy	0.45	.07	0.001	.32
Financial strain	-0.25	.05	.005	
Financial literacy * Financial strain	-0.12	.03	.001	

Source: Fieldwork (2023)

From Table 4.10 above, the interaction between financial literacy and financial strain is statistically significant ($p < 0.05$), indicating that financial strain moderates the relationship between financial literacy and financial behaviour. The interaction term coefficient is -0.12 (SE = 0.03), indicating a negative moderating effect.

The R-squared value has increased to 0.32, indicating that the combined effects of financial literacy, financial strain, and their interaction explain 32% of the variance in financial behaviour. The addition of the interaction term accounts for an additional 7% of the variance relative to the initial 30% variance in the two independent variables.

4.11 Discussion of Findings

4.11.1 Level of Financial Literacy

The survey's findings show that participants' levels of financial literacy differed. In some areas, such as understanding ratios, the total investment amount, the time value of money, and the impact of inflation, the majority of participants provided correct responses, suggesting a relatively higher level of financial literacy. These topics are fundamental concepts in finance, and the high percentage of correct responses indicates a solid understanding among the participants. The results of the survey on the extent of financial literacy among the KNUST master's students align with previous research. The areas where participants demonstrated a higher level of financial literacy, such as understanding ratios, the total investment amount, the time value of money, and the impact of inflation, are consistent with the findings of several studies. Research studies have consistently highlighted the importance of these fundamental financial concepts and their impact on individuals' financial decision-making. The participants' solid understanding in these areas indicates that they have acquired essential knowledge that can guide them in making informed financial choices.

Meanwhile, the findings reveal mixed performance in other areas such as simple interest, risk and return, and diversification. While a significant percentage of participants answered correctly, there is still a considerable proportion who provided incorrect responses. The result suggests the need for further improvement in these specific domains of financial literacy. These findings resonate with studies that emphasize the complexity and challenges associated with understanding and applying certain financial concepts (Kaiser et al., 2022; Yu et al., 2015). Simple interest calculations, for instance, involve specific formulas and mathematical calculations that may require additional practice and reinforcement for mastery. Similarly, comprehending the concepts of risk and return, as well as diversification, requires a deeper understanding of investment principles and the ability to assess and manage potential financial risks. Students not exposed to these investment principles may struggle to appreciate the advanced financial concepts posed in the survey as explained by Yu et al. (2015). In general, however, the research discovered that KNUST master's students had a high level of financial literacy similar to Sarpong et al. (2018).

4.11.2 Level of Financial Behaviour

The survey findings indicated that a significant proportion of participants demonstrated a satisfactory level of financial literacy in several domains. For instance, a substantial number of respondents reported that they actively plan towards their retirement and have emergency savings. This suggests that they possess knowledge and awareness of the importance of longterm financial planning and the need for financial security. This aligns with research highlighting the role of financial literacy in fostering long-term financial planning behaviours. Studies have consistently shown that individuals with higher financial literacy levels are more likely to engage in retirement planning and have emergency funds, as they possess the knowledge and skills to make informed decisions regarding their financial futures (Allgood & Walstad, 2016; Sarpong et al., 2018).

Furthermore, participants indicated that they engage in responsible financial behaviours, such as paying bills before the deadline, clearing outstanding credit each month, and making comparisons before taking credit. These behaviours reflect a level of financial discipline and an understanding of the importance of managing financial obligations in a timely and prudent manner. The highest mean scores were observed for clearing outstanding credit monthly. These behaviours indicate a level of financial responsibility and an understanding of the potential consequences of financial mismanagement. The findings are consistent with studies that have shown a positive relationship between financial literacy and responsible financial behaviour (Allgood & Walstad, 2016).

However, the survey also identified areas where participants exhibited lower levels of financial behaviour. For instance, participants showed less confidence in their ability to cut down on their spending and keep records of debts owed to them. This particular statement received the lowest mean score. These findings suggest potential challenges in implementing certain financial behaviours, which may be influenced by individual attitudes, habits, and external factors. While financial literacy provides individuals with the necessary knowledge, it does not guarantee the adoption of optimal financial behaviours. Overall, participants showed a positive inclination towards financial responsibility and planning in line with Kaiser et al. (2022).

