

Consumer debt influence on life satisfaction: A South African study

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ABSTRACT

South African consumers are indebted, a status that is not unique to South Africa. Considering the negative impact debt may have on life satisfaction, it is in the interest of consumers and financial institutions that provide consumers with credit to understand such consequences. Of interest is the fact that consumers are not negatively impacted by debt due to having debt nor amount of debt owed, however, it is the perception of debt that influences how the consumer perceives their debt which then impacts life satisfaction. This study aimed to understand this phenomenon in the South African context, as most existing studies are in developed countries. A quantitative research methodology was undertaken to understand the relationship between these two constructs. The results suggest that South African consumers' life satisfaction is not negatively influenced by debt overall. However, an investigation into the different types of debt held and investigation into the perception South Africans have relating to their debt portfolios, revealed that personal loans are the type of debt that impact the life satisfaction of consumers negatively. This study opens the platform to explore these constructs through future research preferably through longitudinal studies, to examine the relationship of consumer debt and life satisfaction in the South African context.

KEYWORDS

Consumer debt; Household debt; Life satisfaction; Subjective well-being.

DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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ABBREVIATIONS

BMR:	Bureau of Market Research
CDI:	Consumer Default Index
CPI:	Consumer Price Index
EFA:	Exploratory Factor Analysis
FWB:	Financial well-being
GDP:	Gross Domestic Product
KMO:	Kaiser-Meyer-Olkin
PAF:	Principal Axis Factoring
SARB:	South African Reserve Bank
SWB:	Subjective well-being
US:	United States of America

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1. CHAPTER 1: INTRODUCTION TO RESEARCH PROBLEM

This chapter purposes to introduce the research problem relating to consumer debt and its impact on life satisfaction within the South African context. Consumer indebtedness is a global concern (Cesar Leandro & Botelho, 2022; Feng et al., 2019) which has been made dire by the recent global pandemic which has caused more households to rely on debt for their day-to-day expenses (Fan & Ryu, 2023; Friedline et al., 2021). It is not surprising that this area of research remains of interest to scholars due to the impact indebtedness has on the quality of lives for consumers and their households.

Emerging economies are under-represented in the studies aimed at understanding the impact of debt in consumer lives and their households (Cesar Leandro & Botelho, 2022; Ngamaba et al., 2020; Tay et al., 2017). Emerging economies face different risks and challenges compared to developed economies (Badarinza et al., 2019), which necessitates research in this context to bridge this gap in literature, which is the objective of this research.

An overview of the South African consumer debt landscape will be outlined to firstly understand the level of indebtedness for South African consumers as support for this study. The problem statement will then be outlined, academic and business relevance will be established, and research scope stated.

1.1. Overview of consumer debt in South Africa

Over 61% of the South African adult population are in debt (Mutsonziwa, 2024). As at March 2024, South Africa had 27.92 million credit active consumers, holding a total amount of R2.37 trillion in debt (NCR, 2024a) and 96.10 million accounts (NCR, 2024b). This translates to an average debt holding of 3.4 accounts per consumer. Banks accounted for 84.83% of the total debtors' book with the balance comprising of retailers at 2.34%, non-bank vehicle financiers at 5.03% and other credit providers at 7.80% (NCR, 2024a). The average credit score of South African consumers, which relates to the credit reliability and credit behaviour of consumers, was 561 as at September 2024 (refer to Appendix A). This is a poor credit score based on the Sigma credit scoring system maintained by Experian Credit Bureau, which requires an average of 616 for an acceptable credit score (Coetzee, 2023).

17.83 million (63.88%) of credit active consumers were classified as good standing while the balance of 10.09 million (36.12%) held impaired records (NCR, 2024a). The past decade reflects an overall increase of 6.21 million (28.60%) in credit active consumers with a constant proportion of consumers in good standing compared to impaired records as shown in Figure 1. This suggests consumers' constant access to credit along with conservative lending practices from credit providers which have kept impairment levels controlled (TransUnion, 2024b).

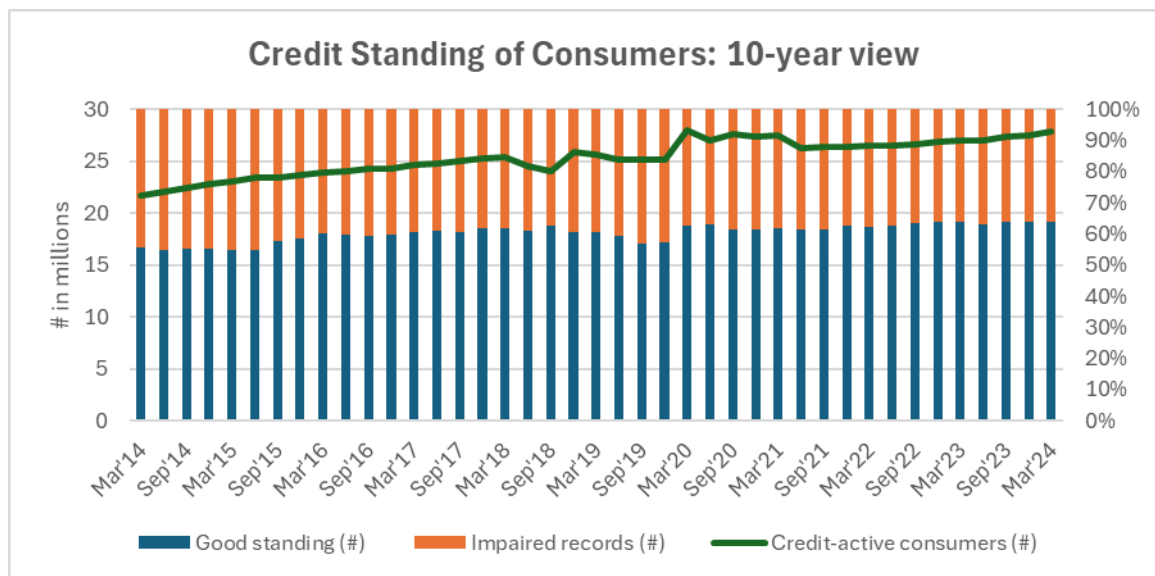


Figure 1: Credit standing of consumers

Source: NCR (prepared by researcher)

Consumer debt products consist of secured products being home (mortgage) loans and vehicle loans and unsecured products consisting of credit cards, personal loans, clothing accounts, retail revolving, and retail instalments (TransUnion, 2024c). Similar classifications are made globally, although the types of debt can differ from country to country (Badarinza et al., 2019; Feng et al., 2019; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023).

Of the total gross debtors' book of R2.37 trillion at March 2024, mortgage loans were the highest composition of consumer debt at 52.03%, followed by secured credit agreements of 21.82%, credit facilities of 14.06%, unsecured credit of 9.20% and the balance of 2.89% relating to other types of credit (NCR, 2024a). Secured credit agreements mainly consist of vehicle loans while credit facilities mainly consist of

credit cards (NCR, 2024a). Based on the amount of debt outstanding, secured debt carries a higher weight, due to the high-value assets attached to this debt. Credit facilities account for 61.5% of credit granted based on the number of agreements in March 2024 compared to 51% in March 2019, which is evidence of a higher need of these facilities from consumers (refer to Appendix B).

The mortgage loan composition is lower than that of the US which is much higher at 69% (Bialowolski & Weziak-Bialowolska, 2021), signifying a higher debt composition in other debt types in South Africa. Developed countries tend to have higher levels mortgage loans compared to emerging countries (Gomes et al., 2021), with unsecured credit in emerging economies being much higher than developed economies (Badarinza et al., 2019). China, an emerging economy, also reported high levels of mortgage loans which were evidenced by the high mortgage loan to income ratio of 68.3% (Feng et al., 2019).

1.2. Consumer debt and indebtedness

The status of consumer debt has a direct impact on households led by these consumers; therefore, this study will consider both individuals and household debt statistics to highlight the status of the South African consumer debt status and justify the basis for the study.

South Africa's household debt was 40.6% of the country's nominal Gross Domestic Product (GDP) in September 2023, relatively high compared to the all-time high of 49.6% reached in September 2007 (CEIC, n.d.). "Household debt to disposable income averaged 63.2% from the first quarter of 2015 to the second quarter of 2023", while "67.2% of the households' debt-service cost related to debt other than mortgage advances" (Muneri & Kuhn, 2023, pp. 96–97). As of December 2023, household debt to disposable income reported at 62.40% compared to 62% in 2022 (SARB, 2024), reflecting an increasing trajectory year-on-year. DebtBusters, a leading South African debt management company, stated that consumers require 62% of their take home pay to service debt, supporting SARB statistics (Sager, 2024). In 2020, the US reported debt levels which were almost equal to consumers' income (Bialowolski & Weziak-Bialowolska, 2021), this issue is not unique to South Africa (Cesar Leandro & Botelho, 2022; Feng et al., 2019). Household debt as a percentage of household disposable income is an objective indicator of the

household's level of indebtedness, and these high levels reflect households being highly indebted.

Risky indebtedness behaviour is one of the risks that can lead to poor management of debt, especially if coupled with low financial literacy (Cesar Leandro & Botelho, 2022; Feng et al., 2019). South African consumers' indebtedness is due to challenging economic conditions rather than risky indebtedness behaviour (TransUnion, 2024b). The top reason for South Africans borrowing money is food (Mutsonziwa, 2024; NCR, 2021). The SARB increased repo rates from November 2021 with a cumulative 4.75% increase, and these have remained at high levels of 8.25% since May 2023 (SARB, 2023). This has made an impact in consumers' affordability and ability to repay debt, together with the impact of increased inflation (particularly on food, electricity, and petrol) and remnants of the COVID-19 pandemic impact on the labour force (Sager, 2024; TransUnion, 2024b).

The Consumer Credit Index (CCI), which reflects the credit health of consumers, reported at below the 'neutral' point of 50 for the past two years, with the lowest level of 39 reached in Q2 2023 (TransUnion, 2024b). This, together with the increased demand in consumers under debt management who have an average debt to income ratio of 107%, reflects the level of debt pressure experienced by South Africans (Sager, 2024). This is even higher for consumers earning more than R35 thousand per month, who need 69% of their take home pay to service debt and have the highest debt to annual income ratio at 172% (Sager, 2024). These consumers are deemed to enjoy luxury living and are aspirational achievers, however, they account for approximately 43% of debt review applications, a further testament of the financial challenges by high income earners (Experian, 2024).

The Consumer Default Index (CDI), which measures the first-time default rate of South African consumers with credit products, indicates deteriorating levels in the last five years. The CDI has deteriorated by 19% since September 2019, the most significant deterioration notable in the home loan CDI with a 79% deterioration, followed by retail loan, credit card, and personal loan indices which are at similar levels as shown in Table 1. This aligns to the noted severe increase in home loan delinquency rates compared to other credit products (TransUnion, 2024c). This is an interesting phenomenon as it is non-mortgage loans that are prone to delinquency,

with credit cards being the highest delinquency in the US (Bialowolski & Weziak-Bialowolska, 2021).

Table 1: Summary of Consumer Debt Index

Index	Mar '19	Sep '19	Mar '24	Deterioration % Mar'19 - Mar'24	Deterioration % Sep'19 - Mar'24
Composite	3.56	3.93	4.69	**	-19%
Home loan	1.61	1.5	2.68	-66%	-79%
Vehicle loan	3.7	3.54	3.84	-4%	-8%
Credit Card	6.53	6.63	7.63	-17%	-15%
Personal loan	8.74	8.84	10.24	-17%	-16%
Retail loan	*	12.77	15.11	**	-18%

* Not tracked

** Not comparable due to retail loan index not be tracked

Source: Experian (compiled by researcher)

The number of credit applications have increased significantly from 10.75 million in March 2019 to 16.55 million in March 2024, which reflects an increase in credit demand from South African consumers (NCR, 2019, 2024a). Although the increase in credit application can be viewed as an indication of financial systems that enable credit access to consumers, the increase in application rejection rates from 55.84% in March 2019 to 67.27% in March 2024, indicates challenges in consumers' ability to afford new credit (NCR, 2019, 2024a). However, this is also evidence of responsible credit granting by credit providers to manage account default levels, necessitated by the challenging economic conditions experienced by consumers due to elevated interest rates and costs of living (TransUnion, 2024b). The researcher argues that this still leaves the consumer negatively impacted while financially vulnerable and increases the risk of these consumers seeking support from informal markets (Experian, 2024). This risk is relevant to note as emerging economies are noted to have high levels of unsecured credit from non-financial institutions in literature (Badarinza et al., 2019).

Culture has an impact on the way consumers manage their debt (Gaganis et al., 2020; Gathergood et al., 2019). Compared to the US, South Africans have significantly lower levels of individualism and similar range on indulgence, signifying the US citizens being more self-focused (The Culture Factor Group, 2023). The expectation, therefore, is that South Africans might have a low tolerance to debt,

since high debt levels are likely to be influenced by necessities rather than an individualism culture.

1.3. Consumer debt impact on life satisfaction

Most existing studies observed that consumer debt has a negative impact on life satisfaction, also referred to as subjective well-being or happiness in literature. This negative impact manifests in various domains of life satisfaction, being work, finances, one's group, health, family, leisure and self-view (Diener et al., 1999).

This negative impact manifests through financial worry, stress and vulnerability to consumers and their households (Black et al., 2024; Daud et al., 2019; French & Vigne, 2019; Tay et al., 2017), which compromises their financial well-being and ultimately their life satisfaction. When consumers are severely indebted, this becomes financial distress (Athreya et al., 2019), which impacts their financial-well-being negatively. Financial well-being is a key predictor of life satisfaction (Netemeyer et al., 2018). The South African Financial Vulnerability Index (FVI) of 50.9 in Q3 2023 (Poalses et al., 2023) and average financial health score of 53 (Thomas et al., 2023) suggest improving levels of South Africans' financial well-being. However, the pulse report highlighted that 67% of consumers admit to worrying about their house debt (Thomas et al., 2023, p. 10), 62% admit to spending equal or in excess of their income (Thomas et al., 2023, p. 8), and 69% admit to not paying their bill on time (Thomas et al., 2023, p. 10). Based on these factors, South Africans are financially vulnerable.

Various studies have observed the impact of consumer debt on physical and mental health (Chen et al., 2021; L. Dunn & Mirzaie, 2016; Sweet, 2018), with some reporting a stronger impact on mental health than physical health (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021). The impact on work experiences, job performance and change on leadership style was also observed (Black et al., 2024; L. Dunn & Mirzaie, 2016; Spoelma & Fletcher, 2024). Furthermore, an impact on one's self view (Fan & Ryu, 2023; Sweet, 2018) and one's group (Fan & Ryu, 2023) was noted. With the impact being so prevalent in all areas of the consumer's life, it creates a need to identify this phenomena when it exists so that policy makers and financial institutions responsible for granting credit can support consumers adequately in managing their debt and improve their life satisfaction (Brüggen et al.,

2017; Daud et al., 2019; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Nanda & Banerjee, 2021; Xiao et al., 2021).

Existing studies further noted that the type of debt held has influence on how the consumer's life is impacted by the debt rather than the amount of debt held when compared to other debt types (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; Greenberg et al., 2020; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Xiao et al., 2021), with student loans being predominant in the US (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021). This is influenced by the perception consumers have of their debt due to the "pain" felt by the consumer in paying for debt when they are no longer consuming the benefit linked to the debt, or the "weight" of the high interest rate linked to the loan which then impacts how the consumer views the debt. Greenberg and Mogilner (2021) state it is this mental labelling of debt as "debt" that influences the impact on consumer life satisfaction.

South Africa has very limited highly rated literature on consumer debt and life satisfaction. However, existing studies convey the weight on certain South Africans due 'black tax' (James, 2021; Webb, 2021) and convey a limited perception of 'acceptance' of the status quo. The 2023's life satisfaction study reflected an improved life satisfaction score for South Africans year-on-year; although long-term average trends of the past 11 years evidence a decrease in life satisfaction (Poalses & Tustin, 2023). These factors make it difficult to predict what the results of this study might be as South Africans show resilience.

1.4. Problem Statement

South Africans are indebted, with 61% of the adult population in debt (Mutsonziwa, 2024) with an average of 3.4 accounts per consumer. South African consumers use approximately 62% of their disposable income to service debt (Sager, 2024; SARB, 2024) and an even higher percentage allocated to debt other than mortgage loans (Muneri & Kuhn, 2023). Consumers must borrow for necessities (Mutsonziwa, 2024; NCR, 2021) due to the challenging economic environment which has been influenced by elevated interest rates (SARB, 2023), remnants of the COVID-19 pandemic and impact of inflation (Sager, 2024; TransUnion, 2024b). 67% of consumers worry about their debt and 69% struggle to pay their debt on time

(Thomas et al., 2023). The poor credit score of 561 as at September 2024 (refer Appendix A), supports this and evidences a nation not coping with managing their debt. This is supported by an increase in new credit application rejection rates which have increased by over 11% in the last five years (NCR, 2019, 2024a). While these challenges are not unique to South Africa (Bialowolski & Weziak-Bialowolska, 2021; Cesar Leandro & Botelho, 2022; Feng et al., 2019) as indebtedness has become a global concern, it does not make it less of a concern.

The challenges in managing debt are evident even in high income earners, who spend a high-than average 69% of their disposable income on servicing debt and have a debt to annual income ratio of 172% (Sager, 2024). Consumers at default have increased in the last five years, more notable on the mortgage loans and followed by unsecured loan products (TransUnion, 2024c). These factors, and the increase in consumers under debt management (Sager, 2024), reflect that South African consumers and their households are financially vulnerable. A struggle in managing debt is one that cannot be ignored as if it once that persists for at least two and half years once declared in financial distress (Athreya et al., 2019).

Consumer debt has a negative impact on life satisfaction which manifests in all the aspects of the consumer's life as observed in existing literature (Bialowolski, Weziak-Bialowolska, & McNeely, 2021; Black et al., 2024; Daud et al., 2019; Diener et al., 1999; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; French & Vigne, 2019; Netemeyer et al., 2018; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). Accredited South African literature is very limited in this area, leaving a gap to study the impact of consumer debt on life satisfaction, to add into this body of literature. The available research from the literature is too limited to have an expectation however, the life satisfaction study gives a glimpse of a deterioration in the past decade (Poalses & Tustin, 2023). Without available studies that directly highlights the issue, consumers are unlikely to aim to change behaviour to manage their debt effectively. Policy makers and financial institutions are also unlikely to initiate innovative ways to support consumers in improving their debt management practices, to improve their financial and overall well-being.

1.5. Purpose of research

As highlighted in the problem statement, South African consumers are indebted and are struggling to manage debt, with a significant amount of their disposable income spent on servicing debt (Sager, 2024; SARB, 2024; Thomas et al., 2023), which is a concern. The research aims to obtain insights on how consumer debt impacts their life satisfaction in the South African context as current studies are heavily skewed to developed countries.

This research aims to add to the body of existing literature to influence consumer behaviour towards better management of debt once the impact on life satisfaction is highlighted (Bialowolski, Weziak-Bialowolska, & McNeely, 2021; Black et al., 2024; Daud et al., 2019; Diener et al., 1999; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; French & Vigne, 2019; Netemeyer et al., 2018; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). The research should further provide insight to financial institutions tasked with responsible lending to consumers to support them in managing their debt optimally for their life satisfaction, and policy makers who manage the credit industry (Brüggen et al., 2017; Daud et al., 2019; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Nanda & Banerjee, 2021; Xiao et al., 2021). The core of this research is based on the intention to contribute towards the improved subjective well-being of South African consumers, which can be achieved through better management of their debt (Black et al., 2024; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Tay et al., 2017; Xiao et al., 2021).

The research aims to firstly investigate the relationship of consumer debt on life satisfaction of South African consumers at an overall level. Secondly, the research will seek insight of consumer debt at debt type level by comparing secured and unsecured debt product's relationship to life satisfaction. This is relevant for South African consumers due to the increased reliance on unsecured credit to maintain their living. Lastly the research will investigate the relationship between consumer debt perceived as "debt" to life satisfaction. The results of the research will be compared to existing studies.

1.6. Academic relevance

Existing studies on consumer debt and indebtedness, financial well-being or satisfaction, and subjective well-being or life satisfaction, as separate constructs or understanding the relationship between these constructs, are skewed to developed countries with most of the studies being US-focused.

Based on the subjective well-being theory measured using the life satisfaction scale (Diener, Emmons, Larsen, et al., 1985; Diener et al., 1999), this research aims to add to the body of existing literature on debt and life satisfaction in the emerging economy context. Although life satisfaction is one of the three components of subjective well-being, existing studies use these words interchangeably along with overall well-being, quality of life or happiness (Greenberg & Mogilner, 2021; Kollamparambil, 2020; Ngamaba et al., 2020; Xiao et al., 2021). The principle of one's life satisfaction is based on the influence of the various aspects of one's life which then influences their life satisfaction and subjective well-being (Diener et al., 2017), the key predictor being financial well-being (Netemeyer et al., 2018).

Emerging economies have unique risks and challenges that make studies invested in understanding consumer and household finance dynamics relevant in their context (Badarinza et al., 2019). Specific to South Africa, the high levels of income inequality that have persisted for decades, makes it relevant to obtain insight into how consumer debt impacts consumer in this context (Chancel et al., 2023). The culture dynamics of South Africa are not equally comparable to developed countries like the US or fellow emerging economy China, which make the study relevant since it cannot be replicated across countries (Gaganis et al., 2020; Greenberg & Mogilner, 2021; Xiao et al., 2021).

The researcher aims to add to the existing literature on the relationship between consumer debt and life satisfaction as this is very limited in the South African context, which can add value to the academic field and direct future areas of research.

1.7. Business relevance

Financial institutions have lending as a major function are tasked with having responsible lending practices manage their risk (Xiao et al., 2021). In South Africa, there are formal lending institutions being banks and informal institutions which

provide various types of lending (James, 2021; NCR, 2021) and the majority of consumer debt from formal institutions is from bank institutions (NCR, 2024a).

Regardless of financial literacy and ability of consumers, the structure and features available from the financial sector institutions, has an impact on the consumers' financial well-being (Fu, 2020). If financial institutions provide credit carelessly without explaining the consequences to consumers (Abrantes-Braga & Veludo-de-Oliveira, 2020), this could result in bad debts for the financial institution when the consumer defaults thus impacting the business profitability (Feng et al., 2019). Consumers are not immune to advice from financial institutions and can be persuaded to choose recommended financial products or a certain structure of financial products for their financial well-being (Greenberg et al., 2020). Any study that gives insight into the impact of consumer debt on their life satisfaction is therefore of interest to financial institutions to be responsible lending institutions that add value to consumers while managing the risk to the business.

Recent research in the financial sector by Nedbank and FinMark Trust (Mutsonziwa, 2024; Thomas et al., 2023) and specifically the credit unsecured credit by the National Credit Regulator (NCR) and TransUnion (NCR, 2021; TransUnion, 2024a), shows the interest that exists in the consumer debt landscape as there is awareness of the financial fragility of consumers.

1.8. Scope of research

The scope of research will be limited to consumer debt and life satisfaction with consumer debt as the independent variable and life satisfaction as the dependent variable of the study within the South African context.

Existing studies indicated a negative impact of consumer debt on life satisfaction by demonstrating the impact on financial well-being (Athreya et al., 2019; Black et al., 2024; Cesar Leandro & Botelho, 2022; Daud et al., 2019; French & Vigne, 2019; Robb et al., 2019; Tay et al., 2017), or the various domains of life satisfaction (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021; Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg et al., 2020; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). Some of these studies went further to suggest

that the type of debt held has an impact on the consumer's life satisfaction (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Greenberg et al., 2020; Greenberg & Mogilner, 2021; Xiao et al., 2021). The experience of benefiting from the asset purchased through debt influences how the consumer perceives the best based on the benefit still obtained from the underlying asset and has an impact on life satisfaction with which is positive or negative to life satisfaction (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021).

The research will therefore aim to investigate the relationship between consumer debt and life satisfaction at an overall level, debt type level and perception level to determine how this aligns to previous existing studies, thus adding value to the body of existing knowledge relating to subjective well-being.

Financial institutions and policy makers can obtain insight that can result in favourable policies being promulgated and the structure of financial products can be enhanced to better assess risk profiles of consumers upon credit granting. It must be noted that the terms consumer or individuals or South African consumers will be used interchangeably in the report.

1.9. Conclusion

This chapter aimed to provide the background and relevance of the research problem identified through using literature and recent, relevant available sources. The next section will provide theory through relevant literature review to support the need for this research as highlighted in this chapter.

2. CHAPTER 2: THEORY AND LITERATURE REVIEW

2.1. Introduction

In line with the purpose of the research, this chapter will focus on the two constructs identified for this research which are: consumer debt and life satisfaction. The concepts of the constructs will be outlined in line with academic literature with determinants and consequences of these constructs from literature highlighted. The importance of financial well-being or financial satisfaction as a key contributor to overall subjective well-being or life satisfaction will also be highlighted, to create the necessary link between the constructs being researched. Consumers are the heads of households, therefore literature relating to both consumers and their households was considered for this research in line with academic literature.

The literature review will explore what is known and not known about the relationship between consumer debt and life satisfaction, which will direct the research questions and hypotheses drawn from the literature review. The literature review represents a global view of the research that relates to the constructs of this research and has not been filtered to focus only on South Africa as the context of this study. Most of the literature comes from developed countries, and this has been purposely highlighted on the literature review since it relates to the gap in literature which this research aims to contribute towards. Figure 2 represents the conceptual framework of the literature review.

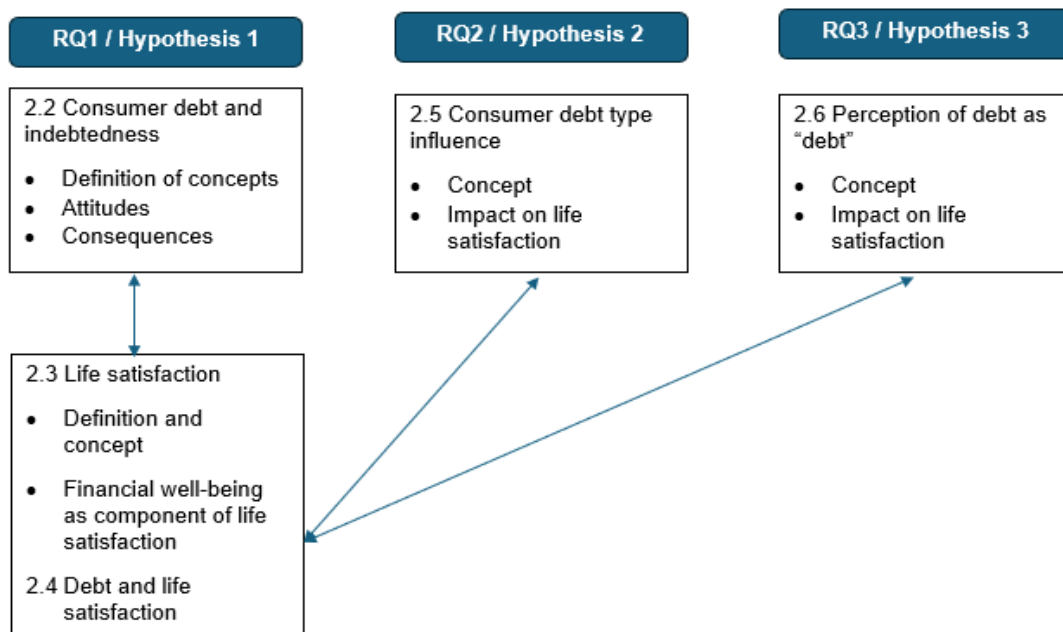


Figure 2: Conceptual framework of the literature review

2.2. Consumer debt and consumer indebtedness

Consumer debt refers to access to borrowings by consumers in enabling consumption when income levels are unstable and is categorised into secured and unsecured debts (Feng et al., 2019; Xiao & Tao, 2021). This allows consumers to smooth consumption over their lifetime, despite the uncertainty of their income (Almenberg et al., 2021; Feng et al., 2019; Gathergood et al., 2019; Nagatani, 1972). Consumer debt consists of various types of debt including mortgage debt, instalment loans, payday loans, auto (vehicle) loans, home equity line of credit, student loans and credit card debt (Bialowolski & Weziak-Bialowolska, 2021; Chen et al., 2021; Greenberg & Mogilner, 2021). Consumer debt can be viewed as objective and subjective, with objective debt representing the amount owed, level of delinquency or debt status relating to debt; whereas subjective debt relates to the burden felt by the consumer about the debt which manifests as stress or worry (Tay et al., 2017).

Consumer indebtedness is “defined as a situation where a consumer holds excessive debts, reporting persistent difficulty paying their debts and living expenses and finding their debts a heavy burden” (Cesar Leandro & Botelho, 2022, p. 535). However, there are various other definitions of consumer-indebtedness across various authors (Cesar Leandro & Botelho, 2022) which reflect principles of financial distress and struggles to meet debt repayments for debtholders, in broad terms. Therefore, consumer debt in itself is not negative and can even be an indicator of financial well-being (Xiao & Tao, 2021) when a consumer has access to credit, as long as it is not excessive and managed well.

The researcher determines both terms to be relevant for this study as the construct of consumer debt is the state of having debt, and consumer indebtedness captures the state of having excessive debt. Studies that have focused either on the broader term of consumer debt and those that focused specifically on consumer indebtedness have been included for the purposes of this research. The researcher considers the construct of consumer debt to be a broader term that encapsulates consumers that have debt and those that are indebted due to excessive debt.

Consumer debt continues to be the subject of various studies globally as an important component to understand consumer debt behaviour and household finance. In the US, mortgage loans are the highest component of consumer debt at

69%, followed by student loans at 11%, credit cards at 6%, and vehicle loans at 9% (Bialowolski & Weziak-Bialowolska, 2021). China, an emerging economy, also holds high levels of mortgage debt as reflected with the high mortgage loan to disposable income ratio of 68.3% (Feng et al., 2019). Developed economies tend to have high levels of mortgage loans compared to developing economies (Gomes et al., 2021).

Credit card debt tends to have higher interest rates compared to mortgage loans and student loans (Greenberg et al., 2020; Greenberg & Mogilner, 2021), thus an expensive form of credit along with payday loans (Gomes et al., 2021). Regardless, the use of credit cards is prominent globally, with households in the UK holding an average of two credit cards or more (Gathergood et al., 2019) and US households having at least one credit card (Kuchler & Pagel, 2021). Stavins (2020) found that 74% of consumers have at least one credit card with an average of 2.26 credit cards per person in the US. With these statistics, it is not surprising that credit cards are deemed to be one of the largest sources of liquidity in the US (Keys & Wang, 2019). Although the third-highest type of debt in the US, there are observations that the use of credit cards has been declining in the past two decades (Mudrazija & Butrica, 2023). In contrast, the study done on six emerging economies concluded that emerging economy households hold high levels of unsecured debt which is often sourced from informal providers (Gomes et al., 2021).

Consumer debt and consumer indebtedness have increased in recent decades globally, becoming a threat not only to households but to the economy (Cesar Leandro & Botelho, 2022; Feng et al., 2019). In the UK, four million households are defaulting on their debt repayments with an additional one and half million struggling to pay their debts (Cesar Leandro & Botelho, 2022). Non-mortgage loans are more prone to delinquency compared to mortgage loans with credit cards being the highest in the US at 10%, measured using loans that are outstanding for 90 days or more (Bialowolski & Weziak-Bialowolska, 2021). When consumers reach levels of outstanding debt that was 120 days or more at least once thus severely delinquent, this results in financial distress in households, which applies to 35% of US households (Athreya et al., 2019). Although found to be applicable to a concentrated number of households, once in financial distress due to severe delinquency or full utilisation of credit limited, this lasted for two and half years (Athreya et al., 2019).

The importance of research relating to household finance and the factors that impact households financial and overall well-being remain important. Consumer debt does not affect only their households, but can impact the economy (Feng et al., 2019; Gomes et al., 2021). Emerging economies have specific challenges which need to be studied and understood, especially since current literature is skewed towards developed countries (Badarinza et al., 2019).

2.2.1 Consumer attitudes towards debt

Various factors influence consumers' attitude towards debt including socioeconomic demographics like education, gender, age, race, employment, income levels, risk aversion, and culture. These factors then influence consumers' decision-making and behaviour towards debt.

Debt literacy is one of the factors that plays a role in the consumer attitude towards debt, reflected in consumers with higher levels of debt literacy being more pro-debt compared to those that are not (Białowolski et al., 2020). When consumers are debt literate, they are in a position to select debt products that are not expensive and are able to make sound financial decisions without needing to consult with financial advisors (Galariotis & Monne, 2023).

Limited understanding of debt consequences can be problematic for consumers (Białowolski & Weziak-Białowolska, 2021; Feng et al., 2019). Where debt literacy levels are low to consumers with debt, these consumers are more likely to engage in risky indebtedness behaviour due to poor debt management (Galariotis & Monne, 2023). Where debt literacy is low, households find themselves with higher levels of unsecured debt compared to secured debt, placing them in a vulnerable position should economic shocks occur (Feng et al., 2019). Debt literacy is therefore important and cannot be underestimated, as it provides confidence to consumers in their ability to manage debt well, thus protecting their financial well-being from indebtedness.

Cultural upbringing and cultural differences can also influence an attitude towards debt (Almenberg et al., 2021; Gaganis et al., 2020; Hofstede, 2011). Gaganis et al. (2020) found that countries with individualism and indulgence as cultural dimensions are likely have a higher use of mortgage debt. This suggests risk aversion in

consumers where culturally brought to be uncomfortable with debt, compared to cultures where indulgence and self-interests are condoned.

There are conflicting results on debt attitudes and gender, with no significant differences found by Białowolski et al. (2020) in Poland, although Swedish women were found to be more uncomfortable with debt compared to men (Almenberg et al., 2021). In South Africa, men were found to be marginally more financial resilient than women, although women were more resilient in cases where the women were employed and had higher levels of education (Zeka & Alhassan, 2024). Although not directly linked to levels of debt between the genders, levels of credit were a component used to determine financial resilience and therefore this provides a glimpse of how women are affected by their financial statuses than man in South Africa, although limited where debt is concerned.

Another factor that gives insight into consumer attitudes towards debt is the manner in which consumers repay their debt. Most US credit cardholders who mainly use their credit cards for convenience are able to pay their credit card balances in full or in intermediary payments with 29% paying close to or at minimum amounts (Keys & Wang, 2019). The ability to pay credit card debt in full hinges on affordability as this is the case for higher income earners who use credit cards for conveniences unlike lower income earners who rely on credit cards and are more prone to revolve their credit card debt (Stavins, 2020).

A study on consumer debt payment choices on vehicle loans revealed a consumer preference to pay targeted monthly payments, with more regard to the maturity of their loans rather than the cost of debt which may result in the debt costing more in the long run (Argyle et al., 2020). In another study exploring how multiple credit card holders pay their debt, the results showed a preference to balance payments across credit cards, with no regard for the interest rates on each of the cards (Gathergood et al., 2019).

Another insight into consumers' mental approach to debt repayments showed a higher repayment preference to non-durable goods than durable goods due to consumption on durables which results in less 'pain' being felt by consumers in paying for goods that will still be of use (Quispe-Torreblanca et al., 2019). However,

when the “repayment-by-repurchase” method was tested, the results showed that it is the preference aspect that seems to encourage consumers to pay higher on their credit card balances irrespective of whether those goods were durable or non-durable (Donnelly et al., 2024). These studies revealed various psychological influences that drive consumers to approach their debt repayment in a manner that may not be economically optimal on their finances considering the higher borrowing cost linked to credit cards and contract terms on vehicle loans which may be up to 66 months (Argyle et al., 2020; Keys & Wang, 2019).

In general, consumers appear to be debt averse. Almenberg et al. (2021) found that consumers that were uncomfortable with debt spent less of their disposable income on debt and had less debt-to-income ratios. One of the notable findings in Białowolski et al. (2020) was the consumers’ view that to avoid indebtedness was optimal financial behaviour, reflecting the aversion to debt. Greenberg et al. (2020) also noted risk aversion where the relationship between debt type sensitivity was driven by the participants’ aversion to high-interest rate debt types. Furthermore, risk aversion attitudes were noted in an experiment where consumers were so focused on reducing debt in their portfolio even at the detriment of higher returns that could be obtained on positive balances (Martínez-Marquina & Shi, 2024). However, this study also suggested consumers repayments of debt can be optimal as repayments were made to higher interest debt holdings first (Martínez-Marquina & Shi, 2024), which differed from previous studies of consumer debt repayments being sub-optimal (Argyle et al., 2020; Keys & Wang, 2019).

South Africans, middle class citizens in particular, find themselves with various forms of debt in meeting their aspirations considering the access to credit that came with financialisation and public sector reform post-apartheid (James, 2021). However, this comes with an added obligation to not only provide for their immediate families but also extended family which is unable to maintain their livelihoods (James, 2021; Webb, 2021). This pressure that comes with these loans burdens these citizens with the ‘burden’ of taking on debt to meet these obligations resulting in over-indebtedness as one obligation is met through another interest-bearing obligation (James, 2021). Webb (2021) argues this ‘burden’ starts at student level due to the expectations placed upon young black first-generation students to uplift their families after completing their studies.

2.2.2 Consequences of consumer debt and consumer indebtedness

The nature of debt comes with an obligation to pay back what is owed to the provider of the debt, thus resulting in a “burden” or “weight” to the consumer due to the amount of the debt or its status, or the subjective obligation due to the emotional burden that comes with debt obligation.

Consumer debt and consumer indebtedness impacts various aspects of consumers’ lives negatively. Consumer debt or consumer over-indebtedness is a contributor to financial strain felt by households who have anxiety over coping financially to fulfil the needs of their families (French & Vigne, 2019). Ryu and Fan (2023) term these as financial worries which are caused by consumer debt and worries over financial day-to-day expenses and are associated with psychological distress among US adults. In the US, women were found to be significantly more stressed by debt than men particularly on their job performance and family life with no significant differences on health, which suggests women are more affected by debt than men health (L. F. Dunn & Mirzaie, 2023).

Although L. F. Dunn and Mirzaie (2023) results exhibited no significant difference on health between genders, the study suggests the individuals’ health is affected by debt nevertheless. In contrast, Chen et al. (2021) suggested debt is associated with higher levels of stress and lower levels of physical health in the US, the association being stronger on woman than men. The study noted the role of perception in self-reported health as women were more likely to report debt struggles compared to men (Chen et al., 2021). Using a neoliberal subjective view in determining the association between health and debt in the US, Sweet (2018) found that the view of debt as failure was strongly associated with worse emotional, psychological, and cardiovascular measures. However, while Bialowolski, Weziak-Bialowolska, Lee, et al. (2021) concurs with stronger negative psychological outcomes of debt related financial stress, there were no adverse effects with anxiety and cardiovascular disease. Therefore, there seems to be mixed results on the impact of consumer debt and health, which may be influenced by the research approach.

The weight of debt also affects employee job attitudes and indirectly results in conflicts with family due to the financial strain experienced by employees (Black et al., 2024). Spoelma and Fletcher (2024) supported the impact of debt in the

workplace by concluding that personal debt impacts leaders in the organisations through a lowered sense of control, more so among men than women. The difference in leadership styles between genders influenced results in this case as, based on the stress impact on women in certain studies, the expectation would be that women be more affected by personal debt in the workplace than men. Overall, these studies evidence the negative psychological impact of debt on individuals and households.

2.3. Life satisfaction

Life satisfaction and happiness are usually used interchangeably in literature, and these terms have been used interchangeably to define well-being along with quality of life and subjective well-being (SWB) (Greenberg & Mogilner, 2021; Kollamparambil, 2020; Ngamaba et al., 2020; Xiao et al., 2021). This research paper considered all studies linked to these terms as relevant for this study where study objectives were linked to financial well-being, SWB and consumer debt.

2.3.1 Concept and determinants of life satisfaction

Subjective well-being has three main components of life satisfaction, positive affect and negative affect with further sub-domains which impact one's life satisfaction being work, family, finances, leisure, health, self-views of one's life and one's group (Diener et al., 1999). Diener et al. (2017) defined life satisfaction as "people's overall evaluations of their lives and their emotional experiences" (p. 87). It is therefore logical to conclude that the individual's evaluation of the status of any of the domains of their life satisfaction will have an impact on their life satisfaction. Figure 3 shows the conceptual view that links life satisfaction to consumer debt through financial well-being, to facilitate the narrative.

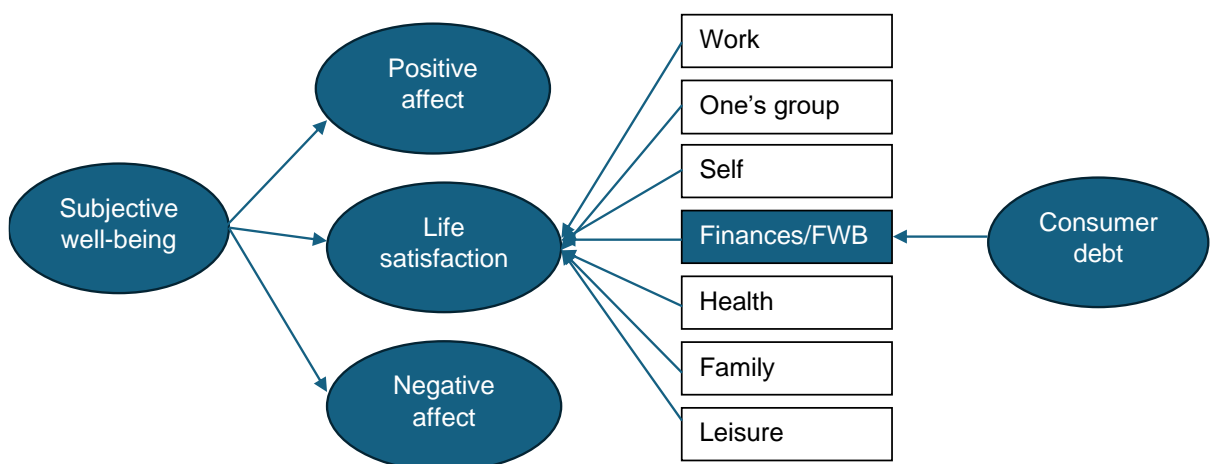


Figure 3: Conceptual view of consumer debt and life satisfaction

2.3.2 Financial well-being as a component of life satisfaction

Brüggen et al. (2017) defines financial well-being (FWB) as “the perception of being able to sustain current and anticipated desired living standard and financial freedom” (p. 229). Complimenting this definition, Netemeyer et al. (2018) identified the two components of subjective well-being as current money management stress and an expectation of future financial security, which encompasses the assessor’s current assessment and future expectations regarding their financial status. Financial satisfaction is not interchangeable with FWB but a measure of FWB and is used by scholars as a prevalent construct to understand FWB (Brüggen et al., 2017; Nanda & Banerjee, 2021), therefore considered relevant for this study.

The concept of FWB consists of both objective and subjective elements, with objective elements in as far as financial measures are concerned and subjective elements which are influenced by consumer behaviour due to psychological attributes and attitudes towards debt (Netemeyer et al., 2018). This distinction comes through in various research methodologies with some scholars taking objective measures of financial conditions or subjective measure through self-reported views from participants, or both.

Ngamaba et al. (2020) determined that, as one of the determinants for SWB, financial satisfaction was positively and moderately associated with subjective well-being. However, there was a skew of this association to developed countries due to the population of studies being vast in those countries, which brings into question whether the conclusion can be deemed to developing countries. Netemeyer et al. (2018) concurred and took it further by concluding that, not only was financial well-being positively associated with subjective well-being but determined that it was a key predictor of overall well-being compared to the other elements of subjective well-being.

FWB has a spillover effect on other domains of life satisfaction (Kahneman et al., 1999). Ryu and Fan (2023) determined an association between financial worries and psychological stress, which impacts the finances and health domains of life satisfaction. FWB can also impact the family through the household financial strain felt due to financial pressures (Athreya et al., 2019; French & Vigne, 2019; Friedline

et al., 2021). Poor FWB due to financial stress even as an impact at work through changes in leadership style and worker experiences (Black et al., 2024; Spoelma & Fletcher, 2024).

Financial conditions can have both the negative and positive effects on FWB. While financial distress was negatively associated with FWB (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021) along with risky indebtedness behaviour (Abrantes-Braga & Veludo-de-Oliveira, 2020), financial security and financial capability had a positive association to FWB which then had a positive or negative spillover effect to consumer health. In a South African study, Reyers (2019) identified financial capability is an important predictor of emergency savings which enables preparedness for financial emergencies, thus placing consumers in an improved FWB state. In addition, Bialowolski, Weziak-Bialowolska, and McNeely (2021) showed financial control as positively related to FWB when compared to financial fragility while Tay et al. (2017) showed that income also played a moderator role in the negative impact of financial worry on FWB. Contributing to FWB and life satisfaction studies, Kollamparambil (2020) concluded that absolute income levels have a strong relationship with happiness in South Africa and the levels of happiness did not decline regardless of the increase in income inequality. However, as the study approach was income-focused rather than debt-focused, this reflects a gap to explore a debt-focused approach to determine a relationship with life satisfaction.

2.4. Consumer debt and life satisfaction

Literature has various studies related to the constructs of consumer debt and life satisfaction either directly studying the relationship between these constructs or studying the impact of debt on FWB which then affects life satisfaction. All these studies are relevant to this research due to the interchangeable nature in which life satisfaction and subjective well-being were used. Table 2 shows the grouping of literature as it relates to the conceptual view of consumer debt and life satisfaction and has been used as a guide to narrative the relationship between the constructs.

2.4.1 Impact through financial well-being

Consumer debt impacts FWB through financial strain, financial worry and vulnerability on individuals and households (Black et al., 2024; Daud et al., 2019; French & Vigne, 2019; Tay et al., 2017). While financial strain is not holistically explained by consumer debt or indebtedness alone, there is a positive relationship

between consumer debt and financial strain (Black et al., 2024) and the relationship is stronger where debt products have higher interest rates (Greenberg et al., 2020).

Consumer debt also impacts FWB through financial distress when severe delinquency levels are experienced and the consumer is regarded as over-indebted (Athreya et al., 2019; Bialowolski, Weziak-Bialowolska, & McNeely, 2021; Cesar Leandro & Botelho, 2022). Financial distress is also seen as financial fragility, which also compromises FWB (Bialowolski, Weziak-Bialowolska, & McNeely, 2021). However, when evaluated with financial control as a positive impact on FWB, the negative association of financial fragility was not stronger than financial control which improves FWB (Bialowolski, Weziak-Bialowolska, & McNeely, 2021). This is good in proving that, while financial distress implies a severe impact on the consumer's FWB, it signifies that consumers are not helpless to influence their FWB positively.

2.4.2 Impact through sub-domains of life satisfaction

Debt-related financial distress was associated with 51% of increased chances of the onset depression, impacting consumer mental health strongly compared to negative impacts on physical health (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021). Although only 16% admitted to their health being quite affected by debt-related stress by Chen et al. (2021), debt was associated with higher levels of stress and lower physical health, which was more prominent in women with higher levels of credit card debt. This aligns with the observations by L. F. Dunn & Mirzaie (2023) that women's health was more affected by debt related stress than men, with women exhibiting an average 30% more debt related stress than men. Furthermore, the internalised feelings of failure due to having debt were associated with worse physical and mental health, more prominent in women who were also not highly educated (Sweet, 2018). The magnitude of affected consumers varied on these US studies, although the conclusions on the negative association of consumer debt on physical and mental health was aligned.

Consumer debt has an impact on job performance and family life, with women being more affected on job performance than men (L. F. Dunn & Mirzaie, 2023). The impact on the consumer's work life is also evident in Spoelma and Fletcher (2024) where leadership styles were impacted by financial stress, although men more impacted than women unlike in L. F. Dunn and Mirzaie (2023). This was also supported by

Black et al. (2024) with observations of consumer debt negatively impacting work experiences and family relationships due to the financial strain.

While student loans resulted in young adults having access to family support, engaged in social activities and had a higher self-esteem, this impacted life satisfaction differently in that self-esteem was positively related to life satisfaction but financial support was not (Fan & Ryu, 2023). Credit cards had no significant association with the young adults' self-esteem nor their social activities and had no relationship with their life satisfaction (Fan & Ryu, 2023). This was an interesting study which demonstrated how the young adults' self-view and their group associations were affected positively by access to financial support, yet life satisfaction was not impacted in a similar manner. The observations differed from other studies which concluded both student loans and credit cards to be negatively associated with life satisfaction (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021). The self-view aspect of life satisfaction was also validated by (Sweet, 2018) since it was the consumer's self-view as failure that resulted in the negative association with life satisfaction through negative health outcomes.

Student loans were identified as the debt type with the strongest negative influence on life satisfaction due to the stress attached to repaying this debt after the benefit of the loan was achieved (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021). However, this was not supported by Robb et al. (2019) as student loan debt did not have a negative association with financial satisfaction.

2.5. Consumer debt type influence on life satisfaction

Unsecured debt products have a higher interest rate compared to secured debt products. This differentiating factor can drive the aversion of consumers to higher interest debt types (Greenberg et al., 2020; Martínez-Marquina & Shi, 2024) and can influence how consumers experience these debt types (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; Greenberg et al., 2020; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Xiao et al., 2021).

Greenberg and Mogilner (2021) determined that, although debt had a negative association to life satisfaction overall for all three debt types studied, student loans had a significant relationship to life satisfaction while mortgage loans and credit card

debt did not yield similar results. In addition, Chen et al. (2021) identified high levels of credit card debt, student loans and loans from family as a significant impact on women's stress levels thus impacting their health, compared to all other debt types. Furthermore, Mudrazija and Butrica (2023) concluded that, while secured products had a limited impact on consumers' health, the impact from unsecured products was substantial. The studies reflect consistent results in the detriment effects that unsecured products have on consumer life satisfaction.

Although Black et al. (2024) created a single debt complexity variance to test debt types against the life satisfaction of consumers, the complexity of debt showed a stronger relationship to financial strain compared to the amount of debt, proving the relevance of debt type to consumers' view of their debt. Greenberg et al. (2020) observed that financial product sensitivity strongly predicted financial health due to consumers' aversion to higher interest debt types, complementing the narrative on debt type relevance. These studies did not dissect the impact on life satisfaction per debt type, however, show the relevance of debt types in how consumers' lives were impacted.

Of the seven debt types studied in China, the results were consistent with prior research that any type of debt is negatively associated to life satisfaction however the results were significant for medical debt, education, other debt, and mortgage loans, in this order (Xiao et al., 2021). The study further noted that the holdings of three debt types (medical, education, and mortgage loans), impacted both low-income and middle-income earners whereas two debt types (business or other debt) impacted only middle-income consumers (Xiao et al., 2021). Although consistent with previous research on the overall negative influence of consumer debt on life satisfaction, the debt types with the strongest impact consisted of both secured and unsecured debt type.

The purpose and perception of credit was strongly highlighted by Bialowolski and Weziak-Bialowolska (2021) where secured debt (mortgage loans and vehicle loans) increased life satisfaction compared to unsecured products (credit cards and student loans) due to the consumers' perception influenced by the benefit still obtained from the assets linked to the debt. Greenberg and Mogilner (2021) observed no significant association on mortgage loans whereas Bialowolski and Weziak-Bialowolska (2021)

showed an increase in life satisfaction. This could be due to the different research approached since Bialowski and Weziak-Bialowska (2021) was a longitudinal study and Greenberg and Mogilner (2021) was survey-based.

Table 2: Literature review classification – Consumer debt and life satisfaction

No	Grouping	Concept/sub-domain	Country of study	Reference
1	Debt and life satisfaction	Debt type influence	US	Greenberg & Mogilner, 2021
2	Debt and FWB	Through financial strain, spillover to	Europe and North	French & Vigne, 2019
3	Debt and life satisfaction	Debt type influence	US	Bialowolski & Weziak-Bialowolska, 2021
4	Debt and life satisfaction	Health	US	Bialowolski, Weziak-Bialowolska, Lee, et al., 2021
5	Debt and FWB	Through financial distress	US	Athreya et al, 2019
6	Debt and life satisfaction	Health	US	Chen at al, 2021
7	Debt and life satisfaction	Job performance, health, family life	US	Dunn & Mirzaie, 2023
8	Debt and life satisfaction	Health, Self view	US	Sweet, 2018
9	FWB and SWB	Spillover to health	US	Ryu & Fan, 2022
10	FWB and SWB		Global (majority of	Ngamaba et al., 2020
11	Debt and life satisfaction	Work , debt type influence	US	Black et al., 2024
12	FWB and SWB	Spillover to work	US	Spoelma & Fletcher, 2024
13	Debt and life satisfaction	Health, debt type influence	US	A.E. Greenberg et al, 2020
14	Debt and life satisfaction	Through financial worry	Global (majority US)	Tay et al., 2017
15	Debt and life satisfaction	Health	US	Mudrazija & Butrica, 2023
16	Debt and FWB		US	Robb, et al., 2018
17	FWB and SWB		US	Netemeyer, et al. 2018
18	Debt and FWB	Financial vulnerability	Malaysia	Daud et al., 2019
19	Debt and life satisfaction	Through financial stress	US	Fan & Ryu, 2021
20	FWB and SWB	Spillover to family	US	Friedline et al., 2021
21	Debt and life satisfaction	Debt type influence	China	Xiao et al, 2021
22	FWB and SWB		US	Bialowolski, Weziak-Bialowolska, Lee, et al., 2021
23	Debt and FWB	Through financial distress	Global (majority US)	Leandro & Botelho, 2022

2.6. Perception of consumer debt as “debt”

The concept of good and bad debt emerges from the interpretation that, depending on the type of debt taken and the purpose from which it was taken, the influence on life satisfaction is then positive or negative (Bialowolski & Weziak-Bialowolska, 2021). In this context, mortgage loans and car loans have a positive impact on life satisfaction as the benefit from the product obtained through debt outweighs the burden of repayment attached to debt (Bialowolski & Weziak-Bialowolska, 2021). (Greenberg et al., 2020) supports this in concluding that the consumer’s sensitivity to the type of debt product is a strong predictor of financial health as consumers can make decisions which will not be detrimental to their financial health. However, Black et al. (2024) argued that even when debt is considered good, it can still result in financial strain if complexity of debt is considered where a consumer has various types of debt which impose a demand on their financial resources.

The amount of debt is not the determinant of the perception the consumer may have of their debt since Bialowolski and Weziak-Bialowolska (2021) determined that mortgage loans increase life satisfaction although much higher in debt value. Black et al. (2024) supported this as it was the complexity of debt rather than the amount of debt that had a stronger association with financial strain in their study although the amount of debt also had a positive association with financial strain.

Consumers with a distorted view of credit limits by seeing these limits as additional income end up budgeting and buying at a level that exceeds their real income which contributes to risky indebtedness behaviour that can ultimately affect their financial well-being (Abrantes-Braga & Veludo-de-Oliveira, 2020). This also reflects an important element of the consumers’ perception and how it influences their behaviour which ultimately affects their well-being. Greenberg and Mogilner (2021), while agreeing with the negative relationship between the type of debt and impact on life satisfaction, took it further and argued it is the labelling of debt as “debt” which influences the life satisfaction of the consumer. In this context, even if credit cards have a high interest rates and mortgage loans were the highest in value, these did not have a negative impact on life satisfaction since the consumers did not label it as debt as strongly as student loans.

The studies referred to above were performed in developed countries and therefore cannot be assumed to apply to emerging economies.

The South African terms “we owe until we die” and “we are now working for mashonisa (loan sharks)” (James, 2021, p. 38) which exist in different generations in South Africa signifies a life sentence and provides a glimpse of South Africans’ perception of debt in general without consideration to debt types, albeit to a very limited extent. The purpose of the study was not to explore the impact of debt on life satisfaction or well-being but rather the impact of financialisation in South Africa’s post-apartheid regime. Without specifically exploring further, the evidence cannot be interpreted as having a negative impact on life satisfaction based on the perception of debt. Webb (2023) supports this study and observed that it was this form of indebtedness that students associated with which resulted in students supporting the #FeesMustFall movement. Students understood the indebtedness that would come in the form of the repayments to NSFAS after completion of their studies which would collide with the family obligations arising from ‘black tax’ (Webb, 2023).

2.7. Theory contributions

The objective of this research is to add to the existing body of literature which seeks to understand the impact of debt on the consumer’s well-being, which is underpinned by the subjective well-being theory.

The subjective well-being theory is concerned with how people view their own lives and emotional experiences (Diener et al., 2017). The theory recognises the three main domains of subjective well-being which are positive affect, negative affect and life satisfaction Diener et al. (2017). Life satisfaction is further divided into various sub-domains of work, one’s group, health, financial well-being, self-view, family, and leisure as outlined in figure 3. Financial well-being is deemed to be the key predictor of financial well-being (Netemeyer et al., 2018). Financial well-being further has spillover effects on other sub-domains of life satisfaction, further validating its importance (Tay et al., 2017).

This study used life satisfaction as the domain to measure the subjective well-being of South African consumers, which is the core concern of this study. Life satisfaction was measured using the satisfaction with life scales and measures the individual’s

well-being based on their cognitive judgmental process (Diener, Emmons, Larsen, et al., 1985; Diener et al., 1999, 2017). These cognitive judgments were determined using the survey questionnaire which were distributed via a survey tool to collect data.

Recent studies have focused on understanding the impact of consumer debt and the impact on various aspects of the consumer's life satisfaction due to the financial strain and stress it brings. Existing literature demonstrated the impact on the consumer's physical and mental health (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Sweet, 2018), with one of the studies concluding that the impact on mental health was more significant compared to physical health (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021). The impact on work through leadership style changes and work experiences due to the stress of debt was also demonstrated (Black et al., 2024; L. F. Dunn & Mirzaie, 2023; Spoelma & Fletcher, 2024). Finally, studies also demonstrated the impact through social groups and one's self view of their lives (Fan & Ryu, 2023; Sweet, 2018).

The type of debt held by the consumer and perception of benefits that the consumer obtains from the assets purchases with debt has also been highlighted as relevant in how it impacts the consumer's life satisfaction Bialowolski & Weziak-Bialowolska (2021; Black et al., 2024; Greenberg et al., 2020; Greenberg & Mogilner, 2021; Xiao et al., 2021). The researcher aims to add to this body of existing debt and subjective well-being literature (Greenberg & Mogilner, 2021) in the context of an emerging economy as most of the research is in the developed economy context.

2.8. Conclusion

Chapter 2 discussed the applicable, relevant theory for the two constructs identified in the research to determine what previous studies have established and to determine the gap that can be addressed in literature with this study. There have been various studies performed on consumer debt and how it impacts life satisfaction. However, most of the studies have been in developed countries, with a few developing countries captured in the literature due to the scarcity of highly rated literature in this context. The researcher aims to contribute to the debt and subjective well-being literature through this research, in the South African context. The next

chapter discusses the identified research hypotheses determined from the literature review performed.

3. CHAPTER 3: RESEARCH QUESTIONS AND HYPOTHESES

3.1. Introduction

The research aimed to answer the overarching research question of: How do South African consumers' debt impact their life satisfaction? The sub-questions that are related will be: Does South African consumer debt impact consumer life satisfaction differently for different types of debt held? Do South African consumers' debt perception of debt types held impact life satisfaction based on this perception?

3.2. Consumer debt and life satisfaction

Consumer debt compromises FWB of consumers and hinders overall well-being of individuals and society at large (Netemeyer et al., 2018). Consumer debt has a negative impact on FWB due to the financial strain, financial distress and financial worry caused (Athreya et al., 2019; Fan & Ryu, 2023; French & Vigne, 2019; Tay et al., 2017). The financial strain, distress and worry associated with debt has an impact on various aspects of consumers' lives that impact life satisfaction, which manifests through the deterioration of physical and mental health (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Sweet, 2018), work (Black et al., 2024; L. F. Dunn & Mirzaie, 2023; Spoelma & Fletcher, 2024), social lives Fan & Ryu, 2023, and one's self view (Fan & Ryu, 2023; Sweet, 2018). The results of these studies were consistent in observing a negative relationship between consumer debt and life satisfaction through deteriorated FWB and life satisfaction.

South African specific studies on debt and impact on life provide a glimpse of a negative impact of debt to life satisfactions, due to pressures of 'black tax' and an 'acceptance' of the life sentence, which comes with debt having an impact from one generation to the other due to the South African history (James, 2021; Webb, 2021). Kollamparambil (2020) contributed to the FWB and subjective well-being literature and posited that the increase in income levels has a positive relationship with happiness in South Africa. However, this study was income-based, leaving a gap of a debt-focused approach study to determine its impact on life satisfaction. South African men were found to be financially resilient compared to women (Zeka & Alhassan, 2024), which would be expected to yield results that are better than women where FWB is concerned due to the impact of debt. The insight into FWB of

South Africans and a view of the impact of debt in their lives is too limited from these studies, therefore cannot be used to form a hypothesis. However, based on the levels of inequality in South Africa (Chancel et al., 2023) and the known impact that was experienced from the COVID-19 globally which impacted consumers' FWB (Fan & Ryu, 2023; Friedline et al., 2021), the researcher expects the impact of debt on life satisfaction to align to observations from developed countries.

Based on the above factors, the hypothesis that was developed to answer research question 1 was:

H1: *Consumer debt has a significant negative relationship with life satisfaction (Null hypothesis - H10)*

Alternative hypothesis (**H11**): *Consumer debt has no significant negative relationship with life satisfaction*

3.3. Consumer debt type and life satisfaction

The impact on life satisfaction is determined by the type of debt held (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021). When consumers are sensitive to the type of debt taken or the interest rate structure of that debt, it predicts the impact on their life satisfaction (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; Greenberg et al., 2020; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Xiao et al., 2021).

Some studies identified unsecured debt to strongly influence life satisfaction compared to secured products (Chen et al., 2021; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023). Bialowolski and Weziak-Bialowolska (2021) observed that mortgage loans and vehicle loans increased life satisfaction due to the benefit obtained from the assets linked to debt while credit cards and student loans decreased life satisfaction as the benefit from this debt was either short-term or passed. Xiao et al. (2021) also conclude that the top three debt types that has a strong negative impact on life satisfaction were unsecured, although these results differed slightly to previous research.

Unsecured products in emerging economies are higher than developed countries (Badarinza et al., 2019). In addition, unsecured debt has higher interest rates which consumers are sensitive to (Greenberg et al., 2020; Martínez-Marquina & Shi, 2024). These factors, together with results of existing literature, led to the following hypothesis that was developed to answer research question 2:

H2: *Unsecured consumer debt types will have a stronger negative relationship with life satisfaction compared to secured consumer debt types (null hypothesis – H2o).*

Alternative hypothesis (H21): Unsecured consumer debt types will have no stronger negative relationship with life satisfaction compared to secured consumer debt types.

3.4. Consumer perception of debt as “debt” and life satisfaction

The quantum of debt does not necessarily result in the being perceived as having a positive or negative impact on life satisfaction, but rather the type or complexity of debt (Black et al., 2024; Greenberg et al., 2020; Greenberg & Mogilner, 2021).

The purpose for which debt was taken results in the debt being associated with emotions of being good or bad (Bialowolski & Weziak-Bialowolska, 2021), which brings perceptions due to emotional responses associated with debt, regardless of the amount of the debt. Even when debt is considered good due to the purpose it serves in a consumer’s life, once it becomes a burden on the available financial resource, it can change the perception of the consumer (Black et al., 2024). In addition, the perception of credit limits as additional income in the context of credit cards as consumer debt, leads consumers to have risky indebtedness behaviour which can impact their life satisfaction negatively (Abrantes-Braga & Veludo-de-Oliveira, 2020), further supporting the influence the perception of debt has on consumers behaviour. Greenberg and Mogilner (2021) posits it is the labelling of debt as debt that carries the most weight on the consumer’s perception of that debt which then determines the impact on their life satisfaction rather than the amount of debt.

South African studies give a limited view of the burden of debt due to limited financial resources of the middle class which creates a necessity of multiple debt being obtained to maintain extended households (James, 2021). However, this view is of

overall 'weight' of debt without consideration of the type of debt, which reflects a gap for studies to be performed.

Considering the above factors, the hypothesis that was developed to answer research question 3 was:

H3: *Consumer debt perceived as 'debt' has a significant negative relationship with life satisfaction (null hypothesis - H30)*

Alternative hypothesis (H31): Consumer debt perceived as 'debt' has no significant negative relationship with life satisfaction

3.5. Conclusion

Chapter 3 aimed to provide a view of how recent relevant literature relating to consumer debt and its impact on overall subjective well-being was used to develop the hypothesis to be tested as part of this research. Figure 4 provides a conceptual model of the study to test the relationship between consumer debt and life satisfaction in South African consumers. The next section discusses the proposed research design and methodology for the hypotheses identified.

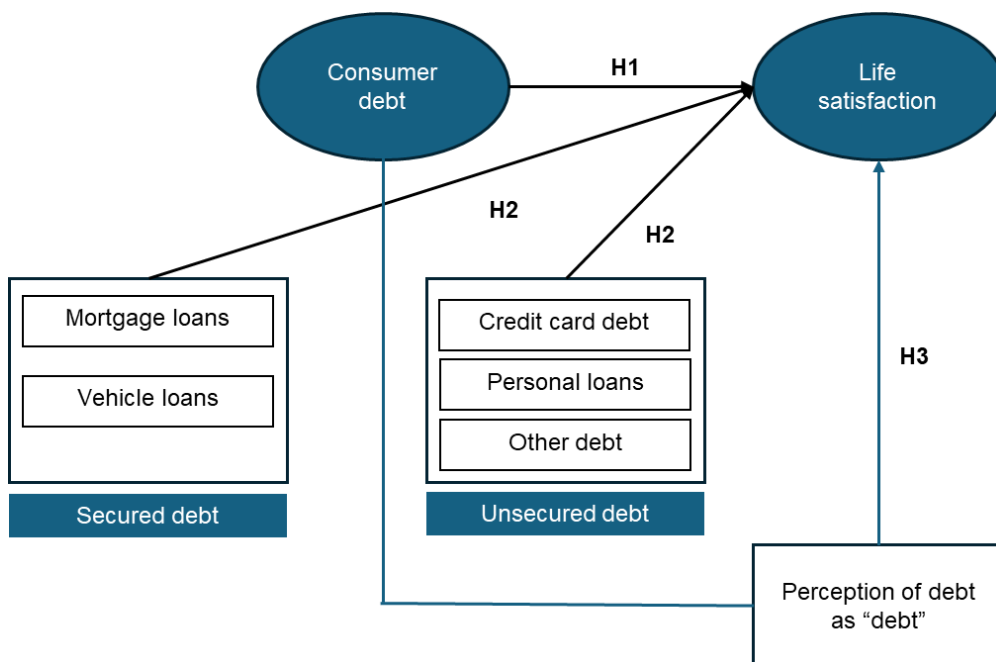


Figure 4: Conceptual model of study

4. CHAPTER 4: RESEARCH METHODOLOGY

The research methodology selected was based on existing literature as the two variables applicable to this study have been studied before. Each component of the research methodology followed will be outlined and justified below.