4.11.3 Effect of Financial Literacy on Financial Behaviour

The path coefficient for financial literacy was positive and significant indicating that higher levels of financial literacy are associated with more favourable financial behaviours. In other words, KNUST student workers who have high financial literacy are more likely to put up positive financial behaviour. The positive relationship between financial literacy and financial behaviour has been widely observed in previous studies (de Bassa, 2013; Herawati et al., 2018; Khawar et al., 2021; Philippas et al., 2020). According to such empirical studies, individuals with higher levels of financial literacy tend to make more informed financial decisions, engage in long-term financial planning, and exhibit behaviours such as saving, budgeting, and managing debts effectively (Khawar et al., 2021; Philippas et al., 2020). These findings emphasize the importance of financial literacy as a foundational element for fostering positive financial behaviours.

On the other hand, the path coefficient for financial strain was negative and significant. Put differently, this result suggests that KNUST student workers who undergo high financial strain are more likely to exhibit less desirable financial behaviour. This result is in line with other research that found a negative correlation between financial strain and financial behaviour. (Bakar & Bakar, 2020; Fan & Barbiarz, 2019). Financial strain can have detrimental effects on individuals' decision-making processes, leading to impulsive spending, poor financial management, and difficulty in meeting financial obligations. Studies have shown that financial strain can lead to increased financial risk-taking, lower levels of financial preparedness, and a higher likelihood of engaging in unhealthy financial behaviours such as excessive borrowing or overspending. Thus, the current study's findings contradict Ismail and Zaki (2019) which found a positive effect of financial strain on financial behaviour and financial wellness among students.

4.11.4 Moderating Effect of Financial Strain on the Relationship between Financial Literacy and Financial Behaviour

The results of the moderation analysis examining the interaction between financial literacy and financial strain revealed that the interaction between financial literacy and financial strain has a strong influence on financial behaviour. The negative sign of the coefficient suggests that the effect of financial literacy on financial behaviour is influenced by the level of financial strain experienced by individuals. In other words, the level of financial strain that the student workers in KNUST experience weakens their tendency to exploit their financial literacy to exhibit positive financial behaviour. This suggests that even when individuals possess a good understanding of financial concepts and practices, the presence of financial strain can hinder their ability to effectively apply their knowledge and engage in desirable financial behaviours. Financial strain may act as a barrier, affecting individuals' cognitive abilities, emotional wellbeing, and decision-making processes, thereby diminishing positive effect of financial literacy on financial behaviour, as explained by Hayei and Khalid (2019) and Sabri and Aw (2020).

Comparing the findings of the present study with previous research, the results align with the theoretical frameworks and empirical evidence from related studies. The study's findings are consistent with the theory of planned behaviour, which suggests that external factors, such as stress or constraints, can influence the relationship between individuals' attitudes, subjective norms, and their behaviours (Ajzen, 1991). The presence of financial strain can disrupt the intentions and motivations of individuals with high financial literacy, leading to suboptimal financial behaviours (Bakar & Bakar, 2020; Fan & Barbiarz, 2019). Mudzingiri et al. (2018) explain that this phenomenon occurs because financial strain presents psychological deficiencies against rational behaviour resulting in behaviours such as overconfidence, impatience and high-risk appetite.

Moreover, previous studies exploring the interaction between financial literacy and financial strain have also identified similar patterns. Several research studies have found that financial strain can moderate the relationship between financial literacy and financial behaviour (Falahati & Paim, 2011). For instance, some research have shown that people with high levels of financial literacy may nevertheless participate in dangerous financial behaviours or fail to make the best financial choices when under significant financial strain (Mudzingiri et al., 2018). Notwithstanding, the empirical evidence of the current study departs from Osman et al. (2018) which found no mediating effect of financial strain on the relationship between financial literacy and financial behaviour.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter aims to provide a comprehensive discussion and conclusion based on the findings of the study on financial literacy, financial behaviour, and the moderating effect of financial strain among master's students. The chapter will address the key aspects of the study, including the level of financial literacy, the level of financial behaviour, the effect of financial literacy on financial behaviour, and the moderating role of financial strain. Additionally, it will include the study's results, implications for policy and practise, recommendations, study limitations, and suggestions for future research.

5.2 Summary

The aim of the study was to investigate the effect of financial literacy on financial behaviour. The study also sought to explore the mediation effect of financial strain on the relationship between financial literacy and financial behaviour. The research objectives also included an attempt to assess the level of financial literacy and financial behaviour among the target population.