4.1. Choice of methodology

A descriptive, explanatory research design was adopted to obtain insight into the South African consumer debt and its impact on the consumers' life satisfaction, with consumer debt being an independent variable and life satisfaction being a dependent variable. The research was focused on South African individuals that have diverse debt types in their finance portfolio which was collected through questionnaires that was completed as part of the survey. The questionnaire was designed to include the qualifying question of being South African prior to completion. Where individuals did not meet this qualifying criterion, the survey could not be completed. A South African was regarded as anyone with a South African ID number and permanently resides in South Africa. In the explanatory research design, data is collected and analysed using statistical methods to explain relationships (Barczak, 2015; Saunders & Lewis, 2018).

A positivism philosophy was followed as this is a quantitative study with hypotheses based on existing theory and literature which involved collecting data that was statistically analysed and measured, with the expectation that if the study were to be repeated, similar results would be achieved as human influence was minimised if not eliminated (Barczak, 2015; Saunders & Lewis, 2018). The constructs studied were previously studied in the US (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021), further supporting the positivism approach of the study.

The ontological and epistemological assumptions were applied to this research as both constructs studied have subjective elements which creates the importance of not creating undue realities or conclusions about the data collected as the research progresses (Solem, 2003). As the researcher is also a South African consumer that considers it important to understand factors that impact individuals' well-being, it is important that the axiological assumptions made from the researcher's own values

and beliefs maintain neutrality and objectivity during the research process (Saunders & Lewis, 2018; Solem, 2003).

A deductive approach was followed for this research. A deductive research approach is normally employed with quantitative studies where a theory is identified, hypothesis developed and then tested (Barczak, 2015). Saunders and Lewis (2018) define the deductive approach as involving a development of a research question from the existing theory, developing hypothesis from the questions using testable propositions which involve a relationship between identified variables, collecting data, analysis the data and the concluding whether the theory is confirmed or not. The two variables identified in this research have been previously studied quantitatively mostly in the developed country context and therefore are based on existing theory, validating the deductive approach (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021).

A mono research choice was applied as the survey was the only method of primary data collection utilised during the research process (Saunders & Lewis, 2018), due to the limited time available to collect data. The previous studies also utilised surveys from publicly available data or privately sourced data using survey platforms as the research methodology choice (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021).

The life satisfaction study suggested that the relationship between consumer debt and life satisfaction was negative which aligns to H1 of this research and used the same method to determine life satisfaction (Poalses & Tustin, 2023). The difference in approach compared to this existing South African research is that the relationships established between the identified constructs was at an overall financial well-being level whereas this study aimed to determine the relationship at overall debt and debt type levels. Therefore, secondary data could only partially fulfil the objectives of this study, therefore was not used (Saunders & Lewis, 2018).

A survey was conducted using questionnaire in line with the approach followed in similar studies (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). The questionnaire used was obtained from peer reviewed academic article (Greenberg & Mogilner, 2021), and modified for South African relevance where necessary.

Due to time limitations arising from the Masters in Business Administration (MBA) course, a cross-sectional study was performed, which represents a view of this study at a particular point in time this year (Saunders & Lewis, 2018). However, other studies used cross sectional research for these constructs together with longitudinal studies, although the majority were longitudinal studies (Greenberg et al., 2020; Greenberg & Mogilner, 2021; Sweet, 2018; Tay et al., 2017).

Consideration was made to use the available secondary data from the National Income Dynamics Study (NIDS) (Southern Africa Labour and Development Research Unit (SALDRU), 2017) waves four and five as a form of a longitudinal study in line with the approaches in previous studies (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). The NIDS has an advantage as it consists of large volumes of data which is a good representation of the population. However, the waves four and five studies were completed in 2014/2015 and 2017 respectively, which is more than five years ago and may no longer be relevant for research purposes. This secondary data was not utilised in this research responses obtained were reasonable compared to the number of questionnaire sent out.

4.2. Population

Saunders and Lewis (2018) state the population needs to be a complete set of data that is available to the researcher (p. 138). The population consisted of all South Africans that were expected to have multiple debt products, including secured and unsecured debt products. As these criteria could not be pre-determined before the data was collected, the survey was conducted on all reachable adult individuals who were expected to have debt. The population was selected across all provinces in

South Africa based on the individuals that could be reached to secure as many respondents as possible.

Most of the studies used available national secondary data to conduct their research as the information had adequate and relevant information for the study (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Mudrazija & Butrica, 2023; Xiao et al., 2021). Due to the consumer information being protected by the Protection of Privacy and Information Act (POPIA), this information is only maintained by regulated institutions like TransUnion, the South African Credit & Risk Reporting Association (SACRRA) and bureaus like Experian that collect data from credit providers for statistical purposes which is not available to the public.

Ideally, the survey would have been distributed to the 27.92 million credit active consumers in South Africa (NCR, 2024a) to ensure completeness. However, this is not possible and therefore, the study was conducted on all the debt holders that could be reached. Saunders and Lewis (2018) also recognise that it is not always possible to reach the entire population therefore most researchers usually collect data from a sample, particularly in academic situations where there is limited time to conduct the research.

4.3. Unit of analysis

The unit of analysis was done at an individual level, in line with the approach of previous similar studies (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021).

4.4. Sampling method and size

The sampling method and size are elaborated on below.

4.4.1 Sampling method

A non-probability sampling technique using purposive sampling was applied as the sample was selected from a complete list of the population but was based on the researcher's judgment of which individuals are likely to meet the criteria required for

the research (Saunders & Lewis, 2018). The sample consisted of individuals selected from the predefined population across all provinces in South Africa, with permanent residence in South Africa, had a South African ID numbers and possibly had multiple debt products based on the researchers' judgment.

Since the existence of multiple debt products could not be pre-determined, the survey was structured with rules that enabled the participants to indicate the debt types applicable, in line with previous research (Black et al., 2024; Greenberg et al., 2020; Greenberg & Mogilner, 2021). This ensured that the final sample selected met the criteria required for the purposes of this study.

Similar quantitative studies utilised large samples of secondary data available and used of platforms like Amazon Mechanical Turk in the US where survey participants were paid to complete the survey (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021). Some studies used a combination of the two methods (Black et al., 2024; Greenberg & Mogilner, 2021).

The sample was obtained from the researcher's personal network which was reached via WhatsApp and LinkedIn social media platforms, e-mail, and face-to-face requests made prior to sharing the survey link. Each individual approached through these platforms was requested to forward the survey link to friends and family, to obtain as many respondents as possible.

4.4.2 Sampling size

Where cross-sectional studies were conducted as a stand-alone study or to supplemented a longitudinal study, the sample sizes were 286 (Sweet, 2018), 458 (Black et al., 2024), 494 (Greenberg & Mogilner, 2021), 985 (Greenberg & Mogilner, 2021), 536 (Greenberg & Mogilner, 2021), 1008 (Greenberg & Mogilner, 2021), 401 (Greenberg et al., 2020), and 1008 (Greenberg et al., 2020). The participants on these studies were paid, and therefore the numbers are on the higher side than would be reached through purposive sampling.

Where survey participants are paid to participate in the study, the number of responses becomes higher (Church, 1993), resulting in data large enough to make reasonable conclusions. The researcher used these sample numbers as a guide on what was achieved on previous studies. The sample reached was not paid since the institution requirements do not allow paying survey participants; the survey was on a voluntary basis.

An estimated average minimum of 503 respondents was required for this study if the average number of 3.4 accounts per customer is used and considering the statistical requirement of seven to eight respondents per question (Zikmund et al., 2013). This estimated number aligned to previous cross-sectional studies.

A total of 186 of respondents was achieved. Of these respondents, 9 were not South African and were therefore not included in the final sample analysed. A further exclusion of incomplete responses was made, resulting in the final of 139 respondents analysed for the purposes of this research. The sample size is lower than the previous studies however, considering the voluntary participation and length of the questionnaire, the researcher expected that the results could be lower than the targeted number .

4.5. Measurement Instrument

A questionnaire was used as the method primary method of data collection through a survey. Questionnaires are an appropriate measurement instrument in quantitative-explanatory descriptive research as large samples of data are required and it facilitates a standardised method of data collections which is subject to less interpretation challenges (Saunders & Lewis, 2018). Appropriate open and closed questionnaires were adopted from literature however, appropriateness of the questionnaire wording was assessed and adjusted where appropriate to suit the South African context of the study. This was applicable, for example, for the currency indicated on the questionnaire, the demographic choices and debt types included in the study. Student loans were not included in this research as a separate debt type as these do not feature as a significant loan type in South Africa, which necessitated the adaptation of the debt types available for selection on the questionnaire. Student loans were catered for as part of other debt types available for selection.

The questionnaire included various types of questions which can be used on the questionnaire (Saunders & Lewis, 2018, pp. 150–151). Section A consisted of demographics information like age, ethnicity, gender, education, income, etc. which consisted mainly of categorical questions and one quantity question to obtain the demographic profile of the respondents (Greenberg & Mogilner, 2021). Income categories used in the questionnaire were aligned to the Quarterly Labour Force Survey (QLFS) as these are relevant for the South African context and enabled the researcher the ability to analyse the responses using various classes of income (Stats SA, 2023, p. 47).

Sections B to F consisted of similar questions relating to different debt types (mortgages, vehicle loans, credit card debt, personal loans, and other debt types) to determine the asset holdings (for mortgages and vehicle loans) and debt holdings. The holdings were determined using categorial questions and objective measures of debt (amount, interest rate) were requested using quantity questions. The perception of debt was determined using open and closed questions. The closed questions were of a rating nature using a 7-point Likert scale with 1 being “*not at all*” to 7 being “*very much*”. The open question requested a brief narrative from respondents about their thoughts and feelings about their debt (Greenberg & Mogilner, 2021). Respondents were also requested to advise if they are personally liable for paying the debt to get full information on the potential impact of the debt on the individual (Greenberg & Mogilner, 2021). Open questions were kept to a minimum, and the wording of questions was similar across different debt types, to minimise cognitive investment time and improve intuitiveness of respondents as survey respondents can be inattentive (Brosnan et al., 2019). The questionnaire used is reflected in Appendix C.

Life satisfaction was assessed in Section G using the 7-point Likert life satisfaction scale which measures life satisfaction as a cognitive-judgmental process (Diener, Emmons, Larsem, et al., 1985, p. 71). Participants were asked five questions and requested to rate them from one to seven; for example “I am satisfied with my life” with 1 being “*strongly disagree*” and 7 being “*strongly agree*” (Diener, Emmons, Larsem, et al., 1985, p. 72).

4.6. Data gathering process

The survey was distributed online using SurveyMonkey as a self-administered tool of data collection. After obtaining approval from the ethical clearance process 12 August, the questionnaire was prepared on the survey tool and a pilot study was kicked off on 18 August 2024. A pre-test survey link was distributed to selected individuals from the researcher's network who were expected to meet the criteria required via WhatsApp and e-mail, to gauge the understanding and effectiveness of the questionnaire as a pilot study. The pre-test participants were requested to report back on the time taken to complete the survey, the number of debt types they have, understanding of the questions, ease of completion from using the tool, and any other relevant feedback from the completion process. 15 responses were obtained from the pilot study, refer to Appendix D.

4.7. Pre-test feedback

Most of the pilot study participants reported no difficulties in understanding the questions. One of the participants did not notice the difference between question seven and eight in Section A of the questionnaire. Therefore, to highlight the difference, the distinctive part of these questions was underlined prior to the final survey link distribution.

Participants with two or more debt types took between 10 to 30 minutes to complete the survey, the longest time reported arising from time taken to look up some debt type information. To address this feedback, the consent form narrative was updated to indicate that, while the survey was expected to take approximately 20 minutes, this depended on the debt types applicable.

The flow of the survey had to be updated as it did not move from each section as expected, and this was updated prior to the final survey link being sent. This arose due to the skip logic rules within the survey tool.

The questionnaire was also updated to indicate whether one or more answers could be selected and to ensure that the answering of questions was indicated as compulsory, based on additional feedback received.

The only feedback which was not addresses related to the concern about the number of questions. The researcher took time to set up the questionnaire in line with academic literature and to modify it to applicable debt types in South Africa. The decision was made to gather all the relevant information to avoid compromising the results of the study.

4.8. Final survey distribution

After updating the questionnaire for the pre-test feedback received, a new link was generated and distributed from 18 August 2024 (refer to Appendix D). The link was distributed through social media via WhatsApp and LinkedIn platforms, e-mail, and face-to-face interactions to the researcher's network across the provinces in South Africa. All participants were requested to participate voluntarily and were requested to forward the survey link to their personal networks. The data collection process was closed on 06 October 2024.

The researcher conducted weekly follows-ups on the surveys distributed as these were considered effective in increasing the number of responses from surveys (Deutskens et al., 2004). The researcher was cognisant of the long nature of the questionnaire with 84 questions if the respondent has all debt types, which may have a bearing on the quality of the responses obtained (Deutskens et al., 2004). This was reflected in the estimated time of completion of 27 minutes and 66% estimated completion rate from the survey tool, should the participant indicate all debt types were applicable (refer to Appendix D). A final completion rate of 75% was achieved with an average of 9 minutes taken to complete the survey.

4.9. Data analysis approach

Descriptive and inferential statistics were run on the IBM SPSS statistical tool based on the nature of data that was analysed. A combination of independent t-tests, 2-way ANOVA, correlation tests and multiple regression analysis were run as detailed in chapter 5 to determine the relationship between consumer debt independent variables and life satisfaction as a dependent variable, using the life with satisfaction scale.

The data collected was categorial nominal and ordinal data, scale, and qualitative data from open-ended questions. After determining the reliability and validity of data, descriptive statistics were finalised to determine the total number of the sample as N=130, which was the same as the total number of qualifying respondents from the survey. Due to respondents not having all types of debt, there were different numbers of data run for each debt type depending on qualifying respondents. The researcher performed checks on the split and determined these to be accurate.

The statistical assumptions for the different tests were checked prior to proceeding with the tests. Where outliers were identified which compromise the normality and skewness of the data, the researcher made a judgment call on these and deleted those data points where these were extreme. Due to the open-ended nature of some questions relating to scale data, the data was prone to errors from respondents.

All statistical tests were run at a 95% confidence level. All results with a sig value that was less than 0.05 was interpreted as significant based on statistical principles. Results of all statistical tests are presented in chapter 5 with relevant appendices included.

4.10. Quality controls

The Gordon Institute of Business School (GIBS) protocols were followed to ensure that data collection is done in line with guidance principles. The ethical clearance approval was obtained on 12 August 2024 prior to commencing the data gathering process on 18 August 2024.

The collection of data was conducted with utmost integrity to ensure there was no duplications of data. To ensure only South African data was collected, a qualifying question was included as the first question of the questionnaire. Non-South Africans could not proceed with the survey based on the set-up done on the survey tool by the researcher.

A pilot study was conducted on participants who had similar characteristics as the targeted population, to ensure that the questionnaire is understandable and not ambiguous to the participants. All necessary changes were made from the pilot

feedback and a separate link was generated to ensure the pilot study responses were excluded from the final sample analysed.

To the most possible extent, the researcher utilised the SurveyMonkey survey tool functionality to eliminate duplicate responses from the same participants. As part of the data clean-up process, the researcher further checked for duplicates in IP addresses.

All incomplete or unknown responses were eliminated from final sample used as on the data analysis. Greenberg and Mogilner (2021) had no challenges with the survey conducted and performed similar treatment where respondents did not know the values owed, giving confidence to the researcher that the use of this questionnaire as the basis of the study has yielded successful results.

The researcher aimed to eliminate bias in the data collected by distributing the survey link not only to colleagues and ex colleagues but also a mixed demographic of the target population accessed at church and workshop attended at the University of Pretoria in August 2024. The researcher recognises that the risk of bias in the data would not have been fully eliminated due to the demographic characteristics of most of the personal network.

The reliability of the data was determined using the Cronbach's Alpha Coefficient (Cronbach's Alpha). The Cronbach's Alpha measures the internal consistency reliability of the relevant questions to assess the applicable constructs (Hair et al., 2021; Taber, 2018).

The validity of the data was determined using the Exploratory Factor Analysis (EFA), which aims to determine the common factors or relationships in the questions included in the questionnaire for effectiveness in measuring the identified variables or constructs (Beavers et al., 2013; Goretzko et al., 2021; Watkins, 2018). Although the preference in psychological studies is that the sample size be large to determine validity through EFA, current practice utilises EFA on various sample sizes (Goretzko et al., 2021).

4.11. Limitations

This study was subject to limitations of culture and specific dynamics of the country being studied and therefore cannot be extrapolated to other developing countries like South Africa by virtue of those countries' economic status (Greenberg & Mogilner, 2021).

Due to purposive sampling, the sample size of 130 is not large and therefore is an inadequate representation of the population, therefore limiting the ability to generalise the data. This is especially the case since the number of credit active consumers is close to 30 million, which is a large population.

The survey as a method of data collection is not comprehensive in nature as it is not detailed like other research strategies, which becomes a limitation (Saunders & Lewis, 2018). In addition, while the questionnaire attempted to capture emotional state of the survey participants, it is possible that other factors may influence the participants' perceptions in addition to their debt status.

The study was cross-sectional in nature which captures the status at a point in time, it did not allow the tracking of results over time. Tracking of results over time would have provided insights into how changes in economic conditions and participants' circumstances over time as done in most of similar studies (Bialowolski & Weziak-Bialowolska, 2021; Black et al., 2024; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023; Fan & Ryu, 2023; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023; Sweet, 2018; Tay et al., 2017; Xiao et al., 2021).

4.12. Conclusion

Chapter 4 discussed the research methodology design and choices that was followed in conducting this study in line with the acceptable research standards recommended in literature, including the limitations identified.

5. CHAPTER 5: RESEARCH RESULTS

5.1. Introduction

This chapter presents the research results by first describing the sample obtained, demonstrating the reliability and validity of the data, describing data transformations performed and statistical results per hypothesis.

The IBM SPSS statistical tool was used to analyse the data with only relevant findings presented as part of this chapter. The statistical tests ran were the independent t-tests, Pearson's correlation, Spearman's correlation, 2-way ANOVA, and multiple regression analysis. The selection of tests depended on the types of independent variables tested, with the dependent variable being life satisfaction as a continuous variable. The life satisfaction scale was utilised by calculating the score as guided in academic articles (Diener, Emmons, Larsen, et al., 1985; Diener, Emmons, Larsen, et al., 1985). All statistical tests were run at a 95% confidence level. The detailed results from the tool are presented in Appendix G to appendix AD.

5.2. Description of sample

A total of 186 respondents were achieved from the survey (see appendix D). 9 respondents were not South African, therefore did not qualify to continue with the survey and the survey ended accordingly, which left 177 South African respondents. Of the 177 respondents, 47 did not complete the survey which left a final of 130 respondents' data to analyse (N = 130), refer to Appendix F. The researcher was aware that, due to the long nature of the questionnaire if the respondent had more debt types, the more challenging it could be to complete the questionnaire (Deutskens et al., 2004).

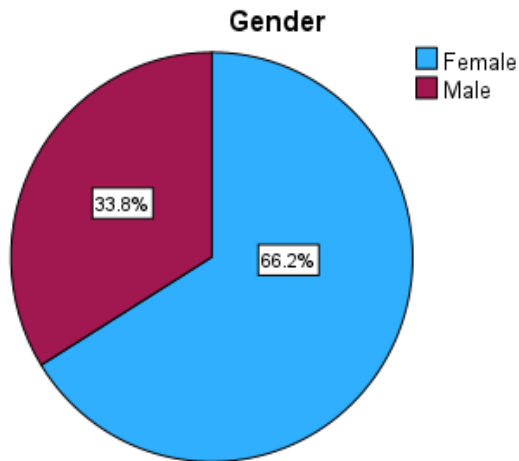


Figure 5: Gender demographics
(Source: SPSS)

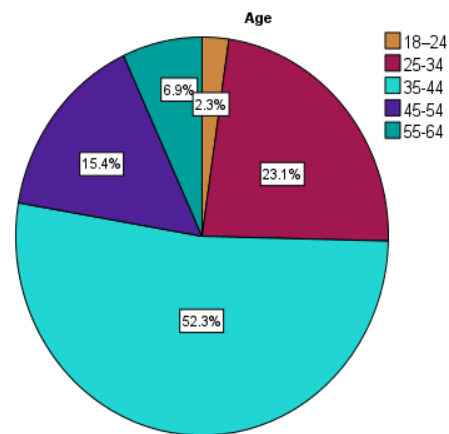


Figure 6: Age demographics
(Source: SPSS)

The sample was skewed towards females with a total of 86 (66.15%) female respondents and the balance of 86 (33.85%) being male. Most of the sample was represented by the 35 to 44 age group (52.3%), followed by the 25-34 age group (23.1%), followed by the 45-54 age group (15.4%), then the 55-64 age group (6.9%), with the balance being the 18-24 age group (2.3%).

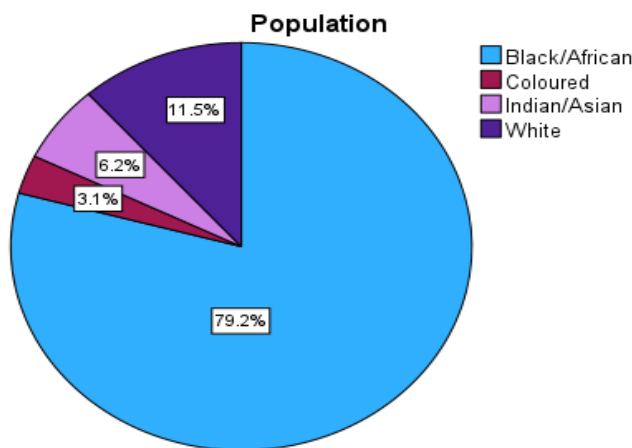


Figure 7: Population demographics (Source: SPSS)

The population was skewed to African/Black with a representation of 103 (79.2%) respondents, followed by White with a representation of 15 (11.5%), then the Indian/Asian population group with 8 (6.2%), and the Coloured population group with 4 (3.1%) respondents.

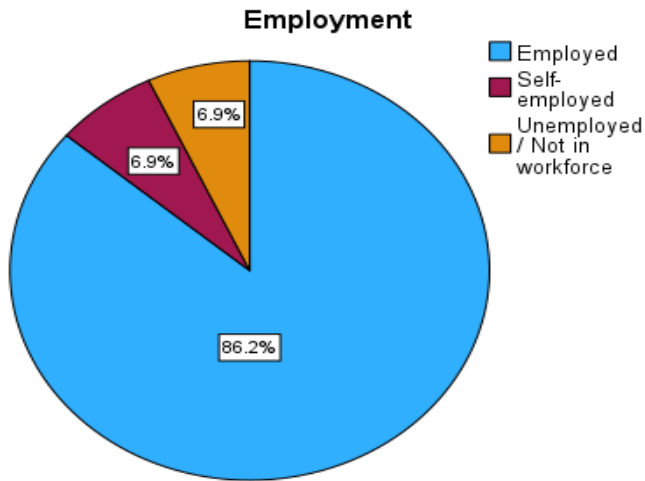


Figure 8: Employment demographics (Source: SPSS)

Most respondents are employed with a representation of 112 (86.2%), followed by self-employed respondents with a representation of 9 (6.9%), and the balance being unemployed with 9 (6.9%) respondents.

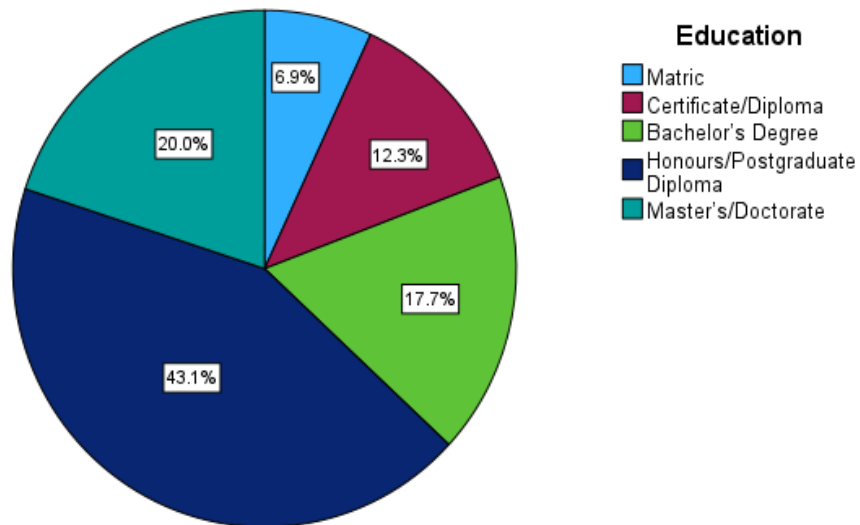


Figure 9: Education demographics (Source: SPSS)

The sample was skewed to highly educated respondents with the highest group of 55 (42.3%) having Honours/Postgraduate diplomas, followed by 26 (20%) Masters/Doctorate level respondents, then 23 (17.7%) Bachelor's degree respondents, 16 (12.3%) Certificate/Diploma holders, 9 (6.9%) Matric holders, and one (0.8%) respondent with a CA(SA) professional qualification, which is also a higher level educated respondent.

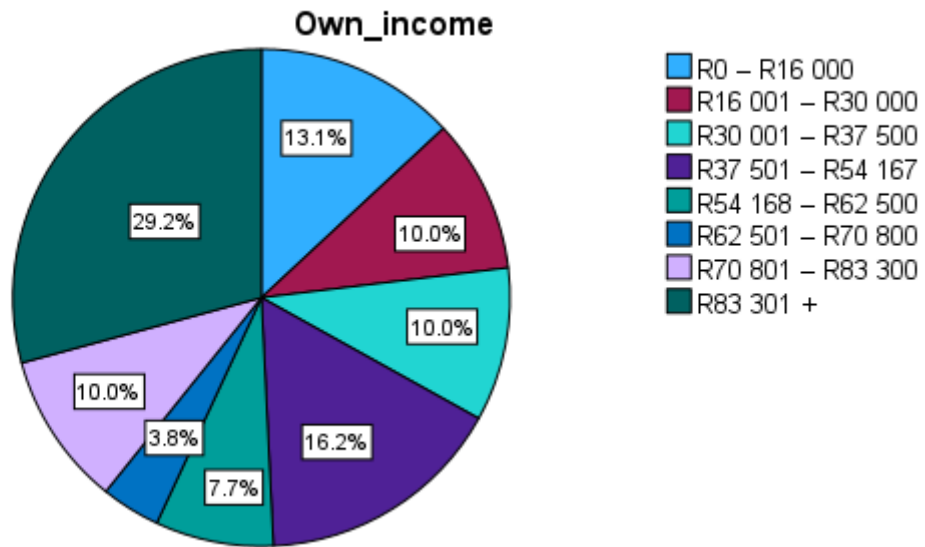


Figure 10: Own income demographics (Source: SPSS)

The respondents' own income is well distributed across income groups with the R83 301+ category represented by 38 (29.2%) respondents, followed by the R37 501 - R54 167 category with 21 (16.2%) respondents, then the R0 - R16 000 group with 17 (13.1%) respondents, followed by the R16 001 - R30 000, R30 001 - R37 500, and R70 801 - R83 300 each represented by 13 (10%) respondents, 10 respondents from the R54 168 - R62 500 category, and five (3.8%) respondents from the R62 501 - R70 800 category. This representation reflects a sample group mainly in the middle-income and higher-income class, although there is representation from the lower income and unemployed group.

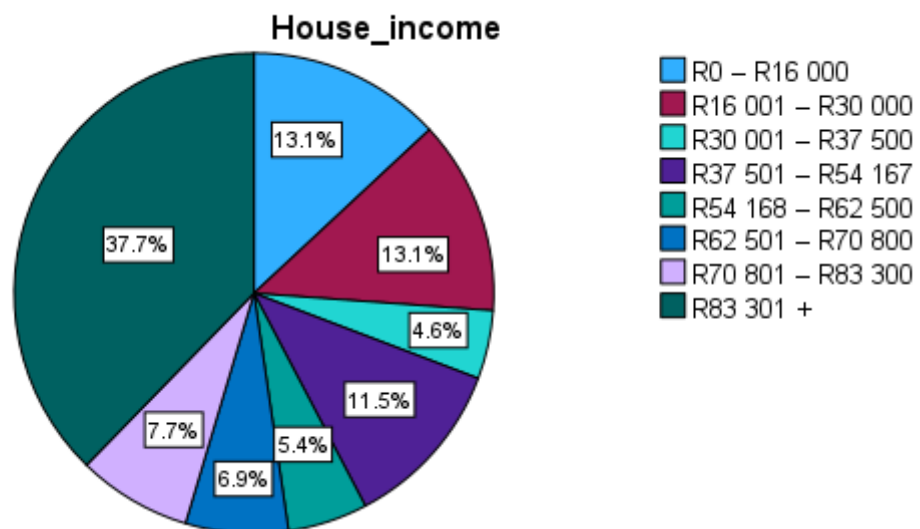


Figure 11: Household income demographics (Source: SPSS)

The R83 301+ group has increased on the household income which could be because of those with partners or married, and are supported by their partners' or spouses' income to support the household. This group is higher than the individual income with 49 (37.7%) representing this group and remaining the highest representation. This is followed by the R0 – R16 000 and R16 001 – R30 000 group each with a representation of 17 (13.1%) respondents. The R0 – R16 000 is similar to the individual income representation, which may be due to the single marital status of these respondents. The R37 501 – R54 167 is the next group with 15 (11.5%) respondents representing, followed by the R70 801 – R83 300 with 10 (7.7%) respondents, followed by the R62 501 – R70 800 group with 9 (6.9%) respondents, the R54 168 – 62 500 group with 7 (5.4%) respondents, and lastly the R30 001 – R37 500 group with a representation of 6 (4.6%) respondents.

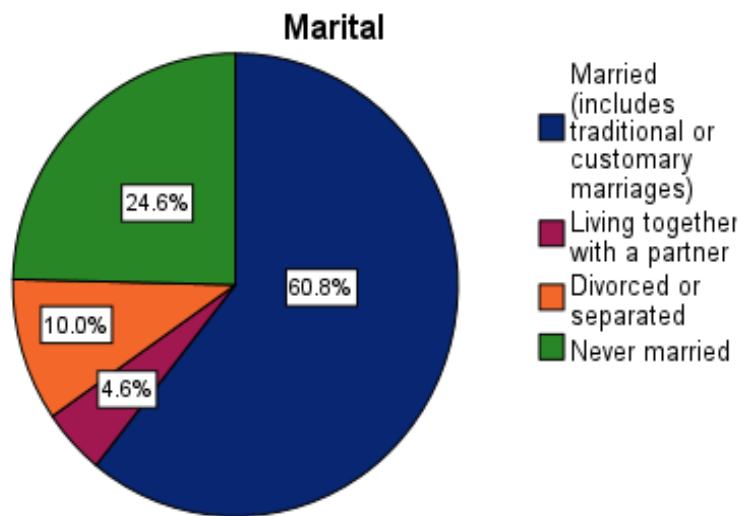


Figure 12: Marital status demographics (Source: SPSS)

The majority of the sample was married with a representation of 79 (60.8%) respondents, followed by 32 (24.6%) respondents who never married, then 13 (10%) being the divorced or separated respondents, and lastly 6 (4.6%) of those living with partners.

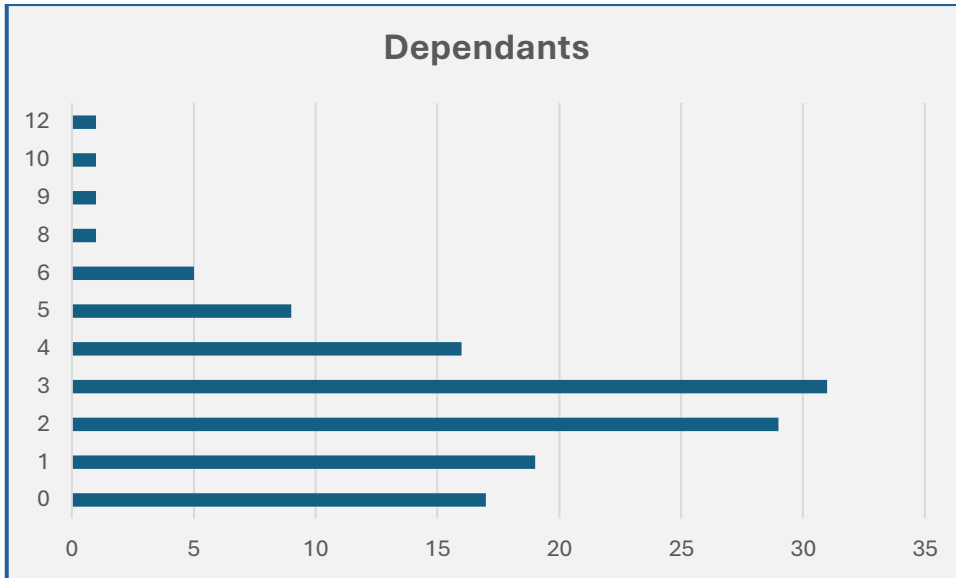


Figure 14: Dependants demographic (Source: Prepared by researcher)

A total of 31 (23.8%) respondents had 3 dependants, followed by 29 (22.3%) respondents with 2 dependants, then 19 (14.6%) respondents with one dependant. Respondents with no dependants and those with four dependants were 16 (12.3%) equally, followed by 9 (6.9%) respondents with five dependants, then 5 respondents with 5 (3.8%) dependants. Finally, the eight to 12 category each had one (0.8%) respondent.