To achieve this aim, the research employed a cross-sectional survey and quantitative methodology. The participants were selected from among master's students at KNUST. A sample of 400 participants were surveyed to gather primary data using close-ended questionnaire. The survey instrument was designed to solicit respondents' demographic data; to assess the participants' financial literacy level; to pose key financial knowledge areas relevant to their financial decision-making to assess their financial behaviour; and to assess their financial strain level. Thus, the study relied on self-reported data from the participants.

The levels of financial literacy and financial behaviour were analysed using descriptive statistics involving count, percentages and mean. Meanwhile, the data collected was also analysed using the Amos SPSS version 26 software as an attempt to analyse the direct effect of financial literacy on financial behaviour, and the moderation effect of financial strain on the relationship between financial literacy and financial behaviour. The software enabled the computation of the path analysis following the Structural Equations Modeling technique. The results were presented according to the objectives of the study, as follows:

5.2.1 Level of Financial Literacy

The survey results indicate a varied level of financial literacy among the participants. In some areas, such as understanding ratios, the total investment amount, the time value of money, and the impact of inflation, the majority of participants provided correct responses, suggesting a relatively higher level of financial literacy. These topics are fundamental concepts in finance, and the high percentage of correct responses indicates a solid understanding among the participants.

Meanwhile, the findings reveal mixed performance in other areas such as simple interest, risk and return, and diversification. While a significant percentage of participants answered correctly, there is still a considerable proportion who provided incorrect responses. In general, however, the study found that KNUST master's students' financial literacy was fairly high.

5.2.2 Level of Financial Behaviour

The survey findings indicated that a significant proportion of participants demonstrated a satisfactory level of financial literacy in several domains. For instance, a substantial number of respondents reported that they actively plan towards their retirement and have emergency savings. These facts imply that they are knowledgeable of the value of long-term financial planning and the need of financial security.

Furthermore, participants indicated that they engage in responsible financial behaviours, such as paying bills before the deadline, clearing outstanding credit each month, and making comparisons before taking credit. These behaviours reflect a level of financial discipline and an understanding of the importance of managing financial obligations in a timely and prudent manner. The highest mean scores were observed for clearing outstanding credit monthly.

However, the survey also identified areas where participants exhibited lower levels of financial behaviour. For instance, participants showed less confidence in their ability to cut down on their spending and keep records of debts owed to them. This particular statement received the lowest mean score. Overall, participants showed a positive inclination towards financial responsibility and planning.

5.2.3 Effect of Financial Literacy on Financial Behaviour

The path coefficient for financial literacy was positive and significant indicating that higher levels of financial literacy are associated with more favourable financial behaviours. In other words, KNUST student workers who have high financial literacy are more likely to put up positive financial behaviour.

On the other hand, the path coefficient for financial strain was negative and significant. Put differently, this result suggests that KNUST student workers who undergo high financial strain are more likely to exhibit less desirable financial behaviour.

5.2.4 Moderating Effect of Financial Strain on the Relationship Between Financial Literacy and Financial Behaviour

The moderation analysis's findings examining the interaction between financial literacy and financial strain revealed that the interaction between financial literacy and financial strain has a strong influence on financial behaviour. The negative sign of the coefficient suggests that the effect of financial literacy on financial behaviour is influenced by the level of financial strain experienced by individuals. In other words, the level of financial strain that the student workers in KNUST experience weakens their tendency to exploit their financial literacy to exhibit positive financial behaviour.

5.3 Conclusions

The study aimed to investigate the effect of financial literacy and financial strain among master's students and its implications for their financial decision-making. The results of the research showed that KNUST master's degree candidates had excellent levels of financial literacy, moderate financial behaviour and moderate financial strain levels. Financial behaviour, financial literacy, and financial strain play crucial roles in the lives of master's students. Students who develop positive financial behaviour make informed decisions, set financial goals, and manage their resources effectively. In addition, financial literacy equips students with the necessary knowledge and skills to navigate complex financial situations, make sound financial choices, and plan for their future. Last but not least, students who understand and manage their financial strain levels have a better chance of improving their mental well-being, academic performance and overall quality of life.

In addition, the results highlighted the importance of considering the role of financial strain in understanding individuals' financial behaviour. Financial strain can be caused by various factors such as economic instability, job insecurity, or personal financial difficulties. By incorporating financial strain as a moderator, the study recognized that individuals' financial behaviour is not solely determined by their level of financial literacy but is also influenced by external factors that contribute to financial strain.