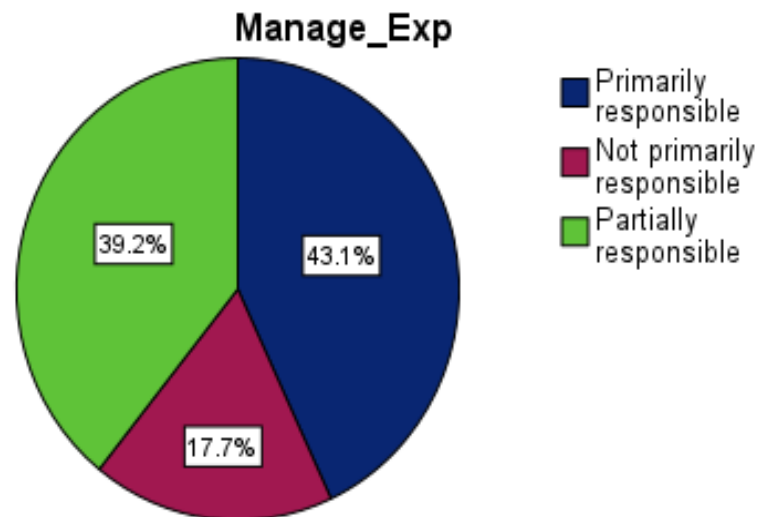


Figure 13: Managing of expenses demographics (Source: SPSS)

The sample has a slight skew to respondents that are primarily responsible for managing expenses with 56 (43.1%) respondents, followed closely by 51 (39.2%) respondents that are partially responsible for managing their expenses, with the

balance of 23 (17.7%) respondents not being primarily responsible for managing their expenses. This distribution is reasonable considering the marital status of the respondents.

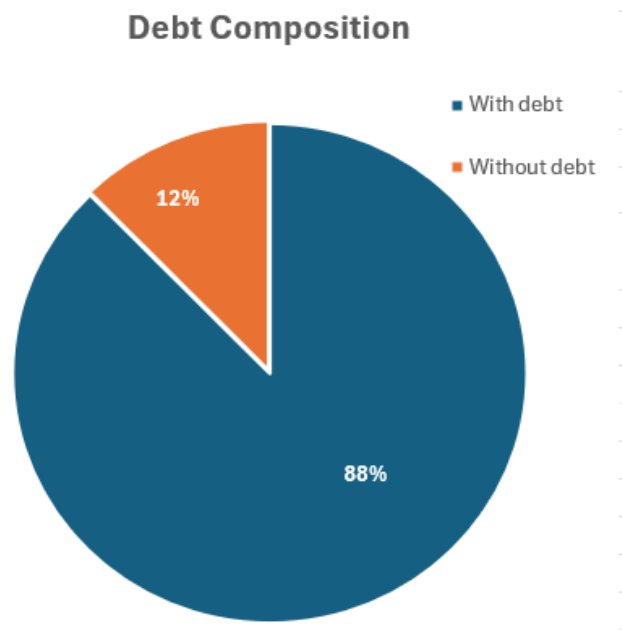


Figure 15: Debt composition (Source: Prepared by researcher & Appendix H)
Of the total 130 respondents, 114 (88%) had current debt and 16 (12%) had no current debt although some had debt previously.

5.3. Data preparation and coding

The data was extracted from the survey tool in Microsoft Excel format after closure of the survey early October 2024. Data was extracted for the full sample of respondents for audit trail purposes and for completed lines only, as these would be the focus of the analysis. The extract was made at individual answer level for both actual responses in line with questionnaire and coded version as converted by the survey tool, SurveyMonkey.

5.3.1 Data preparation

After checking for completeness and non-existence of duplicate IP addresses, the logic of responses was checked by the responses in relation to each other, considering the various skip logic rules that had been applied on the survey tool. For example, where a respondent responded they have a house and a mortgage, the expectation was the questions relating to mortgage debt be answered. Certain

instances were noted where, regardless of the set up done by the researcher on the survey tool, there were inconsistent responses which had to be cleaned up. Other instances cleaned up related to open-ended responses which required allocation to the respective groups. The following represents as a summary of changes made as part of data preparation:

- 1) Education (Q6) – the respondent indicated a CA(SA) qualification as “Other – specify”, this was allocated to group “4” by the researcher from experience, this professional qualification requires an Honours Degree to be completed before writing board examinations.
- 2) Dependents (Q10) – respondents 22 and 28 wrote the number of dependents they have in words; this was captured to numbers by the researcher of “2” each as indicated by the respondents on their response.
- 3) All questions that required values for debt types – various respondents did not know the amounts or interest relating to their loan, this was treated as missing information on the sample.
- 4) Number of mortgages (Q19) – respondent 50 stated in words they have a second mortgage for investment purposes, the researcher updated the number of mortgages to “2”.
- 5) Number of mortgages (Q19) – respondent 101 stated they have a mortgaged however stated the balance was zero, therefore, technically they did not have a mortgage. The researcher updated the response to indicate as such as the values and all other questions relating to the mortgage would not be applicable.
- 6) Vehicle loan holding (Q27) – the respondent answered this question even though they stated they had not vehicle, this did not align to the skip logic on the survey tool. The answer was deleted since the rest of the questions relating to vehicle loans, meaning the survey tool would have skipped them.
- 7) Vehicle loan current balance (Q30) – respondent 35 stated they had no debt therefore should not have answered as having a vehicle loan. Updated response to indicate previous loan with no current loan.
- 8) Credit card holding (Q40) – respondent 76 completed details of the credit card which indicates they had credit card debt. However, the response showed “no” to credit card debt. The researcher updated the response to “yes” to make sense.

- 9) Personal loan holding (Q53) – respondent 123 responded to have no loan yet the survey tool requested the answers for personal loans which indicated a technical error of where the response was. The researcher updated the responses to indicate the respondent has a personal loan.
- 10) Happiness question (Q79) – The researcher deleted this question as it fell under a different construct of subjective well-being on the US study that is the basis for this research. had seven different studies and had subjective well-being questions for other studies. The researcher aimed to investigate the consumer debt independent variable with life satisfaction as a dependent variable, this rendering this question irrelevant for this study. It was initially included with the belief that it was part of the life satisfaction construct.
- 11) Interest rate questions per debt type (Q18, Q32, Q45, Q58, and Q71) – Since the selection options on the question included “I don’t know” as an option, the survey tool allocated number “1” on these responses. The researcher updated these responses to missing values.
- 12) Values – The researcher formatted numbers to ensure they were all full numbers which were recognised as numbers.

5.3.2 Data coding

Cleaned data was imported into the SPSS statistical tool’s data view with the ID numbers that correspond to respondent numbers. Q1 was not imported as it was a qualifying question, and Q79 was not imported as explained in section 5.3.1. The qualitative open questions relating to the perception of debt i.e. Q22, Q36, Q49, Q62, and Q75. Therefore, out of the 84 questions on the questionnaire, a total of 78 questions were imported for analysis on the SPSS software.

On the variable view, all questions were coded with a short-name that describes what the question is about, the values were completed in line with the selection options that were available for respondents on the questionnaire e.g. 1 = Yes, 2 = No, etc. The measure column on the variable view was updated to reflect the nature of the data as nominal, scale and ordinal as appropriate.

Specific coding was done on certain questions used to run the statistical tests to easily identify respondents that meet the specific criteria. For example, where

statistical tests were run based on whether the respondent had a type of debt or not, re-coding for that specific question was done to convert Yes from being “1” and “No” to “2” by changing these to “No” being “0” and “Yes” being “1”. These questions were then renamed to, for example, “Q13_rec” to separate them from the original coded question.

5.4. Reliability – Cronbach’s Alpha

Cronbach’s alpha is one of the measures used as a measure of internal consistent reliability of constructs, aiming to demonstrate that the tests and scales used in the research are adequate for the purpose intended (Hair et al., 2021; Taber, 2018). An acceptable level of Cronbach’s Alpha is 0.70 (Hair et al., 2021; Taber, 2018), with a recommended range of 0.80 to 0.90 (Hair et al., 2021).

The constructs applicable to this research to answer the hypotheses investigated were determined as debt holding, perception of debt which applies to consumer debt as an independent variable and life satisfaction as a dependent variable. Debt holdings were determined by asking survey participants whether they had a type of debt, how many accounts they have of that type of debt, the current and initial amounts of the debt, and interest rate applicable to that debt type. However, the current amount of debt and the nominal data of having debt was used in determining the relationship between consumer debt and life satisfaction (Greenberg & Mogilner, 2019), rendering the reliability test unnecessary for debt holdings. Most of the articles investigating the consumer debt construct did not report on Cronbach Alpha’s (Bialowolski & Weziak-Bialowolska, 2021; Chen et al., 2021; A. E. Greenberg et al., 2020a; Greenberg & Mogilner, 2021; Sweet, 2018; Tay et al., 2017), or reported on financial conditions’ Cronbach’s Alpha like financial security or financial distress reliability composites (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021).

The perception of debt was determined by asking survey participants whether they viewed they were benefiting from the asset relating to debt taken, whether they perceive their debt as a “debt”, whether they see the debt as an investment, and whether they see debt as a choice. These items are not meant to be correlated as they provide various views about both the assets and debt. The perception of debt as “debt” is the only question that was used in hypothesis three, complemented by

the qualitative part of the questionnaire and therefore the reliability and validity test for all the perception questions was not tested. This approach is similar to (Greenberg & Mogilner, 2021).

Life satisfaction was determined using the life satisfaction scale (refer to Appendix G). The Cronbach's Alpha for life satisfaction was 0.831 (refer to Appendix H, Table 3), which is within the recommended levels (Hair et al., 2021). Previous articles measuring life satisfaction using the satisfaction with life scale reported Cronbach's Alpha of 0.88 (Ilies et al., 2019) and 0.83 (Kiral Ucar et al., 2019).

5.5. Validity – Exploratory Factor Analysis

To determine the common factors and relationships in the life satisfaction construct, an EFA which was based on Principal Axis Factoring (PAF) extraction method was run on SPSS. The PAF is the predominant extraction method in psychological research (Goretzko et al., 2021). The other constructs were not processed for validity for the same reasons provided in section 5.4.

The first requirement in the EFA is that the correlation between questions included exceed 0.3 to show that there is adequate commonality (Beavers et al., 2013). Secondly, the Kaiser-Meyer-Olkin (KMO) test which measures the shared variance of the factors must be determined (Beavers et al., 2013). This should be at least 0.60 as a minimum acceptable range in line with Kaiser's index of factorial simplicity (Kaiser, 1974). Lastly, the Bartlett's test of sphericity must be calculated to determine the correlation mix of questions, with the requirement that the sig value be $< .05$ (Watkins, 2018).

The calculated KMO for the life satisfaction construct was 0.788, the Bartlett's test was $< .001$, the correlation was above 0.3 for all items within this construct (refer to Appendix H, Table 4). The requirements of all tests were met.

5.6. Descriptive statistics

The descriptive statistics presented below were run using the SPSS software and reflect the total number of applicable data for that item, due to certain debt types being applicable to some respondents and others not being applicable. The

descriptive statistics normally require the minimum, maximum, mean and standard deviation to be presented for all dependent and independent variables (Creswell & Creswell, 2017).

Table 6: Descriptive statistics - Nominal

Descriptive Statistics - Nominal					
	N	Minimum	Maximum	Mean	Std. Deviation
House_Hold	130	1	2	1.32	0.466
Mortdebt_Hold	89	1	2	1.15	0.355
Mortdebt_Prev	13	1	2	1.46	0.519
Mortdebt_Resp	76	1	2	1.16	0.367
Mortdebt_Hous	76	1	2	1.30	0.462
Veh_Hold	130	1	2	1.18	0.383
Vehloan_Hold	107	1	2	1.51	0.502
Vehloan_Prev	55	1	2	1.25	0.440
Vehloan_Resp	52	1	2	1.04	0.194
Vehloan_Hous	52	1	3	1.23	0.509
Crcard_Hold	130	1	2	1.42	0.495
Crcard_Prev	54	1	2	1.44	0.502
Crcard_Resp	76	1	1	1.00	0.000
Crcard_Hous	76	1	3	1.24	0.486
Pers_Hold	130	1	2	1.68	0.466
Pers_Prev	89	1	2	1.51	0.503
Pers_Resp	41	1	1	1.00	0.000
Pers_Hous	41	1	2	1.10	0.300
Other_Hold	130	1	2	1.70	0.460
Other_Prev	91	1	2	1.54	0.501
Other_Resp	39	1	2	1.05	0.223
Other_Hous	39	1	3	1.44	0.641

The nominal descriptives reflect the total sample of 130 that responded to whether they held the asset (house, vehicle) or debt (credit card debt, personal loan or other types of debt). The balance of the questions were then completed by those that hold that type of debt, which differs for each debt type.

Table 7: Descriptive statistics - Ordinal

Descriptive Statistics - Ordinal					
	N	Minimum	Maximum	Mean	Std. Deviation
Mortdebt_Perc	76	1	7	5.03	2.091
Mortdebt_Perc	76	2	7	5.79	1.454
Mortdebt_Perc	76	1	7	4.36	1.867
Mortdebt_Perc	76	1	7	6.01	1.381
Vehloan_Perc	52	1	7	5.71	1.538
Vehloan_Perc	52	1	7	5.92	1.631
Vehloan_Perc	52	1	7	2.69	1.925
Vehloan_Perc	52	1	7	5.94	1.487
Crcard_Perc	76	1	7	3.67	1.821
Crcard_Perc	76	1	7	6.11	1.475
Crcard_Perc	76	1	7	1.67	1.578
Crcard_Perc	76	2	7	5.84	1.461
Pers_Perc	41	1	7	2.93	2.218
Pers_Perc	41	1	7	5.98	1.823
Pers_Perc	41	1	7	2.24	2.022
Pers_Perc	41	1	7	6.00	1.533
Other_Perc	39	1	7	3.03	2.121
Other_Perc	39	1	7	5.64	1.614
Other_Perc	39	1	7	2.13	1.704
Other_Perc	39	1	7	5.64	1.530
Life_satis	130	1	7	5.14	1.488
Life_satis	130	1	7	5.00	1.590
Life_satis	130	1	7	4.43	1.813
Life_satis	130	1	7	5.04	1.597
Life_satis	130	1	7	3.49	1.997

Ordinal information related to the 7-scale likert questions completed and were applicable only to those that had the type of debt as reflected on the nominal descriptives above i.e. 76 for mortgages, 52 for vehicle loans, 76 for credit cards, 41 for personal loans, and 39 for other debt.

Table 8: Descriptive statistics - Scales

Descriptive Statistics - Scales					
	N	Minimum	Maximum	Mean	Std. Deviation
Mortdebt_Curr	67	5,400	4,000,000	1,373,444	832,820
Mortdebt_Init	70	280,000	6,000,000	1,815,391	1,040,304
Mort_Inter	66	5	27	11	3
Mort_No	72	1	5	1	1
Vehloan_Curr	47	5,000	1,400,000	350,442	347,821
Vehloan_Init	46	80,000	2,890,000	647,609	576,354
Vehloan_Inter	46	2	23	11	3
Vehloan_No	52	1	3	1	0
Crcard_Curr	70	43	100,000	25,694	25,387
Crcard_Init	68	600	350,000	46,068	51,829
Crcard_Inter	52	3	27	15	6
Crcard_No	76	1	3	1	0
Pers_Curr	37	1,054	350,000	106,108	101,313
Pers_Init	35	1,730	600,000	147,449	138,690
Pers_Inter	33	2	49	15	9
Pers_No	41	1	6	2	1
Other_Curr	32	800	94,000	22,041	27,581
Other_Init	26	600	200,000	36,730	47,919
Other_Inter	18	3	23	14	7
Other_No	39	1	5	2	1
Sum_Life satisf	130	5	35	23	7
Amount of total	109	2,243	5,040,000	1,054,325	1,051,511

The scale descriptives relate all information after the clean-up of data with regards to outliers which was distorting the normality results. For example, mortgages had four respondents who claimed to have 6 mortgages. Other information consisted of extremely high values compared to the majority of the respondents. In running the inferential statistics, the researcher made a judgmental decision to remove outliers to work with information that is a presentation of most of the sample. The balance of the missing information on the scales was due to respondents that did not know amounts owed or interest relating to their debt. Therefore, each question has a different number of respondents due to the above factors.

5.7. Inferential statistics

The inferential statistics were performed to answer the research questions and hypotheses determined in Chapter 3. The reporting will be done in that order for ease of reference.

5.7.1 Hypothesis 1 – Consumer debt and life satisfaction

The first hypothesis was intended to answer the first research question of how South African consumer debt impacts their life satisfaction. The null hypothesis proposes a significant negative association between consumer debt and life satisfaction, and no significant negative association if the null hypothesis is rejected.

5.7.1.1 Statistical tests performed

Adopting the same approach as (Greenberg & Mogilner, 2021), the relationship between consumer debt and life satisfaction was first determined using the condition of having debt and then the amount of debt currently owed. The life satisfaction dependent variable was treated as a continuous variable as the score of all respondents was added and tested against various independent variables relating to consumer debt holdings, which aligns to the principles of the scale (Diener, Emmons, Larsen, et al., 1985).

Table 9: Hypothesis 1 statistical test results

Independent variables tested	Test	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	Independent t-test	0.201		0.229 (one-sided)
Amount of debt	Pearson correlation		0.282	0.003 (two-tailed)
Number of debt accounts	Spearman correlation		-0.078	0.378
	Multi regression analysis			0.006

An independent t-test was run on SPSS to determine the difference of those having any debt and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. Although the total number of respondents with debt was 114, the test was run on 109 respondents who had debt and had amounts completed for consistency on all the tests. There was no significant difference between those having any type of debt and life satisfaction as the sig value was 0.229, which is more than 0.05 (refer appendix J). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix J).

A Pearson correlation was run to test the strength of the relationship between the amount of debt and life satisfaction as a dependent variable, since these were both continuous variables. There was a significant positive correlation between the amount of debt and life satisfaction with sig of 0.003 which is less than 0.05, which does not align to expectation (refer to Appendix K).

A Spearman correlation was run to test the strength of the relationship between the number of debt accounts held and life satisfaction. There was a negative relationship but it was not significant as the sig of 0.378 was more than 0.05 (refer to Appendix L). The assumptions of normality and scatterplots being linear and homoskedastic were tested and met.

A multiple regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controls for age, own income and gender on the same independent variables already run using the independent t-test and correlations. The same independent variables were used of amount of debt and number of debts held, resulting in a positive significant relationship between consumer debt and life satisfaction even when controlling for age, own income and gender, evidenced by the sig of 0.006 (refer to appendix M) which is below 0.05. This aligns to individual results which have the direction between variable in the opposite direction of what the researcher expected. The assumptions required to run the multi regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

Dependent Variable: Sum_Life satisf				
Gender	Categories	Differenc	Std. Error	Sig. ^a
Female	3-5 debts	2.127	1.419	0.136
	0-2 debts	-2.127	1.419	0.136
Male	3-5 debts	-1.336	2.037	0.513
	0-2 debts	1.336	2.037	0.513

Using the number of debts, split into 2 categories, a relationship was tested between males and females to determine if there might be a significant relationship based on the number of debts held by each gender. With a sig of 0.136 for and 0.513, both above 0.05, there was no significant difference between both gender by virtues of holding more debt accounts (refer to Appendix N).

5.7.1.2 Conclusion – hypothesis 1

The research question that the hypothesis had to answer was how South African consumers' life satisfaction are impacted by debt, with the following hypotheses tested:

H1: *Consumer debt has a significant negative association with life satisfaction (Null hypothesis - H10)*

Alternative hypothesis (**H11**): *Consumer debt has no significant negative association with life satisfaction*

The independent t-test results showed no significant relationship to life satisfaction for respondents that have debt compared to those that do not. In addition, the correlation tests and multi regression analysis showed a significant positive relationship between consumer debt and life satisfaction which is influenced by the amount of debt held. The 2-way ANOVA run on both genders using two categories of debt also confirmed this result as there was no significant difference noted to life satisfaction, regardless of the number of debt accounts held. While it can be expected that high amounts of debt should result in an impact on the consumer's life satisfaction, the direction of the relation being positive did not align to expectations.

Therefore, all factors above concluded, the null hypothesis is **rejected**. Based on these results, at overall level, the consumer that has debt does not have a significant impact on their life satisfaction by virtue of having debt or having a high amount of debt. While the number of accounts held had a negative impact on life satisfaction, this impact was not significant.

5.7.2 Hypothesis 2 - Consumer debt type and life satisfaction

The second hypothesis aims to answer the second question of this research of whether South African consumer debt impacts consumer life satisfaction differently depending on the type of debt held. The second hypothesis proposes that unsecured consumer debt types will have a stronger negative relationship with life satisfaction compared to secured consumer debt types, with the alternative hypothesis

suggesting that unsecured consumer debt types will not have a stronger relationship compared to secured consumer debt types.

5.7.2.1 Statistical tests performed

A similar approach as in section 5.7.1.1 will be followed to determine the relationship between consumer debt and life satisfaction at debt type level.

5.7.2.1.1 Mortgage debt

Mortgage			
Independent variables tested	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	0.057		0.275 (one-sided)
Amount of debt		0.375	0.002 (two-tailed)

An independent t-test was run on SPSS to determine the difference of those having mortgage debt and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. The total number of respondents with mortgage debt was 76 (N=76). There was no significant difference between those having mortgage debt and life satisfaction as the sig value was 0.275, which is more than 0.05 (refer appendix O). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix O).

A Pearson correlation was run to test the strength of the relationship between the amount of mortgage debt owed and life satisfaction as a dependent variable, since these were both continuous variables. Because of respondents that did not know the values of their debt, N=67. There was a significant positive correlation between the amount of debt and life satisfaction with sig of 0.002 which is less than 0.05, which does not align to expectation (refer to Appendix P).

Mortgage debt multiple regression	B	t	Sig
Debt held (yes/no)	-2.677	-1.191	0.237
Amount of debt	3.256	2.896	0.005

A multiple regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controlled for age, own income and gender on

the same independent variables already run using the independent t-test and the Pearson correlation. The results held as having mortgage debt showed a negative non-significant relationship with life satisfaction with $B=-2.677$; $p=0.237$ (refer Appendix Q). The amount of mortgage debt had a positive significant relationship with life satisfaction after controlling for age, income and gender with $B=3.256$; $p=0.005$ (refer Appendix Q). The assumptions required to run the multi regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

5.7.2.1.2 Vehicle loans

Vehicle loans			
Independent variables tested	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	0.422		0.275 (one-sided)
Amount of debt		0.145	0.332 (two-tailed)

An independent t-test was run on SPSS to determine the difference of those having a vehicle loan and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. The total number of respondents with vehicle loans was 52 ($N=52$). There was no significant difference between those having vehicle loans and life satisfaction as the sig value was 0.275, which is more than 0.05 (refer appendix R). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix R).

A Pearson correlation was run to test the strength of the relationship between the amount of vehicle loans owed and life satisfaction as a dependent variable, since these were both continuous variables. Because of respondents that did not know the values of their debt, $N=47$. There was no significant correlation between the amount of vehicle loans and life satisfaction with sig of 0.332 which is more than 0.05 and does not align to expectation (refer to Appendix S).

Vehicle loan multiple regression	B	t	Sig
Debt held (yes/no)	-1.194	-0.926	0.357
Amount of debt	1.775	0.554	0.583

A multiple regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controlled for age, own income and gender on the same independent variables already run using the independent t-test and the Pearson correlation. The results held as having vehicle loan debt showed a negative but no significant relationship with life satisfaction with $B=-1.194$; $p=0.357$ (refer Appendix T). The amount of vehicle loan debt had a positive but no significant relationship with life satisfaction after controlling for age, income and gender with $B=1.775$; $p=0.583$ (refer Appendix T). The assumptions required to run the multiple regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

5.7.2.1.3 Credit card debt

Credit card debt				
Independent variables tested	Test	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	Independent t-test	0.159		0.388 (one-sided)
Amount of debt	Pearson correlation		-0.195	0.106 (two-tailed)

An independent t-test was run on SPSS to determine the difference of those having credit card debt and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. The total number of respondents with vehicle loans was 76 ($N=76$). There was no significant difference between those having vehicle loans and life satisfaction as the sig value was 0.388, which is more than 0.05 (refer appendix U). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix U).

A Pearson correlation was run to test the strength of the relationship between the amount of credit card debt owed and life satisfaction as a dependent variable, since these were both continuous variables. Because of some respondents that did not know the values of their debt and four outliers that were deleted by the researcher, $N=70$. There was a non-significant negative correlation between the amount of credit card debt and life satisfaction with sig of 0.106 which is more than 0.05 (refer to Appendix V).

Credit card debt multiple regression	B	t	Sig
Debt held (yes/no)	-0.876	-0.72	0.473
Amount of debt	-4.773	-1.515	0.135

A multiple regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controls for age, own income and gender on the same independent variables already run using the independent t-test and the Pearson correlation. The results held as having credit card debt showed a negative but no significant relationship with life satisfaction with $B=-0.876$; $p=0.473$ (refer to Appendix W). The amount of credit card debt had a negative but no significant relationships with life satisfaction after controlling for age, income and gender with $B=-4.773$; $p=0.135$ (refer to Appendix W). The assumptions required to run the multi regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

5.7.2.1.4 Personal loans

Personal loan debt			
Independent variables tested	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	0.001		<.001 (two-sided)
Amount of debt		-0.135	0.426 (two-tailed)

An independent t-test was run on SPSS to determine the difference of those having personal loans and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. The total number of respondents with personal loans was 41 (N=41). There was a significant difference between those having personal loans and life satisfaction as the sig value was <.001, which is less than 0.05 (refer appendix X). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix X).

A Pearson correlation was run to test the strength of the relationship between the amount of personal loans owed and life satisfaction as a dependent variable, since these were both continuous variables. Because of some respondents that did not know the values of their debt and one outlier that were deleted by the researcher,

N=37. There was a negative non-significant correlation between the amount of personal loans and life satisfaction with sig of 0.426 which is more than 0.05 (refer to Appendix Y).

Personal loan debt multiple regression	B	t	Sig
Debt held (yes/no)	-5.605	-4.878	<.001
Amount of debt	-1.38	-1.192	0.242

A multi regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controlled for age, own income and gender on the same independent variables already run using the independent t-test and the Pearson correlation. The results held as having personal loan debt showed a negative significant relationship with life satisfaction with B=-5.605; p=<.001 (refer to Appendix Z). The amount of personal loan debt had a negative but no significant relationship with life satisfaction after controlling for age, income and gender with B=-1.380; p=0.242 (refer to Appendix Z). The assumptions required to run the multi regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

5.7.2.1.5 Other debt

Other debt			
Independent variables tested	Levene's test	Correlation coefficient	Sig
Debt held (yes/no)	0.382		.102 (one-sided)
Amount of debt		0.149	0.416 (two-tailed)

An independent t-test was run on SPSS to determine the difference of those having other debt and life satisfaction and those that do not, as this was between a categorical variable with two groups and a continuous variable. The total number of respondents with personal loans was 39 (N=39). There was no significant difference between those having other debt and life satisfaction as the sig value was .102, which is less than 0.05 (refer appendix AA). The test assumptions of normality and homogenous nature of variances between these groups tested were met (refer to Appendix AA).

A Pearson correlation was run to test the strength of the relationship between the amount of other debt owed and life satisfaction as a dependent variable, since these were both continuous variables. Because of some respondents that did not know the values of their debt and one outlier that were deleted by the researcher, N=32. There was a positive non-significant correlation between the amount of other debt and life satisfaction with sig of 0.416 which is more than 0.05 (refer to Appendix AB).

Other debt multiple regression	B	t	Sig
Debt held (yes/no)	-1.583	-1.258	0.211
Amount of debt	2.52	0.482	0.634

A multiple regression analysis was run to determine how the dependant variable, life satisfaction would change if the test controlled for age, own income and gender on the same independent variables already run using the independent t-test and the Pearson correlation. The results held as having other debt showed a negative non-significant relationship with life satisfaction with B=-1.583; p=0.211 (refer to Appendix AC). The amount of other debt had a positive but no significant relationship with life satisfaction after controlling for age, income and gender with B=2.520; p=0.634 (refer to Appendix AC). The assumptions required to run the multi regression analysis of linearity, normality of residuals, homoskedacity and independence of residuals were tested and met the requirements.

5.7.2.2 Conclusion – hypothesis 2

The second hypothesis intended to answer the second research question of: Does South African consumer debt impact consumer life satisfaction differently for different types of debt held?

The hypothesis tested were:

H2: *Unsecured consumer debt types will have a stronger negative relationship with life satisfaction compared to secured consumer debt types (null hypothesis – H20).*

Alternative hypothesis (H21): Unsecured consumer debt types will have no stronger negative relationship with life satisfaction compared to secured consumer debt types.

The mortgage debt and vehicle loans are secured debt and were tested first. The independent t-test showed the mortgage debt had no significant relationship to life satisfaction based on having this type of debt. The non-significant result held when controlled for income, age and gender, although a negative relationship was shown by the multiple regression analysis based on having mortgage debt. The Pearson correlation showed a significant positive relationship using the amount of debt owed and this result held even when controlled for age, gender and own income. The null hypothesis is **rejected** for mortgage loans as a secured debt since the relationship between this type of debt and life satisfaction is positive rather than negative as hypothesised.

Vehicle loans showed no significant relations with life satisfaction when tested based on having this type of debt and using the amount of debt. The Pearson correlation showed a positive yet no significant relationship based on the amount of debt. The multiple regression analysis showed a negative relationship but it was not significant on the basis of having a vehicle loan when controlled for gender, income and age. The amount of debt showed a positive and no significant relationship to life satisfaction even when controlled for age, gender and income. Vehicle loans also **reject** the null hypothesis as a secured debt since, although the negative relationship was identified based on having this type of debt, the relationship was not significant.

Credit card debt showed no significant relationship based on having this type of debt, which held even when controlled for age, income and gender, although a negative relationship was identified by the multiple regression analysis. Using the amount of debt to test the relationship, the results held as having a negative relationship against life satisfaction although not significant. This was the case even when controlled for income, gender and own income. Credit card debt results are mixed and therefore **reject** the null hypothesis of unsecured debt having a stronger negative relationship compared to secured debt.

Personal loan debt showed a significant relationship to life satisfaction on the basis of having this type of debt. The multiple regression analysis validated this and identified a negative significant relationship between personal loan debt and life satisfaction based on having this debt even when controlled for income, age and gender. The Pearson correlation test and multiple regression analysis identified a

negative but no significant relationship between personal loan debt and life satisfaction based on amount held. This result held even when controlled for income, age and gender. Personal loan debt has a negative relationship to life satisfaction based on having this debt although this is not the case based on the amount of debt. Therefore, just having personal loans is adequate for a negative impact on life satisfaction regardless of the amount owed. Personal loans, as unsecured debt, **accepts** the null hypothesis as there is a stronger negative relationship to life satisfaction based on having a personal loan.

Other debt had no significant relationship with life satisfaction based on having this type of debt or amount of debt. Controlling for income, gender and own income, the multiple regression analysis showed a negative but not significant relationship based on having this debt type. Based on the amount of debt, a positive non-significant relationship was identified. Other debt **rejects** the null hypothesis as, although there is a negative relationship identified based on having this type of debt after controlling for income, gender and age, this is not significant.

Considering the above results for each debt type, while the results differ with each debt type, the null hypothesis is **rejected** for all the unsecured debt products except personal loans, as four debt types had no significant negative relationship to life satisfaction compared to secured debt products. The exception of personal loans is noted.

5.7.3 Hypothesis 3 – Perception of consumer debt as “debt”

The third hypothesis was aimed to answer the third question of this research which is: Do South African consumers’ debt perception of debt types held impact life satisfaction based on this perception? The null hypothesis proposes that the perception of debt as “debt” has a negative relationship with life satisfactions, the alternative hypothesis proposing that there will be no significant relationship between the perception of debt as “debt” and life satisfaction.

5.7.3.1 Statistical tests performed

The relationship between the perception of debt and life satisfaction was conducted using the Spearman correlation test, as the perception of debt question is ordinal

and the life satisfaction is a continuous variable. The perception of debt as “debt” was one question in the questionnaire which should give a clear view from the respondents on which type of debt is perceived as debt compared to others.

Table 11 : Perception of debt as “debt” Spearman correlation

Spearman's rho		Sum_Life satisf
Mortdebt_Perc	Correlation Coefficient	-0.071
	Sig. (2-tailed)	0.539
Vehloan_Perc	Correlation Coefficient	-.301*
	Sig. (2-tailed)	0.03
Crcard_Perc	Correlation Coefficient	-0.104
	Sig. (2-tailed)	0.372
Pers_Perc	Correlation Coefficient	-0.306
	Sig. (2-tailed)	0.052
Other_Perc	Correlation Coefficient	-0.008
	Sig. (2-tailed)	0.962

* Correlation is significant at the 0.05 level (2-tailed).