Moreover, the findings suggest that interventions aimed at improving financial literacy may have varying effectiveness depending on individuals' level of financial strain. Strategies that focus solely on enhancing financial literacy may not yield significant improvements in financial behaviour if individuals are experiencing high levels of financial strain. Therefore, it is crucial for financial education programs and interventions to address not only the knowledge and skills related to financial literacy but also provide support and resources to manage and alleviate financial strain.

In terms of theoretical contribution, the study discovered that the positive correlation between financial behaviour and financial literacy aligns with the Theory of Planned Behaviour. In effect, individuals with higher financial knowledge and skills are more likely to have positive attitudes and perceive greater control over their financial decisions and actions. In terms of the alignment of the findings with the Social Learning Theory, the significant impact of financial literacy on financial behaviour implies that individuals may learn and incorporate financial knowledge and skills through educational programs or exposure to financial information and resources. Last, in light of the Theory of Behavioural Economics, the findings indicate that negative correlation between financial strain and financial behaviour can be explained that individuals under financial strain may be more susceptible to cognitive biases, leading to suboptimal financial decisions and behaviours.

5.4 Implications of the Findings

In this section, the implications of the findings for policy and national development are discussed. First, they highlight the importance of incorporating comprehensive financial literacy and positive financial behaviour training into school curricula and adult learning programs. By identifying the areas where participants struggled, educators can tailor the content and delivery of financial education programs to address these specific challenges. This may include providing more in-depth explanations, practical examples, and interactive activities to enhance understanding.

Furthermore, the results emphasize the importance of integrating real-life scenarios and case studies can help students apply financial concepts to their everyday lives, fostering practical financial decision-making skills. This might significantly lessen the amount of financial strain which emanate as a form of cognitive dissonance from students' academic financial literacy and their financial behaviour in real-life contexts.

Enhancing financial literacy and positive financial behaviour can significantly impact individuals' personal achievement of financial goals. A comprehensive understanding and application of these concepts can lead to better financial outcomes, increased wealth accumulation, and improved financial well-being.

Moreover, improved financial literacy, positive financial behaviour and reduced financial strain have broader implications for economic stability. When individuals possess a strong understanding of financial concepts, they are more qualified to navigate economic challenges, make wise financial choices, and contribute to a stable economy. Financially literate individuals are more likely to engage in responsible borrowing, plan for retirement, and make informed investment choices, which can positively impact their own financial security and contribute to overall economic growth.

Last, the findings of the study imply that governments and policymakers should consider the importance of integrating financial education initiatives into national strategies. This includes allocating resources for the development and implementation of financial literacy programs, as well as collaborating with educational institutions, employers, and community organizations to reach a wide audience. For instance, interventions such as the Ghana Education Trust Fund, which provide financial support for students, are commendable.

5.5 Recommendations

Based on the findings of the study on financial literacy, financial behaviour, and financial strain, several practical and policy recommendations can be made to address the implications and improve financial well-being. These recommendations are aimed at individuals, financial institutions, educational institutions, and policymakers.

Firstly, it is crucial to enhance financial literacy programs and initiatives targeting individuals. Financial institutions and community organizations should collaborate to develop comprehensive and accessible financial education programs. These programs should focus on improving financial knowledge, skills, and attitudes to empower individuals to make informed financial decisions. By increasing financial literacy levels, individuals can better manage their finances, make prudent investment choices, and plan for their future financial needs.

Secondly, providing access to financial counselling and coaching services can be beneficial. Individuals who are facing financial strain or struggling with their financial behaviour can benefit from professional guidance. Financial counselling services can help individuals develop personalized financial plans, set achievable goals, and navigate financial challenges effectively.

These services can provide valuable support and resources to individuals, enabling them to improve their financial well-being and make positive financial choices.

Additionally, policy interventions are essential to promote financial stability and resilience. Policymakers should focus on implementing regulations and policies that protect consumers and promote responsible financial practices. This includes ensuring transparency in financial products and services, regulating predatory lending practices, and promoting fair and ethical financial behaviours. By establishing a robust regulatory framework, individuals can feel more confident in engaging with financial institutions and making financial decisions.

Moreover, integrating financial literacy education into formal educational curricula is crucial. Educational institutions should incorporate financial literacy as a core component of the curriculum from an early age. By equipping students with essential financial skills and knowledge, they can develop healthy financial habits and behaviours from a young age. This will prepare them to navigate the complex financial landscape and make informed decisions throughout their lives.

Lastly, fostering collaboration among stakeholders is essential. Financial institutions, educational institutions, policymakers, and community organizations should collaborate to develop holistic approaches to encourage improved financial literacy, positive financial behaviour and reduced financial strain. By working together, these stakeholders can create a comprehensive ecosystem of support, including financial education programs, counselling services, and policy initiatives. Collaboration can enhance the impact of interventions, address systemic financial challenges, and ensure that individuals have the necessary tools and resources to make sound financial decisions.

5.6 Limitations of the Study

While the study on financial literacy, financial behaviour, and financial strain provides valuable insights, it is important to acknowledge its limitations. First, the study's findings are based on a specific target population of master's students at KNUST, which may restrict how broadly the findings can be applied to different groups or situations. The financial behaviours and strain levels of master's students may differ from those of individuals in different educational settings or socioeconomic backgrounds. Therefore, caution should be exercised when applying these findings to other groups.

Another limitation is the reliance on self-reported data, which introduces potential biases. Participants' responses to survey questions on financial behaviour and strain may be subject to social desirability bias or recall bias. Additionally, the study is cross-sectional in nature, capturing data at a specific point in time. Longitudinal studies would provide a deeper understanding of the dynamic interaction between financial literacy, financial behaviour, and financial strain over time.

Furthermore, the study focuses on the relationship between financial literacy, financial behaviour, and financial strain without considering other potential influencing factors. Various personal, socio-economic, and cultural factors can influence financial behaviour and stress levels, such as income, employment status, family background, and cultural norms. The omission of these factors limits the comprehensive understanding of the complex nature of financial well-being.

Lastly, the study does not explore the causality between financial literacy, financial behaviour, and financial strain. While the path coefficients show the strength and significance of the correlation, it is important to consider that reverse causality or bidirectional relationships may exist. For example, individuals with higher financial strain levels may exhibit lower financial literacy, or improved financial literacy may alleviate financial strain. Further research using experimental or longitudinal designs could shed light on the causal relationships between these variables.

5.7 Directions for Future Research

Future research may benefit greatly from the insights provided by the limits found in the study on financial literacy, financial behaviour, and financial distress. To address these limitations and further advance our understanding in this field, several directions for future research can be considered.

First, future studies should aim to replicate the findings using diverse and representative samples. By including participants from different educational backgrounds, age groups, and socioeconomic statuses, researchers can examine the generalizability of the correlations between financial behaviour, financial strain and financial literacy across various populations. This would help to establish the robustness and external validity of the findings.

Second, longitudinal research designs should be employed to capture the dynamic nature of financial behaviour and stress over time. Longitudinal studies would allow researchers to explore the causal correlation between financial literacy, financial behaviour, and financial strain, as well as investigate how these variables change and interact with each other over an extended period. This would provide a more comprehensive understanding of the temporal dynamics and potential mechanisms underlying these relationships.

Furthermore, future studies should adopt mixed-methods approaches to overcome the limitations of relying solely on self-reported data. By incorporating qualitative methods, such as interviews or observations, researchers can gain deeper insights into individuals' financial behaviours, stressors, and their experiences related to financial literacy. This would enhance the validity and richness of the research findings.

Lastly, future research should consider incorporating a broader range of factors that may influence financial behaviour and stress. Factors such as income, socioeconomic status, cultural norms, and financial institutions' policies and practices can significantly impact individuals' financial well-being. Examining the interplay between these factors and financial literacy would provide a deeper comprehension of the complexities surrounding financial decisionmaking and stress.

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APPENDIX

QUESTIONNAIRE ON FINANCIAL LITERACY AND FINANCIAL BEHAVIOUR OF POSTGRADUATE STUDENTS: THE MODERATING EFFECT OF FINANCIAL STRAIN

Dear Participants,

I kindly request your participation in a research study aimed at assessing the effect of financial literacy on financial behaviour: the moderating effect of financial strain on the relationship. The purpose of this questionnaire is to gather your opinions and perceptions on issues related to the research topic. This study is a partial fulfilment for the award of my master's degree by the KNUST School of Business, Kumasi Centre.

The questionnaire consists of multiple-choice questions and rating scales to assess your perspectives on various dimensions. It should require at most 20 minutes. Your responses will be treated with strict confidentiality, and all data will be employed for this research exclusively. Answer all questions based on your personal experiences. By continuing with the questionnaire, you attest that you have voluntarily agreed to partake in the research. You may cease answering the questions at any point if you feel the need to do so. Feel free to reach me if you have any doubts about the questions.