There is a negative correlation between perception of debt for all the debt types and to life satisfaction although only vehicle loans have a significant relationship with sig of 0.03, which is less than 0.05. Personal loans are at the border line of the significance level at sig of 0.052, suggesting a neutral view towards perception of personal loans as debt.

Table 12: Benefit from debt Spearman correlation test

Spearman's rho		Sum_Life satisf
Mortdebt_Perc	Correlation Coefficient	0.142
	Sig. (2-tailed)	0.221
	N	76
Vehloan_Perc	Correlation Coefficient	0.058
	Sig. (2-tailed)	0.682
	N	52
Crcard_Perc	Correlation Coefficient	.280*
	Sig. (2-tailed)	0.014
	N	76
Pers_Perc	Correlation Coefficient	.312*
	Sig. (2-tailed)	0.047
	N	41
Other_Perc	Correlation Coefficient	0.067
	Sig. (2-tailed)	0.687
	N	39

*. Correlation is significant at the 0.05 level (2-tailed).

A Spearman correlation test was run to investigate any alignment to the perception of debt as “debt” results as, the logical expectation would be that where a consumer perceives an existing benefit from the debt purchases or asset linked to the debt, they should perceive it less as debt. However, based on the above, personal loans and credit card debt have a positive significant relationship with life satisfaction while secured debt has no significant positive relationship as expected. The expectation is based on the long-term benefit attached to vehicles and houses linked to secured debt, which should result in less “pain” to consumers based on the mental accounting principle. However, this does not appear to be the case on this sample.

5.7.3.2 Qualitative data – perception of debt

Qualitative evidence was obtained through open ended questions on the questionnaire, to obtain insight into the feelings and emotions of consumers relating to their debt. The researcher reviewed the responses manually on Excel as not all respondents commented on these questions. The themes could therefore be identified through a manual process as the sample was not large.

5.7.3.2.1 Mortgage debt perception

Of the 76 respondents that have mortgage debt, 22 commented about interest rates. 19 of these 22 (86%) respondents complained about high interest rates on their loans and the reality of instalments being allocated to interest payments than the capital amount owed. The minority of respondents who were comfortable with their debt can pay quicker and desire a different structure of paying off mortgage debt quicker like the vehicle loans.

Respondent 112 recognised the benefit obtained from the house obtained with the mortgage, however, recognises the pressure of the high interest rate as stated: *“It’s just too much with the increased interest rate, otherwise I’m happy that I managed to provide a safer place called home for my kid and my siblings”*. Respondent 100 states it as *“The interest rate is killing us”*.

The pressure appears greater especially for households headed by single parents, evidenced by responded 90 who stated: *“Mortgage is not bad but the problem comes when the interest rate goes up. When I bought the house, I was affording it and now*

it's a stretch for me as my monthly instalments increased by R5 000. For a single parent this is a strain".

The reality of challenges to cope with monthly household expenses is reflected in respondent 65's comment of *"The mortgage interest rates are erratic and the penalties are punitive when you default (high charges for defaulting)".* Respondent 2 commented along the same these of debt management challenges, coupled with the hint of black tax challenges is a possibility on this comment *"Nedbank is the reason why we got such high interest rate. They claimed that we skipped car payments which messed up my credit profile. Being black is also not helping in this case".* Respondent 125 further supported the sentiment of challenges relating to expense management in households and stated: *"It is a slow process to pay it off compared to 15 years ago due to other expenses such as food water fuel and electricity that have increased so much".*

There is evidence of a desire from some consumers to pay their mortgages in a shorter period, which means they are most struggling with their monthly payments. Respondent 125 stated *"I think banks are taking consumers for granted. Why should I pay for 20 years if I can pay off the same amount in 5 years for a car. A new model needs to be adopted to reduce the years".* Respondent supports this sentiment in stating: *"I have adopted an approach to pay extra payments that are equal to my mortgage to finish it off in 5years. I don't want to be in mortgage debt for + 10years".*

The overall feelings about the mortgage debt came through this comment from respondent 5: *"It's my biggest debt. Don't see it as an investment".* Contrary to this view, respondent 56 stated: *"In the long run It's a worthwhile investment".*

5.7.3.2.2 Vehicle loan perception

Of the 52 comments received from respondents, there much less negative comments on this debt type at 15 comments (28.8%). The same theme of high interest rates came through, including some comments on the structure of vehicle loan agreements that include balloon payments.

The “sting” of high interest rates felt by consumers comes through in respondent 31’s comments of *“Wish interest rates were lower. Bank could not bring them down due to my low credit rating at the time of purchasing the vehicle”*. Respondent 70 stated *“The interest is a bit high”*. Respondent 83 further supported these sentiments by stating *“My loan is expensive due to interest rate”*. Additional similar comments were made by other respondents, evidence of high interest rates.

Financial literacy comes through these comments made by respondents relating to the balloon payment structure, reflecting the attitude of preferring to avoid debt through a balloon payment. Respondent 2 stated: *The balloon payment is a scam. A complete bad decision on my part*”. Respondent 125 also stated: *“Balloon payments are a scam. If I cannot afford a car, I should not be able to buy it”*. Respondent 3’s comments of: *“Vehicle finance is a rip off general”*. could also be due to the sentiments linked to the balloon payment structure of vehicle finance although not clarified.

Respondent shared the view of seeing the vehicle as an asset and therefore the loan being necessary by stating: *“It’s needed as I need a car to get to work so it’s somewhat “income generating” as an asset. Perhaps I could’ve considered a more moderate car”*. Respondent 26 shares this view and stated: *“Very necessary to have and convenient”*. Respondent 108 shared their view of a car that is an investment with: *“I need the car to make money so it’s an investment to me”*.

5.7.3.2.3 Credit card debt perception

Of the 76 comments received from respondents, there is a skew towards negative comments about credit card debt. 41 (53.9%) respondents conveyed negative feelings about their credit card debt compared to 32 (42%) with positive comments. 3 respondents were neutral about their credit card debt as indicated with “N/A”.

Respondents are aware that credit card debt is expensive credit with the following comments made: *“It’s expensive debt. I don’t like it. Hoping to close it off soon”* (respondent 14). Respondent 55 stated *“Interest is drowning me”*. Respondent 62 further adds through this comment: *“It is a very expensive debt, I have been paying interest and the credit card debt is not reducing”*. Respondent 63’s view was: *“I just*

can't pay it back. I can't afford it and as a result it blocks my opportunity to find other jobs".

Respondents use credit cards to cope with living expenses, based on comments received. Respondent 2 stated *"It's a revolving account that I use constantly unfortunately"*. Respondent 15 admitted to viewing their credit card as part of income and stated: *"I have found that it is a crutch and has often given me a false sense of comfort. I have often used it on things I could not afford and also made it a part of my income when it's not"*. Respondent 18 supported these sentiments as said *"what was suppose to be for a rainy day now a day to day because of how expensive things are"*. Lastly, respondent 90 stated: *"Credit card closes the gap caused by interest rate so currently is the reason am coping"*. These comments give a view of the use of credit cards by South African consumers.

The following respondents provide their overall view of credit card debt by stating: *I regret taking the debt* (respondent 13). *"Credit card debt is not good"* (respondent 51). Respondent 78 stated *"Indebtedness that is unnecessary"*. Finally, these strong feelings were confessed by respondent 61 who stated *"EVIL"*.

5.7.3.2.4 Personal loan debt perception

Of the 41 respondents with personal loans, 19 (46.3%) provided comments which were almost all negative towards their personal loan debt. Most respondents feel they had had to take the loan to achieve things that needed a lumpsum of money however the debt is now a burden.

Respondent 15 gave a detailed comment that captures their feeling about this debt and stated *"The personal loan helped me cater for some unexpected events in the absence of emergency savings and I was able to consolidate some debt using it. I don't enjoy repaying it but I can't ignore the relief it has brought to my financial situation. We also managed to build a home for our extended family using multiple personal loans in the past. We could not have saved that much money"*. Respondent 123 shared similar feelings as stated *"I don't like having debt but needed access to a lump sum"*. These comments express a need that consumers had to access a

lumpsum of funds due to a lack of available savings to achieve certain things in their lives, a sign of financial fragility.

The high interest that is attached to personal loans was identified by some respondents. Respondent 43 stated *"It stresses me out. The interest balance is not going down"*, supported by respondent 53 who stated: *"Interest is high"*.

Two respondents viewed their personal loans as a necessity by stating their personal loan was *"Necessary to live"* (respondent 47) and respondent 102 who stated *"Necessary at the time to renovate my house"*.

A general feel of negativity on the personal loans came through some respondent with these comments: *"This should have been avoided by waiting longer for things"* (respondent 2), *"No more loans"* (respondent 9), *"I feel indebted"* (respondent 32), *"It is a burden"* (respondent 41), *"Worst mistake ever"* (respondent 53), *"Depressing"* (respondent 76), and *"Hindrance"* (respondent 82). These are all negative comments reflecting the negative state of mind and indebted feelings to respondents for having a personal loan(s).

5.7.3.2.5 Other debt perception

Of the 39 respondents with other debt, 17 (43.5%) provided comments on their feelings and thoughts about their debt. The respondents provide mixed feelings of the debt being a need, an enabler to achieve some items that are costly, an enabler to pay student loans, and a burden that needs to be paid off as soon as possible.

The respondents that see this debt as a need for daily expenses and student loan stated: *"We need it for daily expenses so it is not beneficial as the amount is needed monthly"* (respondent 42), while respondent 64 stated regarding their overdraft *"very usefully when in financial distress"*, and respondent 67 stated *"Bank overdraft helps in this time of rising costs"*. Respondent 116 stated: *"Needed"*. Respondent 5 stated: *"This my WOOLIES card that comes handy for day-to-day grocery needs"*. Respondent 18 needed the loan for a dependent's student loan and stated: *"School fees for a child currently in university was planning to get a lumpsum to pay off"*. Finally, respondent 113 conveyed the need for the loan and stated: *"It was a*

necessary choice to fulfil a short-term obligation which will benefit me in the long-term. I'm satisfied with the choice".

Some respondents recognised that other debt is unnecessary and enables behaviour impulsive behaviour and purchasing of luxury items. Respondent 15 stated: *"It enables some of my impulsive spending"*. Respondent 62 stated *"It's luxury items"*. Respondent 72 and 77 admitted that the spend was unnecessary by stating: *"It was unnecessary"* and *"Unnecessary, can live without it. Been meaning to cancel it"*, respectively.

The respondents that feel a strain by having other debt expressed it strongly. Respondent 10 stated *"Not huge debt but still overwhelming to be owing municipally rates. Also the rates are forever increasing and this is not satisfying"*. Respondent 34 stated *"They put you under pressure"*, while respondent 43 said *"I feel like I am unable to keep up with the payments"*. Respondent 3 expressed it as: *"Taking too long to finish and straining"*. Respondent 73's feelings were expressed as *"The paying feeling is not nice"* while respondent 76 stated *"They are depressing all of them"*. "Finally, respondent 58 stated in one word and said *"stressing"*.

5.7.3.3 Conclusion – hypothesis 3

Since data collected to test this hypothesis was quantitative and qualitative through open ended questions, the conclusion will be made at those two levels to show how the qualitative data complemented or contradicted statistical tests as a mean to have a holistic insight on the perception of debt from South African consumers and their debt types.

5.7.3.3.1 Conclusion – hypothesis 3 – statistical test

Hypothesis 3 aimed to answer the third research question: Do South African consumers' debt perception of debt types held impact life satisfaction based on this perception? The questionnaire had ordinal questions to test the hypothesis developed for this research question and open-ended questions which aimed to obtain the respondent's thoughts and feelings about their debt types. The open ended responses provided a complementary view to the consumers' perception of

debt, considering the limitation of the likert-scale's lack of comprehensiveness in nature (Saunders & Lewis, 2018).

The following hypotheses were tested:

H3 (H30): *Consumer debt perceived as 'debt' has a significant negative relationship with life satisfaction (null hypothesis)*

Alternative hypothesis (H31): Consumer debt perceived as 'debt' has no significant negative relationship with life satisfaction

The Spearman correlation test was used to determine whether consumers' perception of the different det types as debt has a significant relationship with life satisfaction. There was a negative correlation of the perception of debt to life satisfaction for all debt types, although only significant for vehicle loans.

A Spearman correlation was run on the benefit obtained from debt to life satisfaction, to determine if these results had any complement to the perception of debt results. Since consumers perceive vehicle loans as a significant negative relationship to life satisfaction, there is no significant benefit from the vehicles obtained with the debt compared to life satisfaction. Consumers have a significant positive relationship between the benefit obtained from credit card purchases and personal loan purchases compared to life satisfaction, which aligns to the fact that they do not see it significantly as debt on the first test.

Therefore, based on the statistical tests performed for hypothesis 3, South African consumers perceive vehicle loans as debt with a significant negative relationship to life satisfaction. The null hypothesis is **accepted only for personal loans** and rejected for the rest of the four debt types.

5.7.3.3.2 Conclusion – hypothesis 3 – qualitative data

Most mortgage debt consumers feel the “weight” of this type of debt due to high interest rates. While a minority can cope with the debt and even hope for a reduced amount to pay off this debt, the majority is struggling due to the increase in interest

rates in recent years. However, there is no doubt on the benefit obtained from the houses purchased for the households' benefit.

Vehicle loan consumers also feel the impact of the increase in interest rates although the general perception is that the vehicles are a benefit and a necessity. Some consumers see the vehicles owned as an investment. The structure of the agreements including the balloon payment are seen as a 'scam' by some consumers, and consumers appear to understand that these balloon payments mean you cannot really afford that vehicle and should preferably be avoided.

Credit card debt had negative perceptions linked to it due to high interest rates which make it expensive debt. However, consumers highlight the need they have to manage or cope with their living expenses through use of their credit cards due to the increase in the standard of living. However, the general feelings about having this debt were negative and linked to indebtedness and labelled as "not good" and EVIL".

Personal loan consumers had the most negative perceptions about this debt, which aligns to the statistical findings of a significant negative relationship between personal loan debt and life satisfaction. The use of personal loans for needs that require lumpsums are evidence of financial vulnerability of South Africans due to not having adequate savings. The high interest rate also came through from consumers which then becomes the source of stress. Although a few consumers saw this debt as necessary to achieve what they needed to at the time, the majority of general feelings showed the indebtedness, being burdened, stressed and depressed.

Consumers with other debt generally perceive it as a need to manage their living expenses. Most of this debt related to retail stores, which is used by consumers to purchases groceries, although a few consumers admitted to unnecessary impulsive purchases. The bank overdrafts which were also part of this debt is also used by consumers to cope with living expenses. Like personal loans, one consumer used this debt for student loan requirements for their dependant. The use of this debt is also evidence of consumers in financial fragility due to not having adequate savings which enables them to cater for needs that require lump sum funds or educate their children.

5.8. Conclusion

This chapter detailed the results of the data collected through the survey by detailing the sample achieved, the statistical tests performed using the IBM SPSS statistical tool and simple calculations and graphs performed by the researcher to provide insights into the respondent data collected.

The results were presented based on the research questions and hypothesis developed in chapter 3, to ensure the research questions and hypothesis were answered by the tests performed. Each hypothesis was concluded on and an indication of whether the null hypothesis was accepted or rejected was indicated per hypothesis.

The results indicated that South African consumer debt does not significantly impact life satisfaction at an overall debt level. The investigation at debt type level indicated that only personal loans have a negative significant relationship with life satisfaction, providing evidence that the relations is linked to the type of debt. Finally, the perception of debt appeared to have a negative relationship with life satisfaction although this was only significant or vehicle loans. While consumers benefit from assets obtained from debt through secured debt, this does not appear to influence their perception to life satisfaction since it was the perception of personal loans and credit cards that had a positive significant relationship to life satisfaction.

The chapter will discuss the results obtained in this chapter and link these to the theory obtained from the literature review.

6. CHAPTER 6: DISCUSSION OF RESULTS

6.1. Introduction

This chapter aims to discuss the results of the research on the two constructs of consumer debt and life satisfaction. The research is based on the subjective well-being theory which comprises of the negative affective, positive affect, and life satisfaction domains (Diener, Emmons, Larsen, et al., 1985; Diener et al., 1999, 2017). This study uses the life satisfaction component to measure subjective well-being, using the satisfaction with life scale (Diener, Emmons, Larsen, et al., 1985) which were interpreted as a continuous variable in measuring the impact of consumer debt independent variables of debt holding at aggregate level and at debt type level, and perception of debt.

This research aims to add to the existing body of literature on these two variables in the South African context, as most of the literature represents developed countries. The survey method of data collection was utilised, which resulted in 130 respondents that were valid for data analysis. The analysis was conducted using the SPSS statistical tool to run tests that would result in the acceptance or rejection of the hypotheses developed from the literature review. The main objective of the research is to answer the questions of how South African consumers are impacted by their debt holdings. The sub questions of which debt type influences life satisfaction the most and whether perception of debt plays a role in how the perceive debt affects life satisfaction, will also be explored.

The discussion will start with analysing the general statistics found in the data collected and discuss how it measures up against results of reviewed literature. The three hypotheses developed for this research will then be discussed by reviewing the results of the data, then compare with the findings of existing literature.

The chapter will end with the view of the research model that was presented in Chapter 3, updated with the findings of the research.

6.2. Demographics of the sample

The demographics of this sample were skewed to females with 66.2%, which was larger than the comparable study performed by (Greenberg and Mogilner, 2021) that

had a composition of 37.7% females (Greenberg & Mogilner, 2019) therefore skewed to males. The age groups on that study ranged from 18 to 75 (Greenberg & Mogilner, 2019), which is a wider range compared to this study with 18 to 64. This varied for different studies as Sweet (2018) had an average of 34 years in their study.

The population was largely black in this research, which differs from existing challenges in household finance studies that normally feature white, educated households from rich democracies “WEIRD” (Badarinza et al., 2019). This study was the opposite in this fact.

Sweet (2018) also noted a highly educated sample in their research with 34.7% with no degrees. This sample was even more highly educated as 19.2% of the sample had no degrees. Therefore, it was highly skewed to highly educated consumers.

The employment status of this research’s sample was also skewed to employed individuals as they amounted to 86.2% compared to the equivalent study with 66.8% employed individuals (Greenberg & Mogilner, 2019). Due to the age difference in the sample, this study had no retired individuals compared to 2.0% on the equivalent US study. The unemployed respondents were also higher on the US study at 16.8% (Greenberg & Mogilner, 2019) compared to 6.9% on this research sample. These differences are due to the sample reached for this research and could differ if the sample was much larger.

6.3. Consumer debt

The number of debt holders in the sample was 114, which represents 88% of the sample. This is higher than the 61% debt holders from the adult population of South Africa (Mutsonziwa, 2024), which might be due to the demographics of the sample.

Table 10: Debt holding summary

	Total sample	Mortgage debt	Vehicle loans	Credit cards	Personal loans	Other debt
No of debt holding	130	89	107	76	41	39
% holding		68.5%	82.3%	58.5%	31.5%	30.0%

The sample composition of mortgage debt of 68.5% aligns to that of developed countries of 69% (Bialowolski & Weziak-Bialowolska, 2021) and higher than the country statistics which reflect 52.03% (NCR, 2024a). South Africa has lower levels of individualism compared to the US and similar levels of indulgence, which means they should have relatively high levels of mortgage debt based on observations by Gaganis et al. (2020). The levels of 68.5% are high, although these are likely influenced by the ample size than the cultural dimensions of indulgence and individualism in this case.

The balance of the composition of debt is much higher at 82.3% for vehicle loans, 58.5% for credit card debt, 31.5% for personal loans and 30% for other debt compared to the country composition of 21.82% of secured credit agreements of which the majority is vehicle loans, credit facilities of 14.06% of which the majority is credit cards, unsecured credit of 12.09% for the balance of unsecured debt which includes personal loans and other types of debt (NCR, 2024a). These statistics are also high compared to US statistics of 11% for student loans, 6% for credit cards and 9% for vehicle loans (Bialowolski & Weziak-Bialowolska, 2021). The high statistics of the respondents may be due to the limited number of the sample.

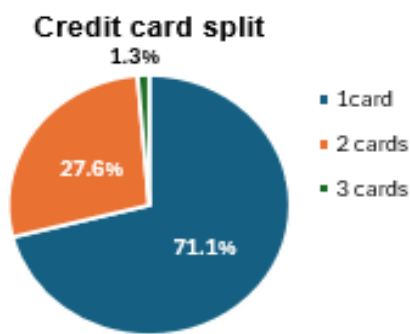


Figure 16: Credit card split

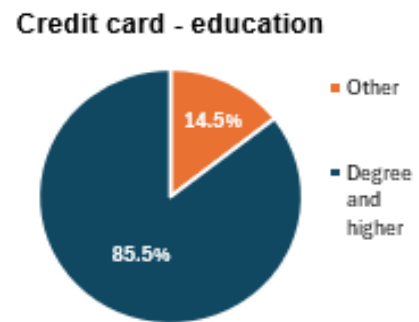


Figure 17: Credit card - education

54 of the 76 credit card holders on the sample have one credit card, representing 71.1%, 21 (27.6%) have 2 credit cards, and 1 (1.3%) has 3 credit cards. The number of respondents with one credit card is slightly lower than the 74% in the US (Stavins, 2020), although comparable. 65 of those with credit cards have Degrees, which represents 85.5% of the sample, lower than the 92% in the US (Stavins, 2020).

The number of credit cards held by each respondent had a mean of 1.42 (refer to table 6, Crcard_Hold), which is lower than the US average of 2.26 credit cards per person (Stavins, 2020) and two cards or more for UK households (Gathergood et al., 2019).

6.4. Hypothesis 1 – Consumer debt and life satisfaction

The first hypothesis intended to answer the first research question as stated in chapter 3 of “How do South African consumers’ debt impact their life satisfaction?”

The hypothesis developed to answer this research question were:

H1: *Consumer debt has a significant negative relationship with life satisfaction (Null hypothesis - H10)*

Alternative hypothesis (**H11**): *Consumer debt has no significant negative relationship with life satisfaction*

The consumer debt impact as an independent variable was measured by considering where the respondents had any type of debt and measuring whether that has a significant impact on life satisfaction. The amount of current debt held and number of debt accounts held were also tested against the life satisfaction dependent variable to investigate whether there was a significant negative relationship between consumer debt and life satisfaction.

The independent t-test, correlation tests and multi-regression analysis performed which controlled for age, gender and income, rejected the null hypothesis. Even when a significant relationship was identified using the amount of debt owed as a measure, the relationship was positive against life satisfaction, which did not align to the hypothesis. Therefore, having consumer debt, at an overall level, has no significant negative relations with life satisfaction.

After testing five different types of debt and how it impacted life satisfaction, (Bialowolski & Weziak-Bialowolska, 2021), concluded that the impact on life satisfaction is determined by the type of debt held by the consumer. (Greenberg and Mogilner, 2021) reached a similar conclusion after four studies investigating the

impact of consumer debt in life satisfaction. Black et al. (2024) also explored the relationship between consumer debt and impact on life satisfaction through financial strain using the amount of debt and types of debt as a measure and concluded that the amount of debt has a negative impact on life satisfaction in the long term, due to the positive relationship with financial strain. Adding to the body of this research, Tay et al. (2017) suggested the negative relationship between debt and subjective well-being due to the financial worry mediator attached to debt but highlighted the importance of examining debt types. Investigating seven different types of debt against happiness in a longitudinal study, which is utilised interchangeably in literature with life satisfaction, Xiao and Tao (2021) suggested that any type of debt has a negative relationship with happiness.

The results on gender reflected no significant relationship between consumer debt and life satisfaction using both the multi regression analysis and 2-way ANOVA. South African consumers have an average of 3.4 accounts per consumer. Therefore, the ANOVA test was split into two groups of consumers that have up to two accounts and those that have three or more accounts, to determine if there would be a significant difference by virtue of this for different genders. The results showed no significant difference for either group for both genders. This study therefore agrees with the findings of Białowolski et al. (2020) that found no significant difference in genders. Contrasting these findings, Almenberg et al. (2021) found Swedish women to be more uncomfortable than men with debt. L. F. Dunn and Mirzaie (2023) also found US women to be more significantly affected by debt stress than men on their job performance and family life. The strong impact of debt on women was also suggested by Chen et al. (2021). Based on sig results of 0.136 for women on this study and a sig of 0.513 for men, although both not statistically significant, the researcher is persuaded that there is evidence of females being more affected by debt than males. Zeka and Alhassan (2024) suggesting financial resilience for South African males might hold true.

Tay et al. (2017) suggested that income plays a moderator role in the relationship between debt and consumer well-being. This was not the case in this study as income made no significant difference in the relationship between consumer debt and life satisfaction.

Tay et al. (2017) and Xiao et al. (2021) highlighted the importance of exploring other factors that may strengthen the relationship debt and life satisfaction in consumers like financial control and managing of debts well. They argue that, implementing such measures might improve the impact of debt on SWB.

The rejection of the null hypothesis, could be an indication that further exploration at debt type level is required, validating the necessity of testing the second hypothesis.

6.5. Hypothesis 2 – Consumer debt type and life satisfaction

The second hypothesis aimed to answer the second research question of: Does South African consumer debt impact consumer life satisfaction differently for different types of debt held?

The hypothesis developed were:

H2: *Unsecured consumer debt types will have a stronger negative relationship with life satisfaction compared to secured consumer debt types (null hypothesis – H20).*

Alternative hypothesis (H21): Unsecured consumer debt types will have no stronger negative relationship with life satisfaction compared to secured consumer debt types.

Unsecured debt types emerged as having a stronger negative relationship to life satisfaction on various studies, with student loans being more prominent in the US. Of the seven debt types investigated, Xiao et al. (2021) identified three of the top four debts that had a negative impact on life satisfaction to be unsecured debt with the exception being mortgage loans. Greenberg and Mogilner (2021) had seven studies investigating the impact of consumer debt on life satisfaction of three debt types with student loans predominantly having a strong negative relationship with life satisfaction across the studies. Credit cards had not significant relationship with life satisfaction while mortgage debt has a positive relationship (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2019). suggested that secured debt increased life satisfaction due to the purpose for which the debt was obtained and the benefit achieved from the assets linked to that debt, while unsecured debt decreased life satisfaction.

The results of this research had elements that align to existing studies in that a positive significant relationship was noted on mortgage debt based on the amount of debt held (Greenberg & Mogilner, 2019, 2021). While the researcher cannot conclude that this results in the increase in life satisfaction as concluded by Bialowolski and Weziak-Bialowolska (2021) due to this being a cross-sectional study, the positive relationship noted would have resulted in the conclusion made in that study as a longitudinal study.

Vehicle loans had no significant negative relationship with life satisfaction on this research. As a secured debt type, this debt type is expected to have a less negative impact on life satisfaction (Mudrazija & Butrica, 2023). Although a negative relationship was identified by virtue of holding this debt type, it was not significant and therefore can be concluded to concur with existing studies.

Credit card debt has no significant relationship with life satisfaction in this study, which aligns to the results of (Greenberg & Mogilner, 2019, 2021). Fan and Ryu (2023) also did not find any significant relationship between having a credit card and impact on social resources, an aspect of life satisfaction. This study also does not align to the findings of Bialowolski and Weziak-Bialowolska (2021), who identified student loans and credit cards to be the largest negative impact on life satisfaction.

Personal loans are the only type of unsecured debt that showed a significant negative relationship with life satisfaction based on having this debt. Personal loans are similar to payday loans in other countries which are subject to high interest rates. Greenberg et al. (2020) purported that it was the high interest rates linked to such debt types that result in debt aversion to consumers, which then cause them to have a negative impact from this type of debt. Together with the conclusions of (Xiao and Tao (2021) relating to unsecured debt, the results of this research align to existing studies.

The student loans were reported as part of other debt types on this research, with these amounting to about 52% of those that provided the details of other debt held. This is not similar to the developed countries and China where student loans featured in research as a negative impact on life satisfaction either directly or through impacting health financial well-being (Bialowolski & Weziak-Bialowolska, 2021; Fan

& Ryu, 2023; Greenberg & Mogilner, 2021; Xiao et al., 2021), with the exception of Robb et al. (2019) who had different findings. This study showed no significant negative relationship between other debt and life satisfaction which would have indicated some student loan influence as most of this type of debt. However, since the overall debt type had no significant negative relationship with life satisfaction, this does not give any indication of associating to existing studies.

6.6. Hypothesis 3 – Perception of debt as “debt”

The third hypothesis aimed to answer the third research question of: Do South African consumers’ debt perception of debt types held impact life satisfaction based on this perception? In addition, open-ended questions were asked from survey participants to complement the quantitative test and get a holistic view of the consumer’s perception of the different types of debt. This discussion will consider results from both these tests in comparing to theory from existing literature.

The hypothesis tested to answer this question was:

H3 (H30): *Consumer debt perceived as ‘debt’ has a significant negative relationship with life satisfaction (null hypothesis)*

Alternative hypothesis (H31): Consumer debt perceived as ‘debt’ has no significant negative relationship with life satisfaction

The perception of debt is driven by the purpose for which that debt was taken, resulting in the labelling of that debt as either “good” or “bad”, which has become common use in literature. The expectation is that, where debt is perceived as “good”, it should result in positive effected on life satisfaction and when it is “bad” it yields negative effects (Bialowolski & Weziak-Bialowolska, 2021). In this context, the amount of debt owed does not influence the consumer’s perception of their debt, since mortgages are normally the highest debt for consumers however are seen as good and have been concluded to increase life satisfaction in the long-term rather than negatively impact it by virtue of being a highest debt (Bialowolski & Weziak-Bialowolska, 2021; Greenberg et al., 2020). The labelling of debt as “debt” therefore becomes a predictor of how the debt will impact life satisfaction, where student loans

were labelled as debt regardless of the amount of debt not being the highest debt (Greenberg & Mogilner, 2021).

The results of this research showed a negative but not significant relationship between the perception of mortgage debt as “debt” and life satisfaction and also did not show a significant positive benefit from the house to life satisfaction. Therefore, consumers label mortgage debt as “debt” although not significant and do not perceive a significant benefit from their houses which are linked to the mortgage. The statistical results considered with most comments from open ended questions, reflect that consumers perceive mortgages as debt regardless of the benefit of having a house due to the high amount and high interest rates linked to the debt. These findings are not aligned to literature.

Consumers perceive vehicle loans as “debt” while the benefit obtained from the vehicles has a positive relationship to life satisfaction although not significant. Vehicle loan debt is “good” due to the benefit from it being long-term, however, South African consumers significantly perceive it as debt. This may also be due to the highlighted high interest rates that have resulted in increased instalments. The argument that even when debt is considered good, it can result in a burden that impacts the perception of the consumer if it places a demand on the consumer’s financial resources (Black et al., 2024). This argument holds true in line with the findings of this research for vehicle loan perception of debt. The labelling of vehicle loans having a significant relationship with life satisfaction also aligns to the view by Greenberg and Mogilner (2021).

Credit card debt consumers recognised that this debt type is an expensive type of debt due to high interest rates, which aligns to literature (Gomes et al., 2021; Greenberg & Mogilner, 2021). Consumers also confirmed use of credit cards for living expenses due to the high cost of living. Two consumers confirmed the use of credit card funds as income, which makes them prone to risky indebtedness behaviour (Abrantes-Braga & Veludo-de-Oliveira, 2020). The negative relationship of credit card perception and life satisfaction was not significant, although consumers perceive the benefit from credit card use to have a positive significant relationship to life satisfaction. It could be due to the role of credit cards in assisting the consumers with their living expenses as admitted, which then drives their perception of seeing it

less as debt due to the benefit achieved from its use (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021).

Data collected through open ended questions on credit card perception as clearly suggest use of credit cards for living expenses, which is different to developed country literature where some consumers use their credit cards for convenience (Keys & Wang, 2019). Stavins (2020) suggested it is lower income earners who have affordability challenges with credit card debt and those with higher income use their credit cards for convenience. This is not the case in South Africa as the average of the sample of this research earns over R54 000 per month, which is classified as higher income. However, the feedback suggests struggles and dependency on credit cards to cope with living expenses as suggested in South African specific available data (Sager, 2024). The findings of this research therefore disagree with literature from developed countries.

Consumers' personal loan perception had a negative non-significant relationship to life satisfaction. However, consumers' perception of the benefit from personal loans was positive and significant to life satisfaction. This did not align to the researcher's considering unsecured nature of this debt type and high interest rates linked to it. Based on the negative feedback from open ended questions, the expectation would be that the negative relationship between personal loan perception would be significant. This could also be due to the impact made by the personal loan in consumers being enabled to achieve what is a necessity to them at the time of need, regardless of the cost of this debt. The pressures of taking care of extended households (black tax) as unique to South Africa comes through with one of the respondents using the personal for the extended family's home (James, 2021). The view the perception of debt being impacted by the benefit obtained from debt in this case holds true as personal loan holders do not have a negative significant relationship on debt and life satisfaction since they see a significant benefit from this type of debt (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021). The other debt perception as "debt" had a negative but not significant relationship to life satisfaction. Although the perception on the benefit from debt is a positive relationship, this was not significant. The researcher expected a different result on this relationship considering the comments obtained from the open-ended question on perception. However, considering the role played by the other debt in assisting in

coping with living expenses and the severity of the stress conveyed on this debt, it could be resulting in this “neutrality” view where neither the perception as “debt” nor the perception as a benefit were significant.