Thank you.

Student Name: Yvonne Naa Atswei Adjei

Contact Number:0242844272

Section 1: Demographic Profile

Please tick the appropriate square brackets by the option that describes your demographic profile.

1. Age

a. 22-26 [ ] b. 27-31 [ ] c. 32-36 [ ] d. 37 and above [ ]

2. Sex:

a. Male [ ] b. Female [ ] 3. Monthly income level:

a. Below GHS 1,000 [ ] b. GHS 1,001 to GHS 2,000 [ ]

c. GHS 2,001 to GHS 3,000 [ ] d. GHS 3,001 to GHS 4,000 [ ]

e. GHS 4,000 and over [ ] 4.

Year of master's program:

a. First year [ ] b. Second year [ ]

Section 2: Financial Literacy

The following questions are meant to assess your level of financial literacy. Please tick inside the square bracket by the correct answer for each question.

5. Imagine if 5 students were gifted a single GHS 1,000 to equally share among themselves, what is each student's share?

a. GHS 500 [ ] b. GHS 200 [ ] c. GHS 100 [ ] d. I do not know [ ]

6. Consider a scenario where the 5 students are promised to receive their respective share of the GHS 1,000 and inflation stays at 10% per annum. All other things being equal, will they be able to purchase, after a year:
    a. Items worth the same amount [ ]
    b. Items worth more with their share of the money they could today [ ]
    c. It depends on the things they want to buy [ ]
    d. Items worth less than they could buy today [ ]
    e. I do not know [ ]
7. You lend GHS 25 to another student and she returns the GHS 25 the following day. Did she pay interest on the amount?
    a. She did not pay any interest [ ]
    b. I do not know [ ]
8. Imagine you put GHS 1,000 into tax-free savings account that charges no management fees, and guarantees 2% per annum interest rate. You fail to further contribute to the lumpsum you deposited. After one year, what will be the account balance, considering the account receives its interest due?
    a. GHS 1,000 [ ]
    b. GHS 1,200 [ ]
    c. GHS 1,020 [ ]
    d. GHS 1,002 [ ]
    e. I do not know [ ]
9. Imagine you put GHS 1,000 into a no-fee, tax-free savings account that charges no management fees, and guarantees 2% per annum interest rate. You fail to further contribute to the lumpsum you deposited. After five years, what will be the simple interest earned, considering the account receives its interest due?
    a. GHS 1,200 [ ]
    b. GHS 1,100 [ ]
    c. GHS 200 [ ]
    d. GHS 100 [ ]
    e. I do not know [ ]

Please specify whether the following statements are true or false.

10. High-risk investments tend to be correlated with high returns.
    a. True [ ] b. False [ ]
11. When the general cost of living is rapidly increasing, we may say there is high inflation.
    a. True [ ] b. False [ ]
12. An investor in the stock market can generally minimise his risk exposure by investing in a range of shares and stocks.
    a. True [ ] b. False [ ] Source: OECD (2018)

Section 3: Financial Strain

This section measures your level of financial strain. Please tick in the appropriate cell to indicate the extent to which you agree with each of the following statements.

	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
13.	I worry over delay in payment.					
14.	I worry over my due bills and this disturbs my sleep.					
15.	Medical costs make me worried.					
16.	I am restless and moodier because of my current financial standing.					
17.	Financial strain makes me fall sick easily					
18.	It is difficult to sufficiently sustain my eating habits because of my finances.					
19.	I am concerned that I will not be able to sustain my living when I am sick.					
20.	My financial standing has influenced my weight because of depression.					
21.	My blood pressure is high because I stress over my financial standing.					

Source: Osman, Madzlan and Ing (2018)

Section 4: Financial Behaviour

This section measures your financial behaviour. Please tick in the appropriate cell to indicate the extent to which you agree with each of the following statements.

	Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
22.	I plan towards my retirement					
23.	I have emergency savings					
24.	I revise and improve my financial plans					
25.	I pay all bills before the deadline					
26.	I clear all outstanding credit every month					
27.	I make comparisons before taking credit					
28.	I discuss my financial issues with my partner					
29.	I spend as budgeted					
30.	I plan to cut down on my spending					
31.	I keep records of debts owed me					
32.	I save for the short-term					
33.	I save for the long-term					
34.	I have adequate insurance cover					

Source: Osman, et al. (2018)

The End.