6.7. Research model

The research model was first presented in chapter 3 and demonstrated the conceptual model of this research including the hypotheses planned for testing which were developed from literature. Below is the updated view of the conceptual model, after updating for the results of this research with accepted null hypothesis shown in green and those that were rejected reflected in red.

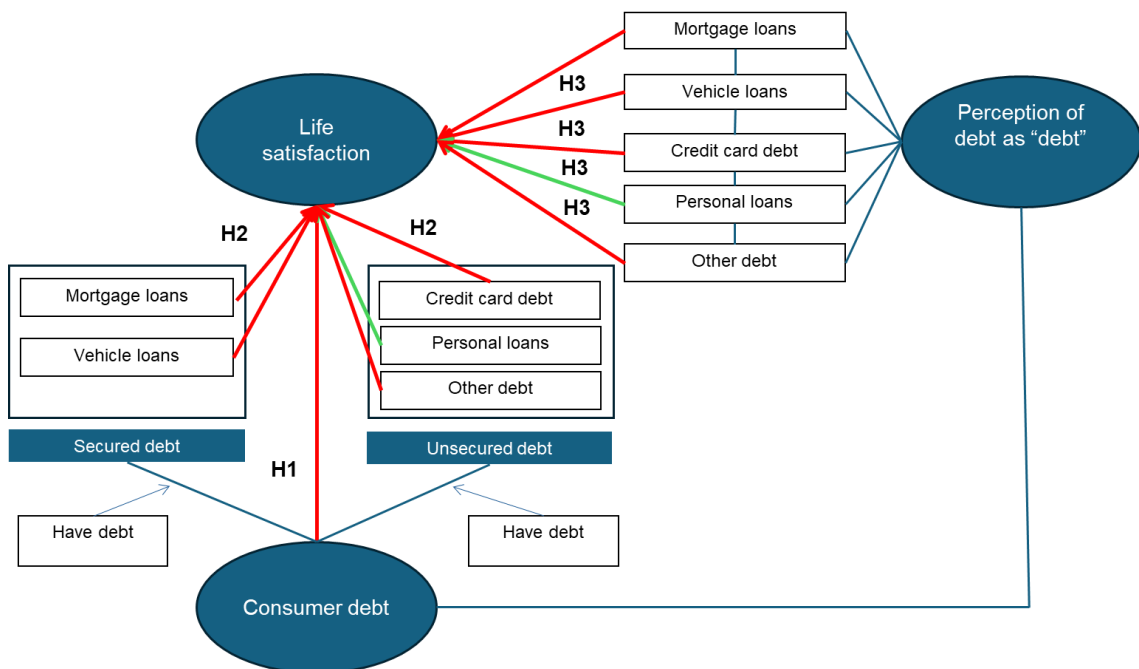


Figure 18: Updated conceptual model with findings

6.8. Conclusion

This chapter aimed to discuss the results of the findings from the research and to align these to the theory on existing literature. The research conceptual model was then updated with the findings of the study.

At an overall consumer debt level, having debt has no significant relationship with life satisfaction. Zooming in to different consumer debt types, the secured debt types

had no significant negative relationship with life satisfaction. The unsecured debt had mixed results with credit card debt and other debt types having no significant relationship with life satisfaction. However, personal loans had a significant negative relationship with life satisfaction.

The perception of debt as “debt” and impact on life satisfaction had a negative significant relationship only for personal loans, which means the fact that consumers have personal loans and their perception of this type of debt align, negatively impacting their life satisfaction.

In some instances, the results of this research align to existing theory and differ in some. At a high level, this study expected the relationship between consumer debt to have a significant negative relationship to life satisfaction, which was strong for unsecured debt than secured debt. While the study confirmed that the relationship between consumer debt and life satisfaction differs based on debt type, not all relationships were a negative relationship nor was the relationship significant. Only personal loans had a negative significant relationship to life satisfaction both for having this type of debt and perception held by consumers. This aligns to results found in US studies where student loans had a negative significant relationship with life satisfaction based on having this type of debt and was also perceived as debt by consumers. In South Africa’s case, this relates to personal loans.

The next chapter will provide conclusions and recommendations for this research based on the results of this research, including limitations of the research.

7. CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

South Africa has over 61% of its adult population in debt (Mutsonziwa, 2024) and each credit active consumer has an average of 3.4 credit accounts. The number of credit active consumers has increased by over 28% in the last decade as reflected in figure 1 of chapter 1. While this is positive with regards to the access of consumers to credit, the credit score of 561 (refer to Appendix 1) in the country compared to the acceptable average score of 616 (Coetzee, 2023). South African consumers have good access to credit with banks providing over 84% of the total debtors' book (NCR, 2024a), however over 62 % of their disposable income is spent on servicing debt (Sager, 2024; SARB, 2024). As of September 2023, South Africa's household debt was 40.6%, which is relatively high compared to the all-time high of 49.6% that was reached in September 2007 (CEIC, n.d.). All these factors evidence the indebtedness of South Africa consumers.

South African consumers have increasingly found themselves depending on credit for their living expenses, with the top reason for borrowing being food (Mutsonziwa, 2024; NCR, 2021). The elevated interest rate, following a cumulative 475 basis point increase since November 2021, including the increased inflation and the remnants of the COVID-19 which impacted the labour force, had a direct impact on instalments due from consumers on their debt (Sager, 2024; SARB, 2023; TransUnion, 2024b).

The first-time default rate of South African consumers has deteriorated by 19% in the last five years since September 2019 (see Table 1, chapter 1). This, together with the increase in demand for debtors under management, is evidence of the challenges faced by credit active consumers (Sager, 2024). The challenges are further seen in the increase in rejection rate of credit applications, which have increased by over 11% in the last five years (NCR, 2019, 2024a). Such conditions give rise to the risk of consumers seeking assistance from informal institutions, which would place them in higher levels of financial vulnerability due to high interest rates charged (Badarinza et al., 2019; Experian, 2024).

The indebtedness of South African consumers is a concern, despite this not being unique only to South Africa (Bialowolski & Weziak-Bialowolska, 2021). These

challenges are seen not only in low-income consumers but also high-income earners who see 69% of their disposable income, higher than the average of 62%, servicing debt (Sager, 2024). The issue of consumer indebtedness is not one to be taken lightly as, once it reached financial distress stages, can take up two and half years to abate (Athreya et al., 2019). This would not only impact consumers' financial well-being, but also the financial institutions that provided this debt as they would incur bad debts due to non-recovery of debt (Feng et al., 2019).

Consumer debt compromises financial well-being, which negatively impacts the overall life satisfaction or subjective well-being of consumers as financial well-being is a key predictor of subjective well-being (Netemeyer et al., 2018; Ngamaba et al., 2020). Compromised financial well-being affects other domains of life satisfaction like health (Ryu & Fan, 2023), causes financial strain to households (Athreya et al., 2019; French & Vigne, 2019; Friedline et al., 2021), and negatively impacts work life (Black et al., 2024; Spoelma & Fletcher, 2024).

Consumers employing good debt management practices result in better financial conditions which then positively impact their financial well-being. Financial distress caused by over-indebtedness causes a negative impact on financial well-being (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021) along with risky indebtedness behaviour (Abrantes-Braga & Veludo-de-Oliveira, 2020). However, financial control, financial capability and financial security have a positive impact on financial well-being (Abrantes-Braga & Veludo-de-Oliveira, 2020; Bialowolski, Weziak-Bialowolska, & McNeely (2021). Therefore, any study that contributes to the understanding of matters impacting consumers' financial well-being is one that could empower consumers, giving them the desire to attain financial control over their finances to have financial satisfaction and positive impact on their life satisfaction.

Financial institutions are in a position of influence to consumers through advise given relating to the financial products offered to consumers, together with how these financial products are structured (Fu, 2020). When financial institutions are responsible in their lending practices it has a positive influence on whereas if credit is given negligently it can also have dire consequences to consumers (Abrantes-Braga & Veludo-de-Oliveira, 2020; Fu, 2020; Greenberg et al., 2020). Research that gives insight to the impact of debt products, could assist business change these

structures to suit the needs of consumers, as well as provide the necessary advise about the risks of certain debt types if research proves them as negative to the consumers' life satisfaction. This research aims to achieve such insights for business.

Various studies have been done in developed countries on consumer debt and life satisfaction of subjective well-being. As life satisfaction is a component of subjective well-being, these terms tend to be used interchangeably in research (Greenberg & Mogilner, 2021; Kollamparambil, 2020; Ngamaba et al., 2020; Xiao et al., 2021). Most of these studies have been done in developed countries, which resulted in the under-representation of emerging economies (refer to table 2 in chapter 2). Life satisfaction has further sub-domains of work, one's group, self-view, finances, health, family and leisure (refer to figure 3 in chapter 2). Existing studies have therefore focused on these various areas of life satisfaction in studying the impact of consumer debt on life satisfaction, with the financial conditions caused by consumer debt being a measure of financial well-being which then impacts life satisfaction through the sub-domains of life satisfaction. Consumer debt financial distress has a negative impact on physical and mental health, with a stronger impact on women than men as women are more likely to report on health problems (Bialowolski, Weziak-Bialowolska, Lee, et al., 2021; Chen et al., 2021; L. F. Dunn & Mirzaie, 2023).

The impact of student loans on life satisfaction was found to improve life-esteem of young adults which positively impacted their self-view while credit cards did not have a similar impact, suggesting a different impact of debt types on one's life satisfaction (Fan & Ryu, 2023). In another study, student loans and credit cards were also concluded to impact life satisfaction negatively (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2021) although Robb et al. (2019) concluded differently and did not find a negative association between student loans and financial satisfaction.

The negative impact of consumer debt on life satisfaction was linked to the type of debt by further studies due to the consumers' debt aversion to high-interest rate debt types (Greenberg et al., 2020; Martínez-Marquina & Shi, 2024). Other studies investigated the various types of debt and determined which debt type had a stronger negative relationship to life satisfaction, with unsecured debt like credit cards and

student loans dominating these studies (Bialowolski & Weziak-Bialowolska, 2021; Chen et al., 2021; Greenberg & Mogilner, 2021; Xiao et al., 2021). Secured debt types like mortgage debt had no significant relationship to life satisfaction (Greenberg & Mogilner, 2021) or increased life satisfaction (Bialowolski & Weziak-Bialowolska, 2021), depending on the research methodology followed.

Studies further pursued the impact of the different debt types on life satisfaction based on the perception from consumers of that debt. Research findings then suggested that the reason for obtaining the debt and benefit obtained from the purchases made with that debt impact the perception of consumers and their life satisfaction from that debt (Bialowolski & Weziak-Bialowolska, 2021). Greenberg et al. (2020) supported this view by claiming that it is the sensitivity of the consumer to the debt that impacts life satisfaction, while Greenberg & Mogilner (2021) worded it as the labelling of debt as “debt” that influences the consumer’s perceptions which then impacts life satisfaction. This view suggests that, even when debt is large based on the amount, it will not be necessarily perceived as debt by consumers due to factors mentioned above (Bialowolski & Weziak-Bialowolska, 2021). Abrantes-Braga & Veludo-de-Oliveira (2020) added to the perception view by cautioning consumers against seeing their credit card limits as their income as it may impact their behaviour and result in risky indebtedness behaviour, which would be detrimental to their financial well-being and therefore life satisfaction.

As mentioned earlier, most of these studies were in developed countries, leaving a gap in the emerging economies. Emerging economies have specific risks and challenges which necessitate this study in this context as the developed country conclusions cannot be assumed to apply to emerging economies as well (Badarinza et al., 2019; Greenberg & Mogilner, 2021; Xiao et al., 2021). The purpose of this research was to obtain insight into the impact of consumer debt on life satisfaction in the South African context, with the objective of adding to the existing body of knowledge on these variables.

Some of the studies on consumer debt and life satisfaction are based on the subjective well-being theory, which is concerned with how people view their own lives and emotional experiences (Diener et al., 2017). The theory further investigates the various domains of subjective well-being which are positive affect, negative affect and life satisfaction Diener et al. (2017). Life satisfaction is further divided into various sub-domains, with financial well-being being the key predictor of financial well-being

(Netemeyer et al., 2018). Financial well-being further has spillover effects on other sub-domains of life satisfaction, further validating its importance (Tay et al., 2017).

This study used life satisfaction as the domain to measure the subjective well-being of South African consumers, which is the core concern of this study. Life satisfaction was measured using the satisfaction with life scales and measures the individual's well-being based on their cognitive judgmental process (Diener, Emmons, Larsen, et al., 1985; Diener et al., 1999, 2017). These cognitive judgments were determined using the survey questionnaire which were distributed via a survey tool to collect data.

7.2 Research scope, approach and findings

The research was specific to South African consumers and limited to the consumer debt as an independent variable and life satisfaction as a dependent variable. The definition of South African consumers included all consumers that permanently reside in South Africa and have a South African ID, therefore regarded as citizens.

The research scope intended to investigate the relationship between consumer debt and life satisfaction at an overall level, debt type level and perception of debt level. This scope was informed by the literature review performed on existing literature that contributed to the debt and subjective well-being theories.

The research aimed to answer the following three research questions to determine the impact of consumer debt on life satisfaction in the South African context:

RQ1: How do South African consumers' debt impact their life satisfaction?

RQ2: Does South African consumer debt impact consumer life satisfaction differently for different types of debt held?

RQ3: Do South African consumers' debt perception of debt types held impact life satisfaction based on this perception?

The research applied a quantitative research methodology and followed a descriptive, explanatory design as there are existing studies relating to these constructs (Saunders & Lewis, 2018). A positivism philosophy was applied as this was a quantitative study together with ontological and epistemological assumptions,

to avoid creating undue realities or conclusion about the data collected (Saunders & Lewis, 2018; Solem, 2003). A deductive approach was followed as this was a quantitative study which aimed to test relationships through developing hypothesis from existing studies (Barczak, 2015). A mono research choice was applied as the survey was the only primary method of data collection utilised, due to the limited time available to collect the data (Saunders & Lewis, 2018).

Due to the regulatory constraints on availability of secondary data, which is what most existing studies used relating to these constructs, the researcher approached a target population that could be reached from their personal network across provinces in South Africa. A non-probability sampling method was used using purposive sampling as the sample could not be selected from the total population of 27.92 credit active consumers in South Africa (NCR, 2024a). The researcher made an effort to eliminate sampling bias by approaching various demographic types of the target population.

The survey was self-created by the researcher on SurveyMonkey as the survey tool, which was then distributed to the target population through social media which was WhatsApp and LinkedIn, email and face-to-face interactions made prior to sharing the survey link. The questionnaire were adopted from a peer-review, highly rated academic article which performed this study in the US (Greenberg & Mogilner, 2021), and adopted for the South African context as necessary. The questionnaire consisted of various closed and open-ended questions to gather information on the two variables identified, at debt type level. Perception of debt was gather through one open-ended question and 7-scale likert questions. Life satisfaction data was obtained through the five satisfaction with life questions which had 7-scale likert questions.

A pilot study was performed to gauge the effectiveness and understandability of the questionnaire from 15 participants. Once the questionnaire was updated for the feedback received, a separate survey link was distributed through the means already mentioned. A final sample of 130 respondents was achieved and analysed. The IBM SPSS statistical tool was utilised, with the assistance of an external Statistician to determine the appropriate tests to be run (refer to appendix AD).

The IBM SPSS statistical tool was utilised to run the independent t-tests, Pearson's correlation, Spearman's correlations, and multiple regression analysis as relevant for the types of variables run. All statistical tests were run at a 95% confidence level. The interpretation of results was made based on the direction of the relationship between the variables tested and the sig value to determine the significance of the relationship. Thereafter, conclusion were made on the hypothesis tested. The findings for each research question are details in 7.3 to 7.7.

7.3 Consumer debt and life satisfaction

There was no significant relationship between consumer debt and life satisfaction. This was the case whether having any debt has an impact, the total number of debts, and amount of debt. This does not align to the suggestion that any debt holding has a negative relationship to life satisfaction (Xiao et al., 2021) Therefore, the impact on South African consumers does not occur by virtue of having debt, which aligns to literature suggesting that considering the type of debt is important in making conclusions between consumer debt and life satisfaction (Chen et al., 2021; Greenberg & Mogilner, 2021; Mudrazija & Butrica, 2023).

7.4 Consumer debt type and life satisfaction

Considering the relationship between consumer debt and life satisfaction at debt type level yielded different results from different debt types, some of which were not expected by the researcher. To answer the research question, South African consumer debt was impacted differently by each debt type.

Mortgage loans had a positive non-significant relationship to consumer debt which aligned to some studies (Bialowolski & Weziak-Bialowolska, 2021; Greenberg & Mogilner, 2019). Vehicle loans had a negative non-significant relationship to life satisfaction and therefore aligns to existing studies which claim secured debt should have a less negative relationship to life satisfaction compared to unsecured debt.

Credit card debt did not have a negative significant relationship with life satisfaction as expected, which does not align to existing studies that highlighted credit cards as one of the unsecured debts with a stronger negative relationship to life satisfaction Bialowolski & Weziak-Bialowolska (2021). However, the results of this research

concur with other findings of existing studies that found no significant negative relationship to life satisfaction (Fan & Ryu, 2023; Greenberg & Mogilner, 2019).

Personal loans had a significant negative relationship to life satisfaction, confirming existing literature as unsecured debt and sensitivity to certain types of debt (Greenberg et al., 2020; Mudrazija & Butrica, 2023; Xiao et al., 2021). Other debt had no significant relationships with life satisfaction, which do not align to existing literature conclusions relating to unsecured debt (Greenberg et al., 2020; Mudrazija & Butrica, 2023; Xiao et al., 2021).

7.5 Perception of debt as “debt” and life satisfaction

Personal loan perception as “debt” was the only debt type that had a significant relationship with life satisfaction. This aligned with hypothesis 2, which means having a personal loan negatively impacts lives of South Africans and affects their perception of this debt due to the burden it brings. This aligns with conclusions of existing research on the principle that where debt is perceived as “debt” this has a negative impact on life satisfaction. While in the US this conclusion related to student loans, it is personal loans that are perceived as “debt” and affect life satisfaction negatively in South Africa.

7.6 Limitations and recommendations for future research

The sample of this study was only 130 respondents due to 47 survey participants that did not complete the questionnaire and 9 participants who are non-South Africans. This limits the ability to generalise the findings as the sample was not a representative of the total population of close to 30 million credit active consumers in South Africa. The researcher recommends that future studies utilise secondary data to access large samples of data. The recent NIDS studies include the life satisfaction component, which could be utilised to gain more valuable insights on the variables of this study.

The cross-sectional research method was not a comprehensive one and was limited due to time constraints. Longitudinal studies in future research could better address this, in line with most of existing studies on consumer debt and life satisfaction.

The questionnaire as a method of data collection provides limitations as the researcher cannot probe the respondent to understand the basis for their response. Although the perception of debt as “debt” component of the questionnaire included open ended questions which partly addressed this, this would not have fully eliminated this limitation.

The research has long questionnaire, with some questions not utilised to explore the relationships extensively due to time limitations linked to the study. Further relationships which consider who is responsible for the debt, studying relationships between different income groups, relationships between different age groups, etc could have been explored in more detail. Future studies could explore this further.

This study was limited to understanding the impact of debt on life satisfaction without exploring other domains of life satisfaction like health, social group impact, one’s self view, etc. Future studies in the South African context could explore these domains as done in developed countries.

Future studies could also explore how South African consumers approach payments on their debt, to determine if the approach is efficient to enable financial well-being or simply balances payments across debt accounts with no regard to interest charged (Argyle et al., 2020; Donnelly et al., 2024; Gathergood et al., 2019; Quispe-Torreblanca et al., 2019). This was not explored by this study.

Perceptions of debt can differ by gender (Chen et al., 2021), which then impacts life satisfaction due to financial stress linked to debt. This was not explored in this study, therefore, future research could include this aspect in the perception of debt studies.

Future studies could explore the impact of personal debt on the employees job performance and overall work experiences, which was not explored in this study (Black et al., 2024; Spoelma & Fletcher, 2024).

Future studies could also explore the levels of education and the impact of consumer on this basis. Existing studies suggest households with lower levels of financial literacy (Feng et al., 2019) and women who are not highly educated (Sweet, 2018), are more likely to be affected strongly by debt. However, in South Africa, highly

educated women were found to be more resilient than men (Zeka & Alhassan, 2024), which would make this study a subject of interest. This was not explored on this research.

Reference List

- Abrantes-Braga, F. D. M. A., & Veludo-de-Oliveira, T. (2020). Help me, I can't afford it! Antecedents and consequence of risky indebtedness behaviour. *European Journal of Marketing*, 54(9), 2223–2244. <https://doi.org/10.1108/EJM-06-2019-0455>
- Almenberg, J., Lusardi, A., Säve-Söderbergh, J., & Vestman, R. (2021). Attitudes towards debt and debt behavior. *Scandinavian Journal of Economics*, 123(3), 780–809. <https://doi.org/10.1111/sjoe.12419>
- Argyle, B. S., Nadauld, T. D., & Palmer, C. J. (2020). Monthly payment targeting and the demand for maturity. *Review of Financial Studies*, 33(11), 5416–5462. <https://doi.org/10.1093/RFS/HHAA004>
- Athreya, K., Mustre-Del-Río, J., & Sánchez, J. M. (2019). The persistence of financial distress. *Review of Financial Studies*, 32(10), 3851–3883. <https://doi.org/10.1093/rfs/hhz009>
- Badarinza, C., Balasubramaniam, V., & Ramadorai, T. (2019). The household finance landscape in emerging economies. *Annual Review of Financial Economics*, 11(1), 109–129. <https://doi.org/10.1146/annurev-financial-110118>
- Barczak, G. (2015). Publishing qualitative versus quantitative research. *Journal of Product Innovation Management*, 32(5), 658. <https://doi.org/10.1111/jpim.12277>
- Beavers, A. S., Lounsbury, J. W., Richards Jennifer K., Huck, S. W., Skolits Gary J., & Esquivel Shelley L. (2013). Practical considerations for using exploratory factor analysis in educational research. *Practical Assessment, Research, and Evaluation*, 18(6). <https://doi.org/10.7275/qv2q-rk76>
- Białowolski, P., Cwynar, A., Cwynar, W., & Węziak-Białowolska, D. (2020). Consumer debt attitudes: The role of gender, debt knowledge and skills. *International Journal of Consumer Studies*, 44(3), 191–205. <https://doi.org/10.1111/ijcs.12558>
- Białowolski, P., & Weziak-Białowolska, D. (2021). Good credit, bad credit: The differential role of the sources of debt in life satisfaction. *Journal of Consumer Affairs*, 55(3), 967–994. <https://doi.org/10.1111/joca.12388>
- Białowolski, P., Weziak-Białowolska, D., Lee, M. T., Chen, Y., VanderWeele, T. J., & McNeely, E. (2021). The role of financial conditions for physical and mental health. Evidence from a longitudinal survey and insurance claims data. *Social Science and Medicine*, 281. <https://doi.org/10.1016/j.socscimed.2021.114041>

- Bialowolski, P., Weziak-Bialowolska, D., & McNeely, E. (2021). The role of financial fragility and financial control for well-being. *Social Indicators Research*, 155(3), 1137–1157. <https://doi.org/10.1007/s11205-021-02627-5>
- Black, K. J., Sinclair, R. R., Graham, B. A., Sawhney, G., & Munc, A. (2024). The Weight of Debt: Relationships of Debt with Employee Experiences. *Journal of Business and Psychology*, 39(1), 45–65. <https://doi.org/10.1007/s10869-022-09867-3>
- Brosnan, K., Babakhani, N., & Dolnicar, S. (2019). “I know what you’re going to ask me” Why respondents don’t read survey questions. *International Journal of Market Research*, 61(4), 366–379. <https://doi.org/10.1177/1470785318821025>
- Brüggen, E. C., Hogueve, J., Holmlund, M., Kabadayi, S., & Löfgren, M. (2017). Financial well-being: A conceptualization and research agenda. *Journal of Business Research*, 79, 228–237. <https://doi.org/10.1016/j.jbusres.2017.03.013>
- CEIC. (n.d.). *South Africa household debt: % of GDP, 1969 – 2023 | CEIC data*. Retrieved 19 February 2024, from <https://www.ceicdata.com/en/indicator/south-africa/household-debt-of-nominal-gdp>
- Cesar Leandro, J., & Botelho, D. (2022). Consumer over-indebtedness: A review and future research agenda. *Journal of Business Research*, 145, 535–551. <https://doi.org/10.1016/j.jbusres.2022.03.023>
- Chancel, L., Cogneau, D., Gethin, A., Myczkowski, A., & Robilliard, A. S. (2023). Income inequality in Africa, 1990–2019: Measurement, patterns, determinants. *World Development*, 163. <https://doi.org/10.1016/j.worlddev.2022.106162>
- Chen, G., Jia, Q., Maskara, P. K., & Williams, A. (2021). Impact of financial debt on borrower’s health based on gender. *International Journal of Consumer Studies*, 45(3), 423–440. <https://doi.org/10.1111/ijcs.12632>
- Coetzee, I. (2023, February 2). *Introducing: A new credit score system | ClearScore ZA*. <https://www.clearscore.com/za/learn/credit-score-and-report/introducing-a-new-credit-score-system>
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SageEdge.
- Daud, S. N. M., Marzuki, A., Ahmad, N., & Kefeli, Z. (2019). Financial vulnerability and its determinants: Survey evidence from Malaysian households. *Emerging Markets Finance and Trade*, 55(9), 1991–2003. <https://doi.org/10.1080/1540496X.2018.1511421>

- Deutskens, E., De, K. O., NI, R. K. D. U., Oosterveld, P., & NI, P. O. (2004). Response rate and response quality of internet-based surveys: An experimental study. In *Marketing Letters* (Vol. 15, Issue 1).
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Emmons, R. A., Larsen, R. J., Griffin, S., Pavot, W. G., Colvin, C. R., & Sandvik, E. (1985). The satisfaction with life scale. *Assessment*, *5*, 164–172.
- Diener, E., Heintzelman, S. J., Kushlev, K., Tay, L., Wirtz, D., Lutes, L. D., & Oishi, S. (2017). Findings all psychologists should know from the new science on subjective well-being. *Canadian Psychology*, *58*(2), 87–104. <https://doi.org/10.1037/cap0000063>
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective well-being: Three decades of progress. In *Psychological Bulletin* (Vol. 125, Issue 2, pp. 276–302). American Psychological Association Inc. <https://doi.org/10.1037/0033-2909.125.2.276>
- Donnelly, G. E., Lamberton, C., Bush, S., Chance, Z., & Norton, M. I. (2024). “Repayment-by-Purchase” increases consumer debt repayment. *Journal of Marketing Research*, *61*(3), 411–429. <https://doi.org/10.1177/00222437231182372>
- Dunn, L. F., & Mirzaie, I. A. (2023). Gender differences in consumer debt stress: Impacts on job performance, family life and health. *Journal of Family and Economic Issues*, *44*(3), 550–567. <https://doi.org/10.1007/s10834-022-09862-z>
- Dunn, L., & Mirzaie, I. (2016). Consumer debt stress, changes in household debt, and the great recession. *Economic Inquiry*, *54*(1), 201–214. <https://doi.org/10.1111/ecin.12218>
- Experian. (2024). *Consumer Default Index - Summary Report - Q1 2024*.
- Fan, L., & Ryu, S. (2023). Financial debts and subjective well-being of young adults: An adaption of the stress process model. *Journal of Consumer Affairs*, *57*(4), 1576–1604. <https://doi.org/10.1111/joca.12560>
- Feng, X., Lu, B., Song, X., & Ma, S. (2019). Financial literacy and household finances: A Bayesian two-part latent variable modeling approach. *Journal of Empirical Finance*, *51*, 119–137. <https://doi.org/10.1016/j.jempfin.2019.02.002>

- French, D., & Vigne, S. (2019). The causes and consequences of household financial strain: A systematic review. *International Review of Financial Analysis*, 62, 150–156. <https://doi.org/10.1016/j.irfa.2018.09.008>
- Friedline, T., Chen, Z., & Morrow, S. P. (2021). Families' financial stress & well-being: The importance of the economy and economic environments. *Journal of Family and Economic Issues*, 42, 34–51. <https://doi.org/10.1007/s10834-020-09694-9>
- Fu, J. (2020). Ability or opportunity to act: What shapes financial well-being? *World Development*, 128. <https://doi.org/10.1016/j.worlddev.2019.104843>
- Gaganis, C., Hasan, I., & Pasiouras, F. (2020). National culture and housing credit. *Journal of Empirical Finance*, 56, 19–41. <https://doi.org/10.1016/j.jempfin.2019.12.003>
- Galariotis, E., & Monne, J. (2023). Basic debt literacy and debt behavior. *International Review of Financial Analysis*, 88. <https://doi.org/10.1016/j.irfa.2023.102673>
- Gathergood, J., Mahoney, N., Stewart, N., & Weber, J. (2019). How do individuals repay their debt? The balance-matching heuristic. In *American Economic Review* (Vol. 109, Issue 3, pp. 844–875). American Economic Association. <https://doi.org/10.1257/aer.20180288>
- Gomes, F., Haliassos, M., & Ramadorai, T. (2021). Household finance. *Journal of Economic Literature*, 59(3), 919–1000. <https://doi.org/10.1257/JEL.20201461>
- Goretzko, D., Pham, T. T. H., & Bühner, M. (2021). Exploratory factor analysis: Current use, methodological developments and recommendations for good practice. *Current Psychology*, 40(7), 3510–3521. <https://doi.org/10.1007/s12144-019-00300-2>
- Greenberg, A. E., & Mogilner, C. (2019). *OSF | Consumer debt and satisfaction in life - supplementary material*.
- Greenberg, A. E., Sussman, A. B., & Hershfield, H. E. (2020). Financial product sensitivity predicts financial health. *Journal of Behavioral Decision Making*, 33(1), 15–26. <https://doi.org/10.1002/bdm.2142>
- Greenberg, & Mogilner, C. (2021). Consumer debt and satisfaction in life. *Journal of Experimental Psychology: Applied*, 27(1), 57–68. <https://doi.org/10.1037/xap0000276>
- Hair, J. F., Hult, G. T. M., Ringle Christian M., Sarstedt, M., Danks, N. P., & Soumya, R. (2021). *Classroom companion: Business Partial Least Squares Structural*

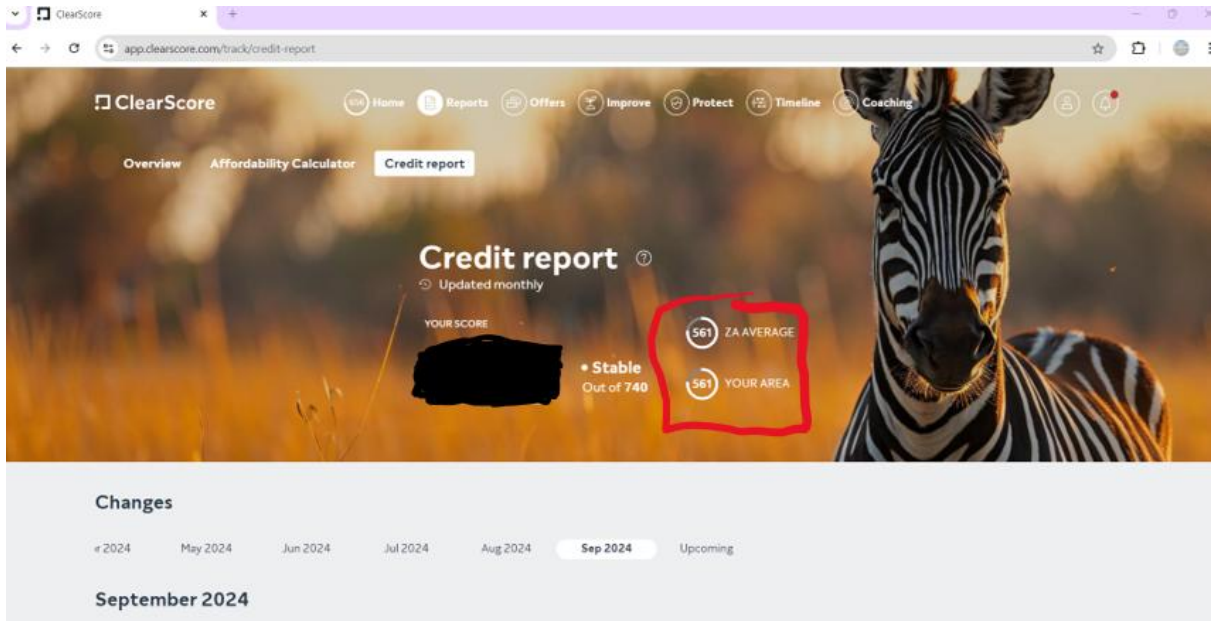
- Equation Modeling (PLS-SEM) using R: A workbook*. Springer Nature. <http://www.>
- Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, 2(1). <https://doi.org/10.9707/2307-0919.1014>
- Illies, R., Yao, J., Curseu, P. L., & Liang, A. X. (2019). Educated and happy: A four-year study explaining the links between education, job fit, and life satisfaction. *Applied Psychology*, 68(1), 150–176. <https://doi.org/10.1111/apps.12158>
- James, D. (2021). Life and debt: A view from the South. *Economy and Society*, 50(1), 36–56. <https://doi.org/10.1080/03085147.2021.1841930>
- Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-being: The foundations of hedonic psychology*. Russell Sage Foundation.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36.
- Keys, B. J., & Wang, J. (2019). Minimum payments and debt paydown in consumer credit cards. *Journal of Financial Economics*, 131(3), 528–548. <https://doi.org/10.1016/j.jfineco.2018.09.009>
- Kiral Ucar, G., Hasta, D., & Kaynak Malatyali, M. (2019). The mediating role of perceived control and hopelessness in the relation between personal belief in a just world and life satisfaction. *Personality and Individual Differences*, 143, 68–73. <https://doi.org/10.1016/j.paid.2019.02.021>
- Kollamparambil, U. (2020). Happiness, happiness inequality and income dynamics in South Africa. *Journal of Happiness Studies*, 21(1), 201–222. <https://doi.org/10.1007/s10902-019-00075-0>
- Kuchler, T., & Pagel, M. (2021). Sticking to your plan: The role of present bias for credit card paydown. *Journal of Financial Economics*, 139(2), 359–388. <https://doi.org/10.1016/j.jfineco.2020.08.002>
- Martínez-Marquina, A., & Shi, M. (2024). The opportunity cost of debt aversion. *American Economic Review*, 114(4), 1140–1172. <https://doi.org/10.1257/aer.20221509>
- Mudrazija, S., & Butrica, B. A. (2023). How does debt shape health outcomes for older Americans? *Social Science and Medicine*, 329. <https://doi.org/10.1016/j.socscimed.2023.116010>
- Muneri, K. P., & Kuhn, K. (2023). *Note on household sector debt and debt-service cost statistics*. <https://www.resbank.co.za/content/dam/sarb/publica->
- Mutsonziwa, K. (2024). *FinScope consumer South Africa 2023 survey launch*.

- Nagatani, K. (1972). Life cycle saving: Theory and fact. *The American Economic Review*, 344–353.
- Nanda, A. P., & Banerjee, R. (2021). Consumer's subjective financial well-being: A systematic review and research agenda. *International Journal of Consumer Studies*, 45(4), 750–776. <https://doi.org/10.1111/IJCS.12668>
- NCR. (2019). *Consumer credit market report 2019Q1*. 1–30.
- NCR. (2021). *Unsecured credit, credit cards, store cards, and the impact of COVID-19 on the consumer credit market in South Africa*. www.genex.co.za
- NCR. (2024a). *Consumer credit market report 2024Q1*.
- NCR. (2024b). *Credit bureau monitor 2024 Q1*. www.ncr.org.za
- Netemeyer, R. G., Warmath, D., Fernandes, D., & Lynch, J. G. (2018). How am I doing? Perceived financial well-being, its potential antecedents, and its relation to overall well-being. *Journal of Consumer Research*, 45(1), 68–89. <https://doi.org/10.1093/jcr/ucx109>
- Ngamaba, K. H., Armitage, C., Panagioti, M., & Hodkinson, A. (2020). How closely related are financial satisfaction and subjective well-being? Systematic review and meta-analysis. *Journal of Behavioral and Experimental Economics*, 85. <https://doi.org/10.1016/j.socec.2020.101522>
- Poalses, J., & Tustin, G. (2023, September 13). *South African life satisfaction study - Bureau of Market Research (Pty) Ltd*. Happiness Index 2023 Research Report No 527. <https://bmr.co.za/2023/09/13/south-african-life-satisfaction-study/>
- Poalses, J., van Tonder, J., & Risenga, A. (2023). *Consumer Financial Vulnerability Index Q3 2023*.
- Quispe-Torreblanca, E. G., Stewart, N., Gathergood, J., & Loewenstein, G. (2019). The red, the black, and the plastic: Paying down credit card debt for hotels, not sofas. *Management Science*, 65(11), 5392–5410. <https://doi.org/10.1287/mnsc.2018.3195>
- Reyers, M. (2019). Financial capability and emergency savings among South Africans living above and below the poverty line. *International Journal of Consumer Studies*, 43(4), 335–347. <https://doi.org/10.1111/IJCS.12520>
- Robb, C. A., Chatterjee, S., Porto, N., & Cude, B. J. (2019). The influence of student loan debt on financial satisfaction. *Journal of Family and Economic Issues*, 40(1), 51–73. <https://doi.org/10.1007/s10834-018-9599-y>

- Ryu, S., & Fan, L. (2023). The relationship between financial worries and psychological distress among U.S. adults. *Journal of Family and Economic Issues*, 44(1), 16–33. <https://doi.org/10.1007/s10834-022-09820-9>
- Sager, B. (2024). *Debt Index | Q1 2024*. www.debtbusters.co.za.
- SARB. (2023). *Monetary policy review*. www.resbank.co.za
- SARB. (2024). *Full quarterly bulletin - SARB*.
- Saunders, M., & Lewis, P. (2018). *Doing research in business management: An essential guide to planning your project* (2nd ed.). Pearson. www.pearson.com/uk
- Solem, O. (2003). Epistemology and logistics: A critical overview. *Systemic Practice and Action Research*, 16(6).
- Southern Africa Labour and Development Research Unit. National Income Dynamics Study 2017, Wave 5 [dataset]. Version 1.0.0 Pretoria: Department of Planning, Monitoring, and Evaluation [funding agency]. Cape Town: Southern Africa Labour and Development Research Unit [implementer], 2018. Cape Town: DataFirst [distributor], 2018. DOI: <https://doi.org/10.25828/fw3h-v708>
- Spoelma, T. M., & Fletcher, K. A. (2024). Financial stress and leadership behavior: The role of leader gender. *Journal of Occupational Health Psychology*, 29(5), 317–341. <https://doi.org/10.1037/OCP0000387>
- Stats SA. (2023). *QLFS CAPI 2023 Jan_Mar*.
- Stavins, J. (2020). Credit card debt and consumer payment choice: What can we learn from credit bureau data? *Journal of Financial Services Research*, 58(1), 59–90. <https://doi.org/10.1007/s10693-019-00330-8>
- Sweet, E. (2018). “Like you failed at life”: Debt, health and neoliberal subjectivity. *Social Science and Medicine*, 212, 86–93. <https://doi.org/10.1016/j.socscimed.2018.07.017>
- Taber, K. S. (2018). The use of Cronbach’s Alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Tay, L., Batz, C., Parrigon, S., & Kuykendall, L. (2017). Debt and subjective well-being: The other side of the income-happiness coin. *Journal of Happiness Studies*, 18(3), 903–937. <https://doi.org/10.1007/s10902-016-9758-5>
- The Culture Factor Group. (2023, October 16). *Country comparison tool*. <https://www.theculturefactor.com/country-comparison-tool?countries=south+africa%2Cunited+states>

- Thomas, C., Magwegwe, F., Mogale, L., & Smit, H. (2023). *The 2023 NedFinHealth monitor report*. <https://www.moneyedge.co.za/nedfinhealth>
- TransUnion. (2024a). *Credit education - Empowering consumers; enabling financial inclusion*.
- TransUnion. (2024b). *SA Consumer Credit Index H1 2024*.
- TransUnion. (2024c, April 2). *South Africa's consumer credit market remains resilient, despite high interest rate environment*. <https://newsroom.transunion.co.za/south-africas-consumer-credit-market-remains-resilient-despite-high-interest-rate-environment/>
- Watkins, M. W. (2018). Exploratory Factor Analysis: A guide to best practice. *Journal of Black Psychology*, 44(3), 219–246. <https://doi.org/10.1177/0095798418771807>
- Webb, C. (2021). Liberating the family: Debt, education and racial capitalism in South Africa. *Environment and Planning D: Society and Space*, 39(1), 85–102. <https://doi.org/10.1177/0263775820942522>
- Webb, C. (2023). 'This country beyond the township': Race, class and higher education mobilities in the post-apartheid city. *Geoforum*, 139, 103678. <https://doi.org/10.1016/J.GEOFORUM.2023.103678>
- Xiao, J. J., & Tao, C. (2021). Consumer finance / household finance: The definition and scope. *China Finance Review International*, 11(1), 1–25. <https://doi.org/10.1108/CFRI-04-2020-0032>
- Xiao, J. J., Yan, C., Bialowolski, P., & Porto, N. (2021). Consumer debt holding, income and happiness: evidence from China. *International Journal of Bank Marketing*, 39(5), 789–809. <https://doi.org/10.1108/IJBM-08-2020-0422>
- Zeka, B., & Alhassan, A. L. (2024). Gender disparities in financial resilience: insights from South Africa. *International Journal of Bank Marketing*, 42(6), 1212–1231. <https://doi.org/10.1108/IJBM-01-2023-0053>
- Zikmund, W., Babin, B., Carr, J., & Griffin, M. (2013). *Business Research Methods* (Eighth Edit). Cengage Learning.

APPENDIX A: South African consumer average credit score



APPENDIX B: Credit granted – Credit facilities

Item	2019Q1	2024Q1
Credit Facilities entered into	2,157,555	2,900,270
Credit Transactions entered into	2,033,314	1,817,813
Grand Total	4,190,869	4,718,083
Credit facilities percentage of total credit granted	51%	61%

Source: NCR

APPENDIX C: Survey questionnaire

Consumer Debt Influence on Life Satisfaction: A South African Study

Consent Statement and Qualifying Question

I am currently a student at the University of Pretoria's Gordon Institute of Business Science and am completing my research in partial fulfilment of an MBA.

I am conducting research on how consumer debt impacts consumer life satisfaction. To that end, you are asked to complete the survey to the best of your knowledge. This will help us better understand how consumers' mental labelling of debt as "debt" affects their life satisfaction. The survey should take no more than 20 minutes of your time, depending on the applicable debt types.

Your participation is voluntary, and you can withdraw at any time without penalty. Your participation is anonymous and only aggregated data will be reported to ensure your confidentiality. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher Name: Wendy Nkambule
Researcher Email: 23993635@mygibs.co.za
Researcher Phone: 083 310 1597

Research Supervisor: Dr Samantha Swanepoel
Supervisor Email: samanthaswanepoel1@gmail.com

* 1. Are you a South African?

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section A: Demographics

This section is to collect your relevant demographic information. All information provided will be kept anonymous and confidential. Please select only one answer.

* 2. What is your gender?

- Female
- Male
- Prefer not to answer

* 3. What is your age (in years)?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

* 4. What is your population group?

- Black/African
- Coloured
- Indian/Asian
- White
- Other (please specify)

* 5. What is your current employment status?

- Employed
- Self-employed
- Unemployed / Not in workforce
- Retired
- Other (please specify)

* 6. What is your highest level of education?

- Matric
- Certificate/Diploma
- Bachelor's Degree
- Honours/Postgraduate Diploma
- Master's/Doctorate
- Other (please specify)

* 7. What is your monthly income (before tax and other deductions)?

- R0 - R16 000
- R16 001 - R30 000
- R30 001 - R37 500
- R37 501 - R54 167
- R54 168 - R62 500
- R62 501 - R70 800
- R70 801 - R83 300
- R83 301 +

* 8. What is your monthly household income (before tax and other deductions)?

- R0 – R16 000
- R16 001 – R30 000
- R30 001 – R37 500
- R37 501 – R54 167
- R54 168 – R62 500
- R62 501 – R70 800
- R70 801 – R83 300
- R83 301 +

* 9. What is your marital status?

- Married (includes traditional or customary marriages)
- Living together with a partner
- Widow/widower
- Divorced or separated
- Never married

* 10. How many dependants (i.e. children, family members, or others whom you support financially) do you have?

Enter 0 if you do not have dependants.

Are you responsible for managing your household expenses?

* 11.

- Yes, I am primarily or solely responsible for managing the household expenses
- No, I am not primarily responsible for managing the household expenses
- Spouse or partner contributes partially to managing household expenses

* 12. Do you own a house?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section B: Mortgage debt

* 13. Do you currently have a mortgage(s)?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section B: Mortgage debt - Previous holdings

* 14. Have you ever had any mortgage debt in the past?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section B: Mortgage debt - Current holdings and perceptions

To the best of your knowledge, please enter your response to the questions. If you do not know the exact amount, interest rate, go ahead and give as close of an estimate as possible.

* 15. Are you personally responsible for paying back your mortgage debt?
You are personally responsible for the debt if solely or partly responsible for the payment of the debt.

Yes

No

* 16. Approximately, what is the current balance of your mortgage debt in total (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate million or 'k' to indicate thousand). If you do not know, enter 12345.

* 17. Approximately, how much debt did you take out initially (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate millions or 'k' to indicate thousands). If you do not know, enter 12345.

What is the interest rate on this mortgage debt?

If you have more than one, pick the option that represents the average interest rate across all your mortgage loans.

* 18.

How many mortgages do you have?

* 19.

* 20. Is all the mortgage debt you have for your own/household use?
If, for example, you took out a mortgage for your child's house that you do not live in, click 'No'.

- Yes
- No
- Some - please specify amount

* 21. To what extent are you still benefiting from your house?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Moderately
- Still benefiting
- Mostly
- Very much

* 22. Please write a sentence or two about your thoughts and feelings surrounding your mortgage debt.

* 23. To what extent do you perceive mortgage debt as "debt"?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 24. To what extent do you perceive your mortgage debt as an investment?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 25. To what extent do you perceive your mortgage as a choice you made?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section C: Vehicle loan - Asset holding

* 26. Do you own a vehicle?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section C: Vehicle loan - Debt holding

* 27. Do you currently have a vehicle loan(s)?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section C: Vehicle loan - Previous holdings

* 28. Have you ever had any vehicle loan in the past?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section C: Vehicle Loan - Current holdings and perceptions

To the best of your knowledge, please enter your response to the questions. If you do not know the exact amount, interest rate, go ahead and give as close of an estimate as possible.

* 29. Are you personally responsible for paying back your vehicle loan?

payment of the debt.

Yes

No

* 30. Approximately, what is the current balance of your vehicle loan in total (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate million or 'k' to indicate thousand). If you do not know, enter 12345.

* 31. Approximately, how much vehicle debt did you take out initially (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate millions or 'k' to indicate thousands). If you do not know, enter 12345.

What is the interest rate on the vehicle loan(s) you have?

If you have more than one, pick the option that represents the average interest rate across all your vehicle loans.

* 32.

How many vehicle loans do you have?

* 33.

* 34. Is all the vehicle debt you have for your own/household use?

If, for example, you took out a vehicle loan for your child's car that does not live with you, click 'No'.

Yes

No

Some - please specify amount

* 35. To what extent are you still benefiting from your vehicle?

Please select one option that best represents your opinion

Not at all

Slightly

Somewhat

Moderately

Still benefiting

Greatly

Very much

* 36. Please write a sentence or two about your thoughts and feelings surrounding your vehicle loan.

* 37. To what extent do you perceive your vehicle loan as “debt”?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 38. To what extent do you perceive your vehicle loan as an investment?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 39. To what extent do you perceive your vehicle loan as a choice you made?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section D: Credit card debt

* 40. Do you have credit card debt?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section D: Credit card - Previous holdings

* 41. Have you ever had any credit card debt in the past?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African Study

Section D: Credit card debt - Current holdings and perceptions

To the best of your knowledge, please enter your response to the questions. If you do not know the exact amount, interest rate, go ahead and give as close of an approximate as possible.

* 42. Are you personally responsible for paying back your credit card debt?

Approximately, what is the current balance of your mortgage debt in total (in Rand)?

Yes

No

* 43. Approximately, what is the current balance of your credit card debt in total (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate million or 'k' to indicate thousand). If you do not know, enter 12345.

* 44. Approximately, how much credit card debt did you take out initially (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate millions or 'k' to indicate thousands). If you do not know, enter 12345.

What is the interest rate on this credit card debt?

If you have more than one, pick the option that represents the average interest rate across all your credit cards.

* 45.

How many credit cards do you have?

* 46.

* 47. Is all the credit card debt you have for your own/household use?
If, for example, you took out a credit card for your child's expenses that you do not live with, click 'No'.

- Yes
- No
- Some - please specify amount

* 48. To what extent are you still benefiting from your credit card spend?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Moderately
- Still benefiting
- Mostly
- Very much

* 49. Please write a sentence or two about your thoughts and feelings surrounding your credit card debt.

* 50. To what extent do you perceive your credit card debt as "debt"?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 51. To what extent do you perceive your credit card debt as an investment?
Please select one option that best represents your opinion

- Not at all
- Lightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 52. To what extent do you perceive your credit card debt as a choice you made?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section E: Personal loan - Debt holding

* 53. Do you have a personal loan?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section E: Personal loan debt - Previous holdings

* 54. Have you ever had any personal loan debt in the past?

Yes

No

Consumer Debt Influence on Life Satisfaction: A South African Study

Section E: Personal loan debt - Current holdings and perceptions

To the best of your knowledge, please enter your response to the questions. If you do not know the exact amount, interest rate, go ahead and give as close of an approximate as possible.

* 55. Are you personally responsible for paying back your personal loan debt?

Approximately, what is the current balance of your mortgage debt in total (in Rand)?

Yes

No

* 56. Approximately, what is the current balance of your personal loan debt in total (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate million or 'k' to indicate thousand). If you do not know, enter 12345.

* 57. Approximately, how much personal loan debt did you take out initially (in Rand)? Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate millions or 'k' to indicate thousands). If you do not know, enter 12345.

What is the interest rate on this personal loan debt?

If you have more than one, pick the option that represents the average interest rate across all your personal loans.

* 58.

How many personal loans do you have?

* 59.

* 60. Is all the personal loan debt you have for your own/household use?
If, for example, you took out a personal for your child's expenses that you do not live with, click 'No'.

- Yes
- No
- Some - please specify amount

* 61. To what extent are you still benefiting from your personal loan?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Moderately
- Still benefiting
- Mostly
- Very much

* 62. Please write a sentence or two about your thoughts and feelings surrounding your personal loan debt.

* 63. To what extent do you perceive personal loan debt as "debt"?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 64. To what extent do you perceive your personal loan debt as an investment?
Please select one option that best represents your opinion

- Not at all
- Lightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 65. To what extent do you perceive your personal loan debt as a choice you made?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section F: Other debt holdings

* 66. Do you have other types of debt (family, friends, student loans, retail stores, etc.)?

Yes

No

Type of debt(s) - please specify

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section F: Other debt - Previous holdings

57. Have you ever had any other types of debt in the past?

Yes

No

Type of debt(s) - please specify

Consumer Debt Influence on Life Satisfaction: A South African Study

Section F: Other debt - Current holdings and perceptions

To the best of your knowledge, please enter your response to the questions. If you do not know the exact amount, interest rate, go ahead and give as close of an approximate as possible.

* 68. Are you personally responsible for paying back other debts?

_____ payment of the debt.

Yes

No

* 69. Approximately, what is the current balance of other debts you have in total (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate million or 'k' to indicate thousand). If you do not know, enter 12345.

* 70. Approximately, how much other debt did you take out initially (in Rand)?

Please write out the full amount if possible (if you abbreviate, please use 'm' to indicate millions or 'k' to indicate thousands). If you do not know, enter 12345.

What is the interest rate on other debt you have?

If you have more than one, pick the option that represents the average interest rate across all your debts.

* 71.

How many types of other debt do you have?

* 72.

* 73. Is all the other debt you have for your own/household use?

If, for example, you took out other debt for your child that you do not live with, click 'No'.

- Yes
- No
- Some - please specify amount

* 74. To what extent are you still benefiting from other debt?

Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Moderately
- Still benefiting
- Mostly
- Very much

* 75. Please write a sentence or two about your thoughts and feelings surrounding your other debt.

* 76. To what extent do you perceive other debt you have as "debt"?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 77. To what extent do you perceive your other debt as an investment?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

* 78. To what extent do you perceive your other debt as a choice you made?
Please select one option that best represents your opinion

- Not at all
- Slightly
- Somewhat
- Neutral
- Moderately
- Mostly
- Very much

Consumer Debt Influence on Life Satisfaction: A South African

Study

Section G: Satisfaction with life

The below six statements aim to obtain your view on your life satisfaction. Please select one option per question that best represents your opinion.

* 79. In general, I consider myself...

- Not a very happy person
- A slightly happy person
- A somewhat happy person
- A neither happy nor unhappy person
- A moderately happy person
- A happy person
- A very happy person

* 80. I am completely satisfied with my life.

- Strongly disagree
- Disagree
- Slightly disagree
- Neither agree nor disagree
- Slightly agree
- Agree
- Strongly agree

* 81. The conditions of my life are excellent.

- Strongly disagree
- Disagree
- Slightly disagree
- Neither agree nor disagree
- Slightly agree
- Agree
- Strongly agree

* 82. In most ways, my life is close to my ideal.

- Strongly disagree
- Disagree
- Slightly disagree
- Neither agree nor disagree
- Slightly agree
- Agree
- Strongly agree

* 83. So far, I have gotten the important things I want in life.

- Strongly disagree
- Disagree
- Slightly disagree
- Neither agree nor disagree
- Slightly agree
- Agree
- Strongly agree

* 84. If I could live my life over, I would change nothing.

Strongly disagree

Disagree

Slightly disagree

Neither agree nor disagree

Slightly agree

Agree

Strongly agree

APPENDIX D: Data gathering

Survey Collectors BUY TARGETED RESPONSES ADD NEW COLLECTOR


Total Responses: **201** Response Notifications
Manage Notifications

Boost your survey response rate with a custom subdomain like https://customsubdomain.surveymonkey.com/r/your_custom_ending. [Get a demo](#)

	NICKNAME		STATUS	RESPONSES	DATE MODIFIED	
Web Link 2	https://www.surveymonkey.com/r/HRXZX...	QR Code Copy URL	CLOSED	186	10/6/2024	...
Web Link 1	https://www.surveymonkey.com/r/MZCQ8...	QR Code Copy URL	CLOSED	15	8/22/2024	...

Created on 8/12/2024 | 19 pages, 84 questions

SURVEYMONKEY GENIUS

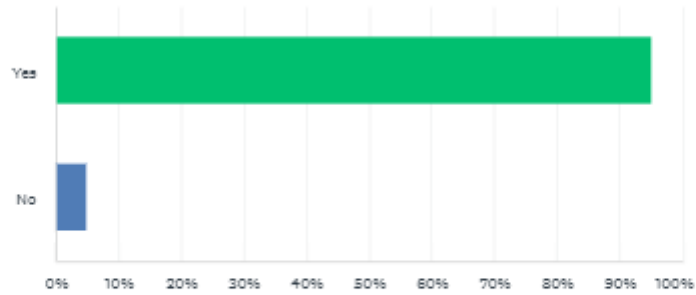


ESTIMATED COMPLETION RATE	ESTIMATED TIME TO COMPLETE
66% Completed	27 Minutes

APPENDIX E: Sample qualifying question

Are you a South African?

Answered: 186 Skipped: 0

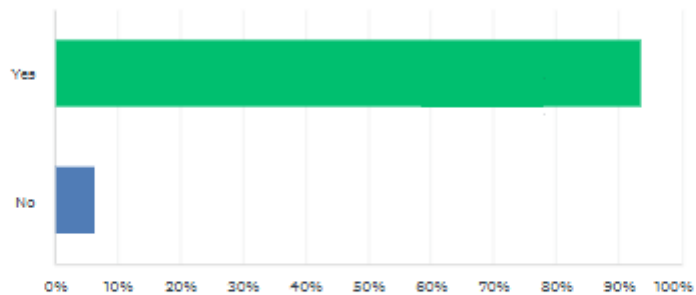


ANSWER CHOICES	RESPONSES
Yes	95.16% 177
No	4.84% 9
Total Respondents: 186	

APPENDIX F: Sample – completed responses

Are you a South African?

Answered: 139 Skipped: 0



ANSWER CHOICES	RESPONSES
Yes	93.53% 130
No	6.47% 9
Total Respondents: 139	

APPENDIX G: Life satisfaction scale

		Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
1.	In most ways my life is close to my ideal.	1	2	3	4	5	6	7
2.	The conditions of my life are excellent.	1	2	3	4	5	6	7
3.	I am satisfied with my life.	1	2	3	4	5	6	7
4.	So far I have gotten the important things I want in life.	1	2	3	4	5	6	7
5.	If I could live my life over, I would change almost nothing.	1	2	3	4	5	6	7

(Diener, Emmons, Larsem, et al., 1985)

Scoring

A total score is calculated by adding up the scores for each item. The possible range of scores is 5-35, with a score of 20 representing a neutral point on the scale. Scores between 5-9 indicate the respondent is extremely dissatisfied with life, whereas scores between 31-35 indicate the respondent is extremely satisfied. The following chart provides cutoff scores to be used as benchmarks.

Score	Level of Satisfaction with Life
31 - 35	Extremely satisfied
26 - 30	Satisfied
21 - 25	Slightly satisfied
20	Neutral
15 - 19	Slightly dissatisfied
10 - 14	Dissatisfied
5 - 9	Extremely dissatisfied

(Diener, Emmons, Larsen, et al., 1985)

APPENDIX H: Reliability and validity tests – Life satisfaction

Table 3: Cronbach's Alpha – Life satisfaction

Reliability Statistics	
Cronbach's Alpha	N of Items
.831	5

Table 4: KMO and Bartlett's test – Life satisfaction

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.788
Bartlett's Test of Sphericity	Approx. Chi-Square	267.902
	df	10
	Sig.	<.001

Communalities

	Initial	Extraction
Life_satis	.543	.550
Life_satis	.540	.558
Life_satis	.624	.776
Life_satis	.342	.365
Life_satis	.379	.350

Extraction Method: Principal Axis Factoring.

Appendix I – Proportion of debt holders

Table 5: Respondents with/without debt

Statistics

Number_of_debts_responsible.		
N	Valid	114
	Missing	16

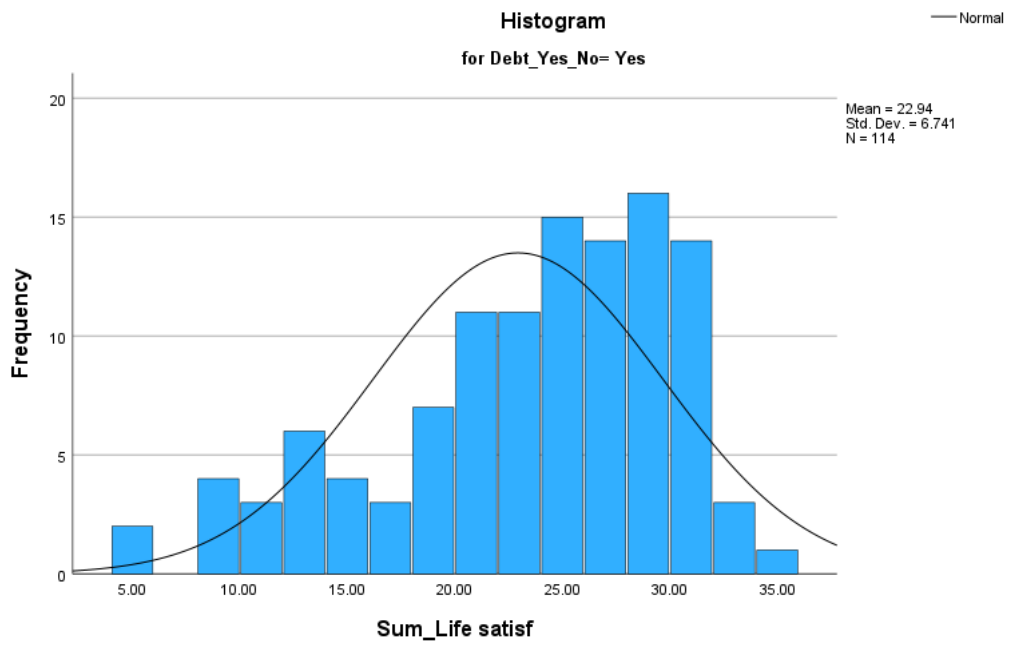
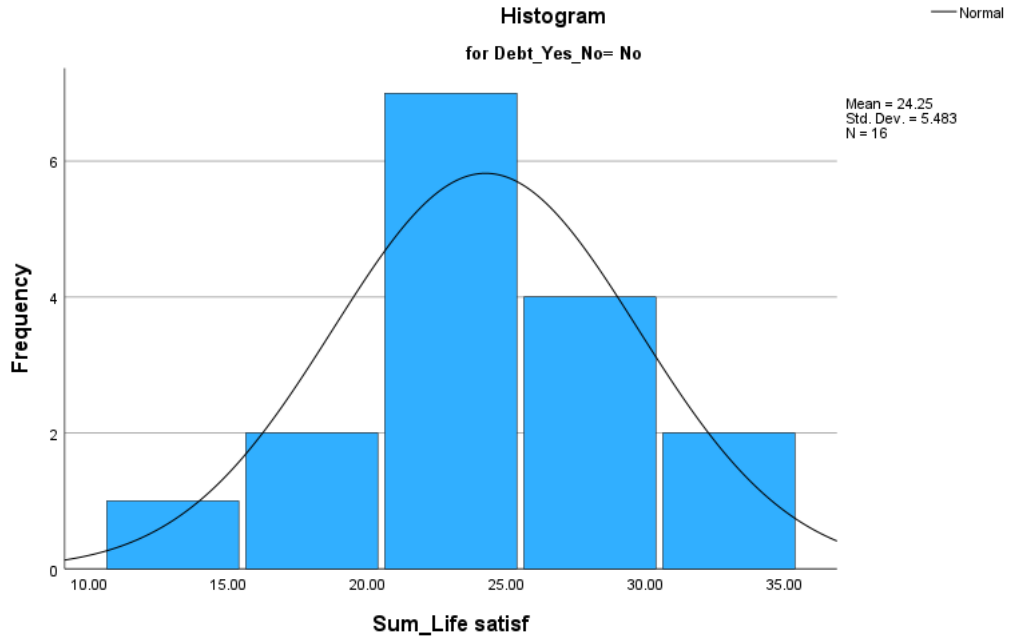
Appendix J – Independence t-test – Hypothesis 1

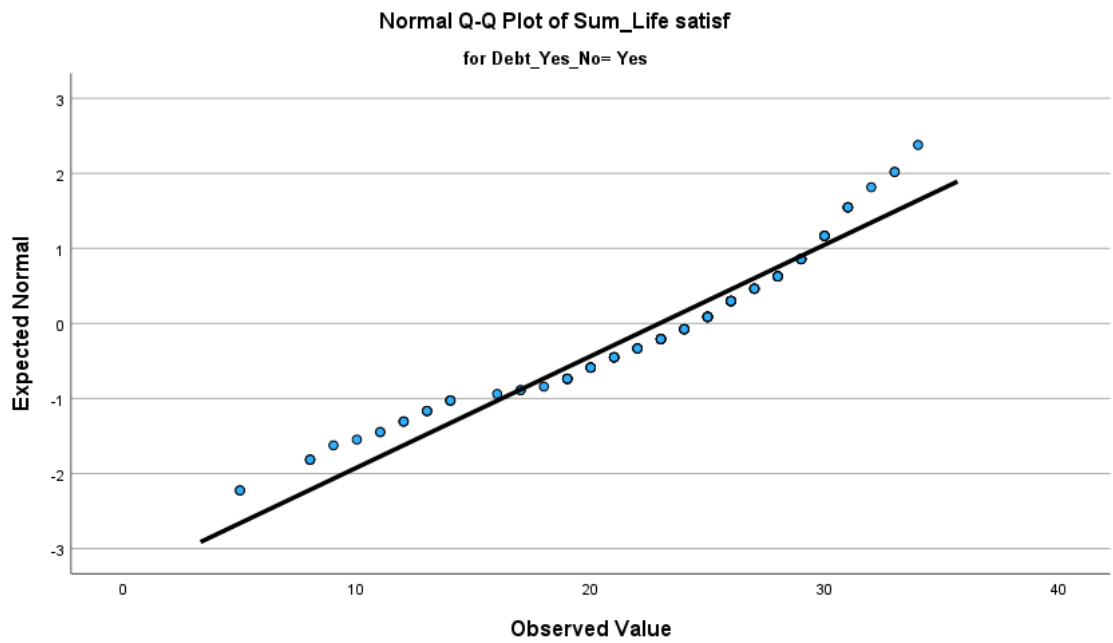
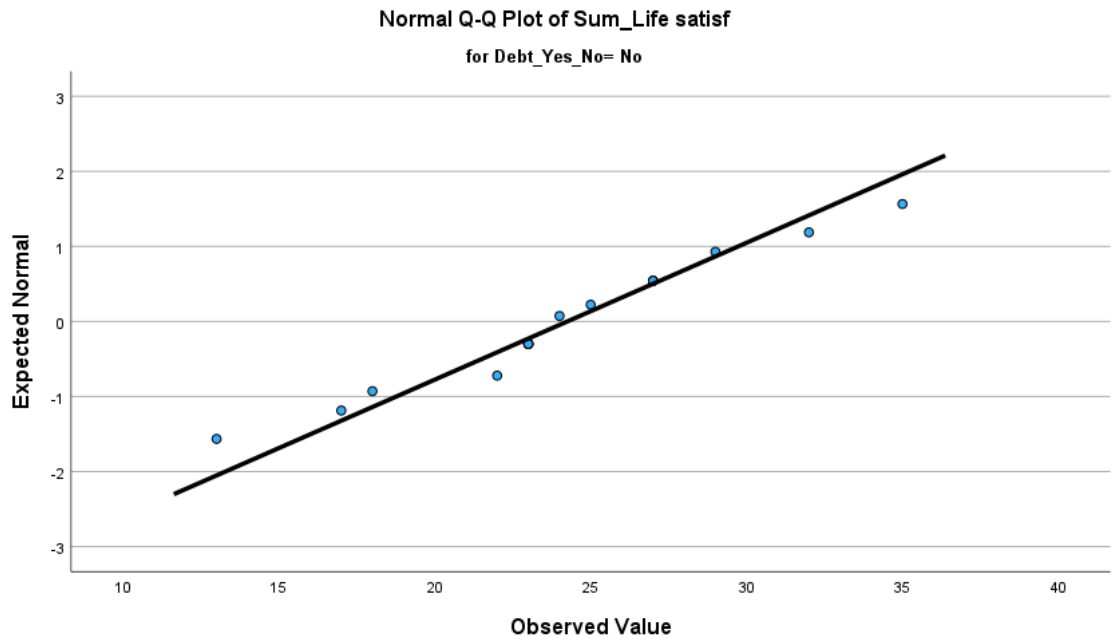
Group Statistics

	Debt yes or no	N	Mean	Std. Deviation	Std. Error Mean
Sum_Life_satisf	No	16	24.2500	5.48331	1.37083
	Yes	114	22.9386	6.74082	.63134

Independent Samples Test

		Levene's Test for Equality of Variances				t-test	
		F	Sig.	t	df	One-Sided p	Two-Sided p
Sum_Life_satisf	Equal variances assumed	1.651	.201	.744	128	.229	.458
	Equal variances not assumed			.869	21.907	.197	.394



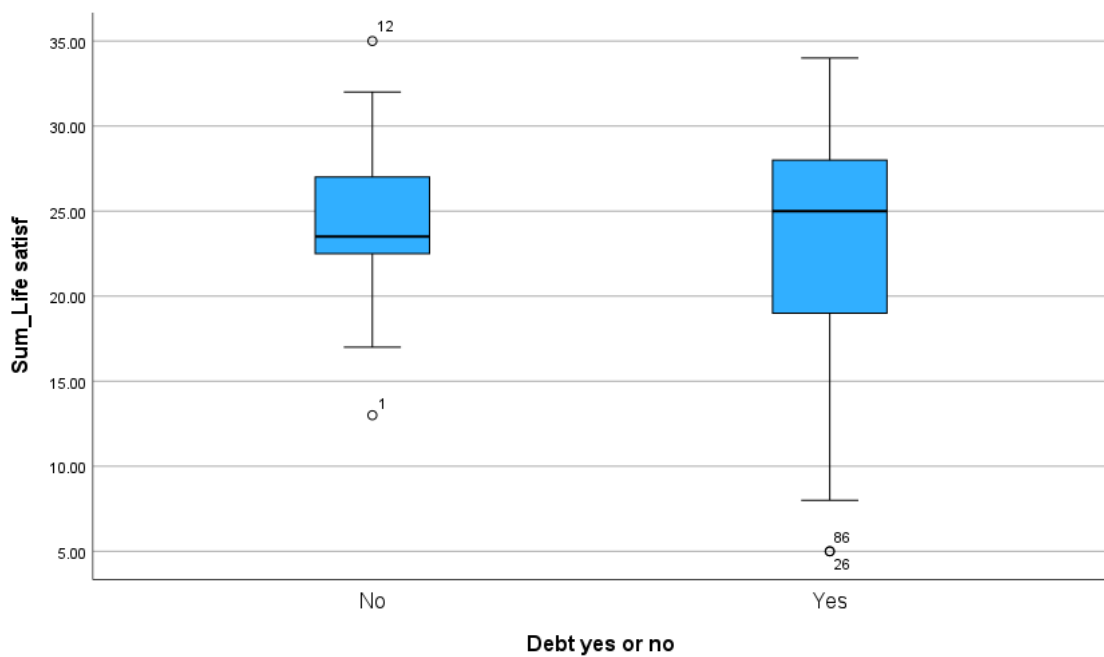


Nonparametric Correlations

Correlations

		Sum_Life satisf	Amount of total debt
Spearman's rho	Sum_Life satisf	Correlation Coefficient	--
		Sig. (2-tailed)	.
		N	130
	Amount of total debt	Correlation Coefficient	.282**
		Sig. (2-tailed)	.003
		N	109
			109

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



Appendix K – Pearson correlation test – Hypothesis 1

Nonparametric Correlations

Correlations			
		Sum_Life satisf	Amount of total debt
Spearman's rho	Sum_Life satisf	Correlation Coefficient	--
		Sig. (2-tailed)	.
		N	130
	Amount of total debt	Correlation Coefficient	.282**
		Sig. (2-tailed)	.003
		N	109

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

Appendix L – Spearman correlation – Number of debts and life satisfaction

➔ Nonparametric Correlations

Correlations			
		Sum_Life satisf	Number of debts
Spearman's rho	Sum_Life satisf	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	130
	Number of debts	Correlation Coefficient	-.078
		Sig. (2-tailed)	.378
		N	130

Tests of Normality							
		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Number of debts	Statistic	df	Sig.	Statistic	df	Sig.
Sum_Life satisf	0	.160	16	.200*	.970	16	.846
	1	.120	22	.200*	.951	22	.328
	2	.160	31	.042	.898	31	.006
	3	.148	47	.011	.918	47	.003
	4	.271	11	.023	.868	11	.073
	5	.232	3	.	.980	3	.726

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix M – Multi regression analysis

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.265 ^a	.070	.044	6.64796	.070	2.641	3	105	.053	
2	.397 ^b	.158	.117	6.38734	.088	5.372	2	103	.006	2.223

a. Predictors: (Constant), Age, Own_income, Gender

b. Predictors: (Constant), Age, Own_income, Gender, Number of debts, Amount of total debt

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	350.169	3	116.723	2.641	.053 ^b
	Residual	4640.510	105	44.195		
	Total	4990.679	108			
2	Regression	788.468	5	157.694	3.865	.003 ^c
	Residual	4202.210	103	40.798		
	Total	4990.679	108			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Age, Own_income, Gender

c. Predictors: (Constant), Age, Own_income, Gender, Number of debts, Amount of total debt

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	16.528	3.021		5.471	<.001		
	Gender	.066	1.444	.005	.046	.964	.879	1.137
	Own_income	.666	.280	.238	2.379	.019	.888	1.126
	Age	.893	.781	.109	1.144	.255	.980	1.020
2	(Constant)	19.931	3.163		6.302	<.001		
	Gender	.289	1.419	.020	.204	.839	.841	1.190
	Own_income	.300	.326	.107	.921	.359	.602	1.660
	Age	1.062	.754	.129	1.409	.162	.972	1.029
	Number of debts	-1.624	.652	-.236	-2.489	.014	.912	1.097
	Amount of total debt	1.880E-6	.000	.291	2.586	.011	.646	1.547

a. Dependent Variable: Sum_Life satisf

Appendix N – 2-way ANOVA – Consumer debt

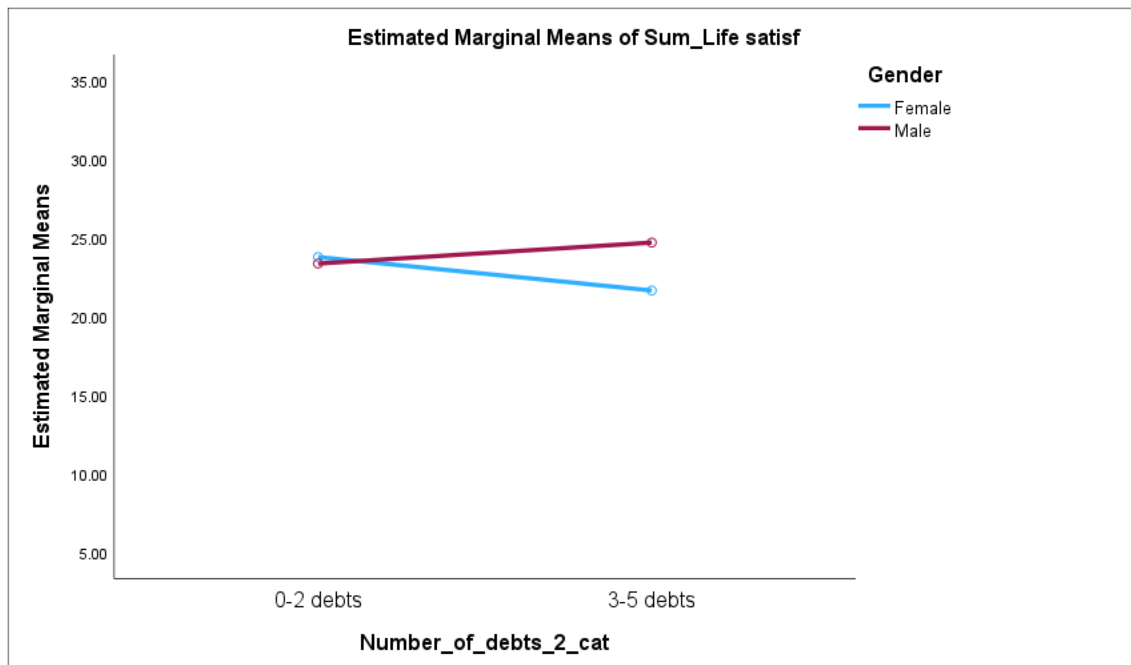
Pairwise Comparisons

Dependent Variable: Sum_Life satisf

Gender	(I)	(J)	Mean	Std. Error	Sig. ^a	Lower
	Number_of_debts_2_cat	Number_of_debts_2_cat	Difference (I-J)			
Female	0-2 debts	3-5 debts	2.127	1.419	.136	
	3-5 debts	0-2 debts	-2.127	1.419	.136	
Male	0-2 debts	3-5 debts	-1.336	2.037	.513	
	3-5 debts	0-2 debts	1.336	2.037	.513	

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).



Estimates

Dependent Variable: Sum_Life satisf

Gender	Number_of_debts_2_cat	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Female	0-2 debts	23.786	1.015	21.777	25.795
	3-5 debts	21.659	.992	19.696	23.622
Male	0-2 debts	23.370	1.266	20.865	25.876
	3-5 debts	24.706	1.596	21.548	27.863

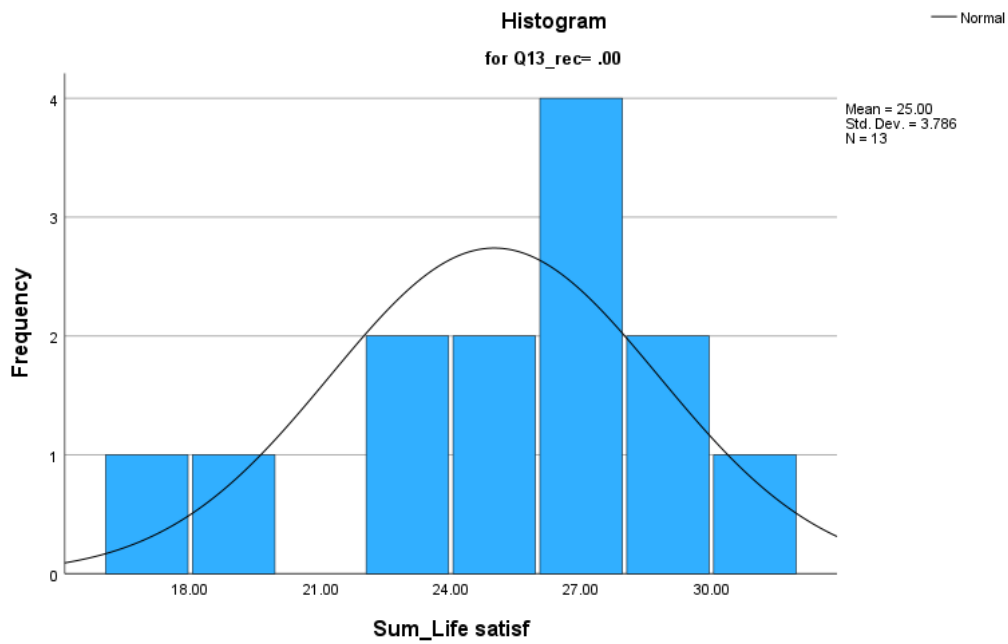
Appendix O – Mortgage debt independent t-test

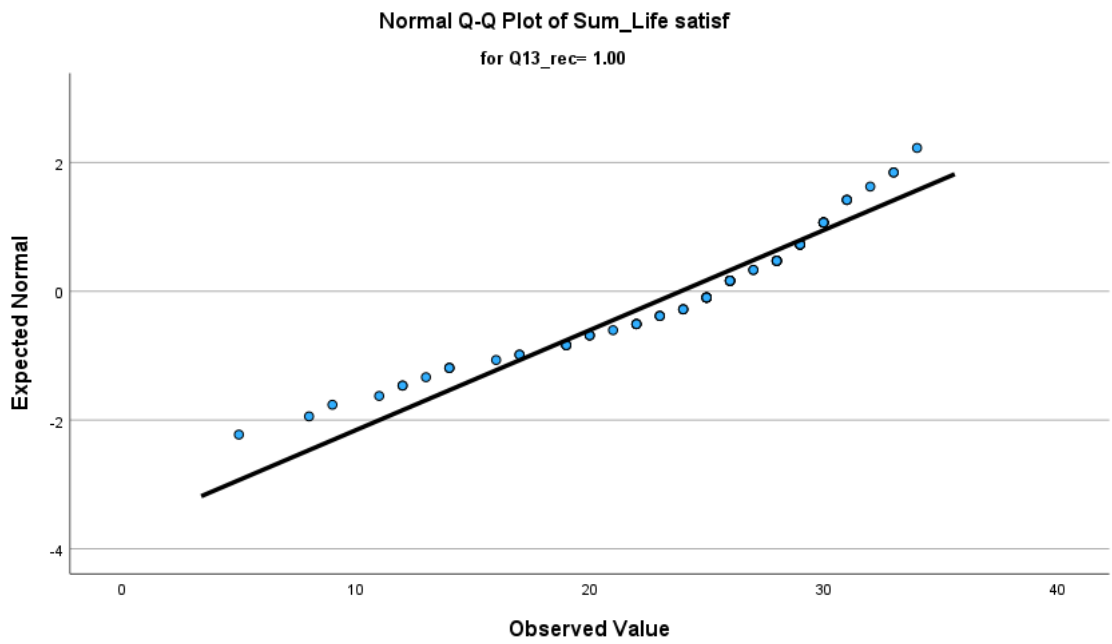
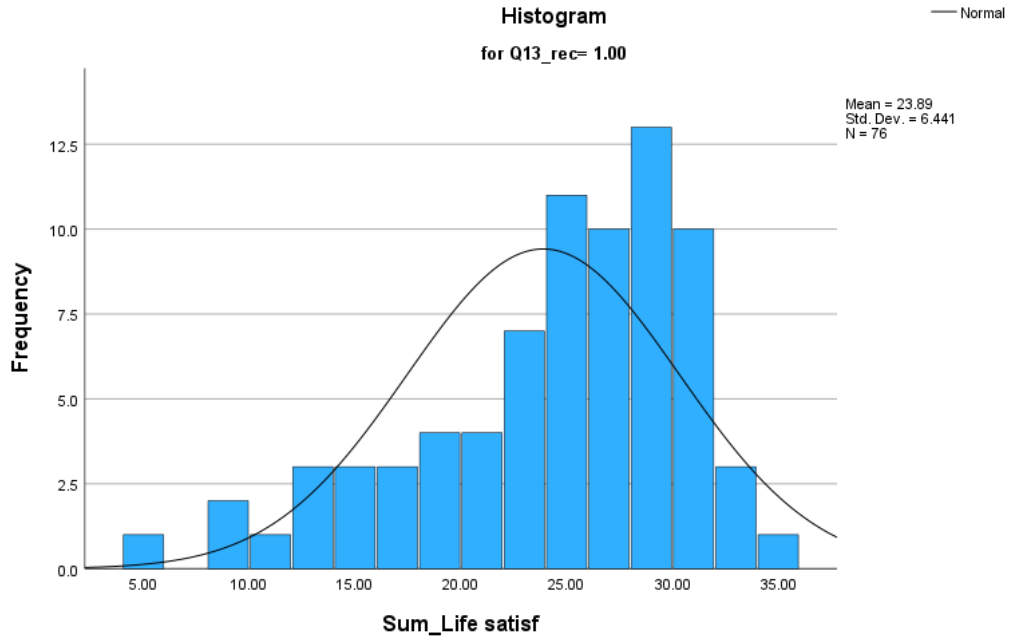
		Independent Samples Test				t-test	
		Levene's Test for Equality of Variances				Significance	
		F	Sig.	t	df	One-Sided p	Two-Sided p
Sum_Life satisf	Equal variances assumed	3.713	.057	.599	87	.275	.550
	Equal variances not assumed			.861	25.810	.199	.397

		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
Q13_rec	Statistic	df	Sig.	Statistic	df	Sig.	
Sum_Life satisf	.00	13	.200*	.926	13	.299	
	1.00	76	<.001	.925	76	<.001	

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction





Appendix P – Mortgage debt Pearson correlation test

Correlations

		Mortdebt_Curr	Sum_Life satisf
Mortdebt_Curr	Pearson Correlation	1	.375**
	Sig. (2-tailed)		.002
	N	67	67
Sum_Life satisf	Pearson Correlation	.375**	1
	Sig. (2-tailed)	.002	
	N	67	130

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

Appendix Q – Mortgage debt multiple regression analysis

Having mortgage:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	.006	6.57586	.040	1.166	3	85	.328	
2	.236 ^b	.055	.010	6.55970	.016	1.419	1	84	.237	2.115

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Q13_rec

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	151.211	3	50.404	1.166	.328 ^b
	Residual	3675.561	85	43.242		
	Total	3826.772	88			
2	Regression	212.283	4	53.071	1.233	.303 ^c
	Residual	3614.489	84	43.030		
	Total	3826.772	88			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Q13_rec

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	2.854		7.227	<.001		
	Gender	-.695	1.528	-.050	-.455	.650	.933	1.072
	Age	.248	.829	.033	.299	.766	.942	1.062
	Own_income	.443	.286	.173	1.550	.125	.902	1.108
2	(Constant)	23.237	3.592		6.469	<.001		
	Gender	-.479	1.535	-.034	-.312	.756	.920	1.087
	Age	-.156	.894	-.021	-.175	.862	.806	1.241
	Own_income	.596	.312	.233	1.906	.060	.751	1.332
	Q13_rec	-2.677	2.247	-.144	-1.191	.237	.768	1.303

a. Dependent Variable: Sum_Life satisf

Mortgage amount:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Durbin-Watson
					R Square Change	F Change	df1	df2	
1	.199 ^a	.040	-.006	6.61488	.040	.864	3	63	.465
2	.392 ^b	.154	.099	6.25813	.114	8.387	1	62	.005

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Mortdebt_Curr

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	113.408	3	37.803	.864	.465 ^b
	Residual	2756.671	63	43.757		
	Total	2870.079	66			
2	Regression	441.896	4	110.474	2.821	.032 ^c
	Residual	2428.183	62	39.164		
	Total	2870.079	66			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Mortdebt_Curr

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	3.315		6.222	<.001		
	Gender	-.695	1.775	-.050	-.392	.697	.933	1.072
	Age	.248	.963	.033	.258	.798	.942	1.062
	Own_income	.443	.332	.173	1.335	.187	.902	1.108
2	(Constant)	16.836	3.399		4.954	<.001		
	Gender	-.426	1.682	-.031	-.254	.801	.930	1.075
	Age	.918	.940	.121	.977	.333	.885	1.131
	Own_income	-.141	.373	-.055	-.377	.707	.639	1.565
	Mortdebt_Curr	3.256E-6	.000	.411	2.896	.005	.677	1.477

a. Dependent Variable: Sum_Life satisf

Appendix R – Vehicle loans independent t-test

Group Statistics

	Q27_rec	N	Mean	Std. Deviation	Std. Error Mean
Sum_Life satisf	.00	55	24.0364	5.62061	.75788
	1.00	52	23.3462	6.27127	.86967

Independent Samples Test

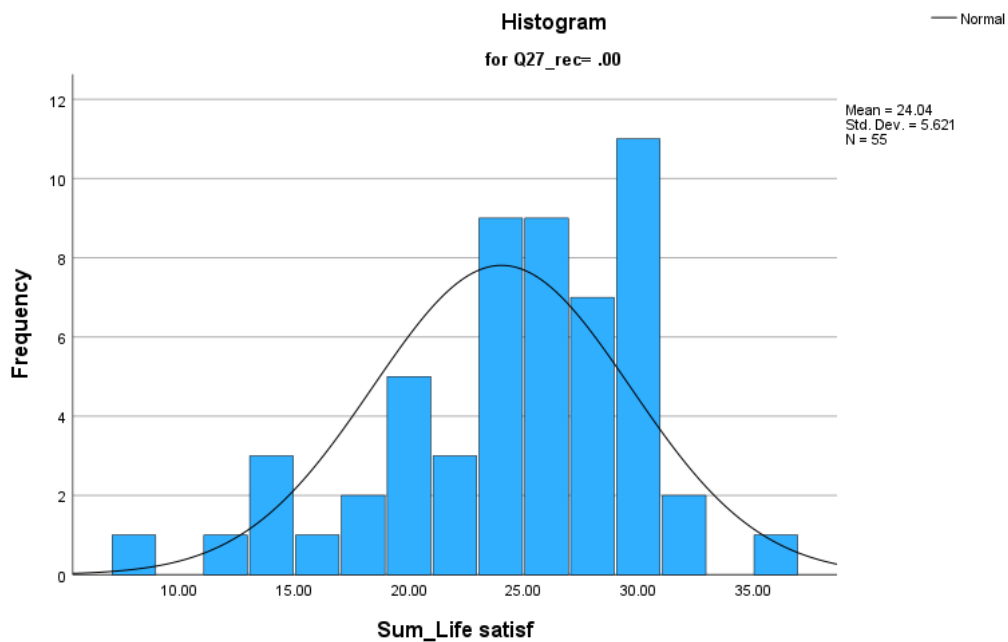
		Levene's Test for Equality of Variances				t-test	
		F	Sig.	t	df	Significance One-Sided p	Two-Sided p
Sum_Life satisf	Equal variances assumed	.651	.422	.600	105	.275	.550
	Equal variances not assumed			.598	102.205	.275	.551

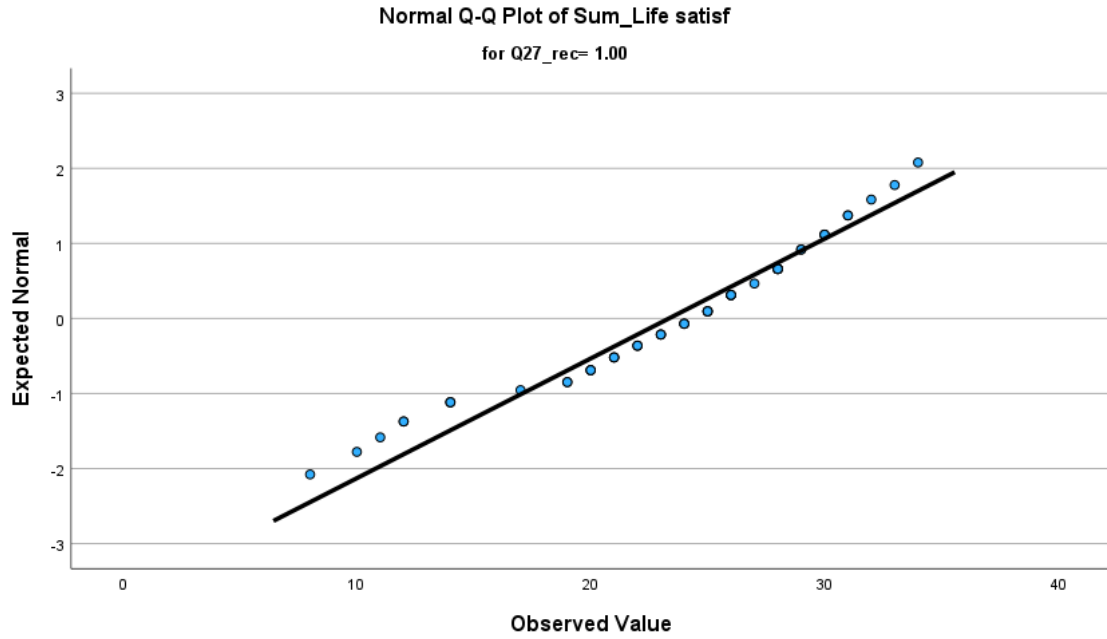
Tests of Normality

	Q27_rec	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Sum_Life satisf	.00	.136	55	.013	.950	55	.022
	1.00	.104	52	.200*	.950	52	.029

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction





Appendix S – Vehicle loans Pearson correlation test

Correlations

		Sum_Life satisf	Vehloan_Curr
Sum_Life satisf	Pearson Correlation	1	.145
	Sig. (2-tailed)		.332
	N	130	47
Vehloan_Curr	Pearson Correlation	.145	1
	Sig. (2-tailed)	.332	
	N	47	47

Appendix T – Vehicle loan multiple regression analysis

Having debt:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	.006	6.57586	.040	1.166	3	85	.328	
2	.236 ^b	.055	.010	6.55970	.016	1.419	1	84	.237	2.115

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Q13_rec

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	151.211	3	50.404	1.166	.328 ^b
	Residual	3675.561	85	43.242		
	Total	3826.772	88			
2	Regression	212.283	4	53.071	1.233	.303 ^c
	Residual	3614.489	84	43.030		
	Total	3826.772	88			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Q13_rec

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	2.593		7.955	<.001		
	Gender	-.695	1.388	-.050	-.501	.618	.933	1.072
	Age	.248	.753	.033	.329	.743	.942	1.062
	Own_income	.443	.260	.173	1.706	.091	.902	1.108
2	(Constant)	21.035	2.632		7.992	<.001		
	Gender	-.640	1.390	-.046	-.460	.646	.931	1.074
	Age	.222	.754	.029	.295	.769	.940	1.063
	Own_income	.486	.264	.190	1.842	.068	.874	1.144
	Q27_rec	-1.194	1.289	-.091	-.926	.357	.969	1.033

a. Dependent Variable: Sum_Life satisf

Amount of debt:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	-.027	6.68444	.040	.590	3	43	.625	
2	.216 ^b	.046	-.044	6.73901	.007	.306	1	42	.583	2.148

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Vehloan_Curr

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	79.042	3	26.347	.590	.625 ^b
	Residual	1921.316	43	44.682		
	Total	2000.358	46			
2	Regression	92.961	4	23.240	.512	.727 ^c
	Residual	1907.397	42	45.414		
	Total	2000.358	46			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Vehloan_Curr

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	4.012		5.142	<.001		
	Gender	-.695	2.148	-.050	-.324	.748	.933	1.072
	Age	.248	1.165	.033	.213	.832	.942	1.062
	Own_income	.443	.402	.173	1.103	.276	.902	1.108
2	(Constant)	20.333	4.080		4.984	<.001		
	Gender	-.854	2.185	-.062	-.391	.698	.917	1.091
	Age	.360	1.192	.048	.302	.764	.914	1.094
	Own_income	.329	.454	.129	.726	.472	.718	1.392
	Vehloan_Curr	1.775E-6	.000	.094	.554	.583	.794	1.260

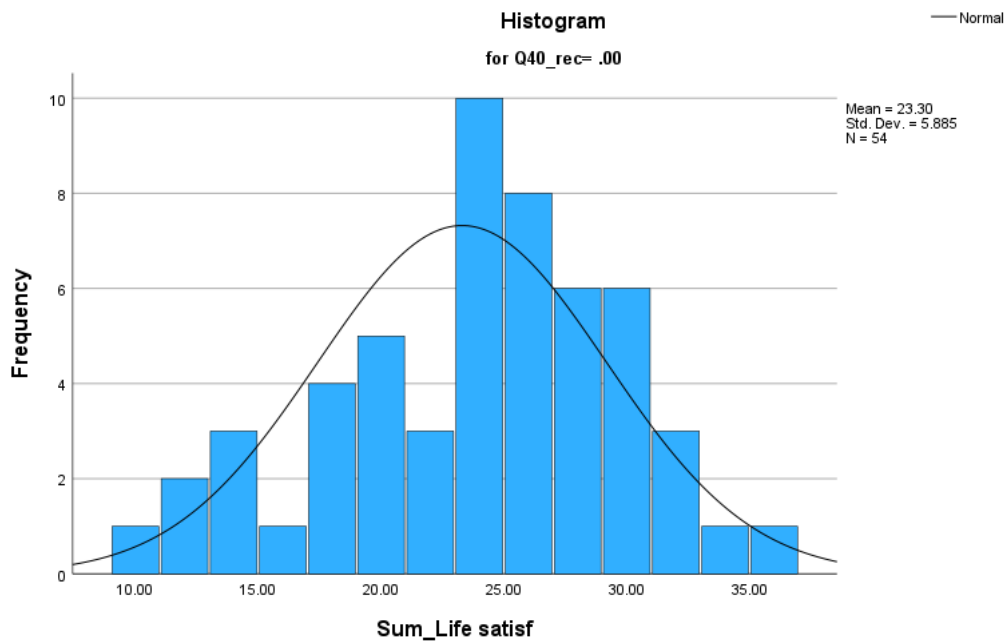
a. Dependent Variable: Sum_Life satisf

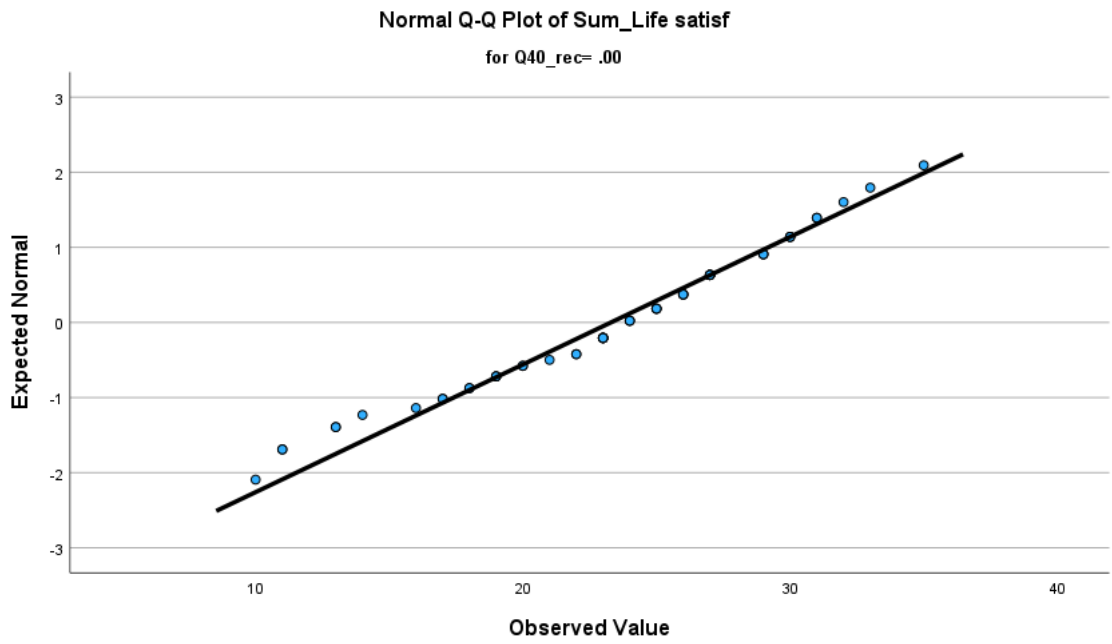
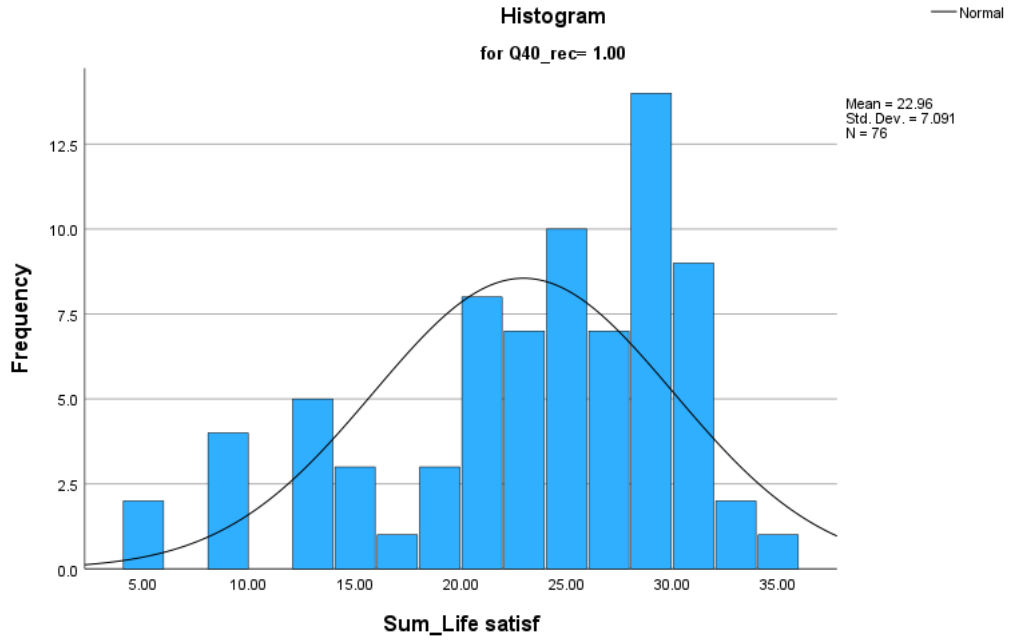
Appendix U – Credit card debt independent t-test

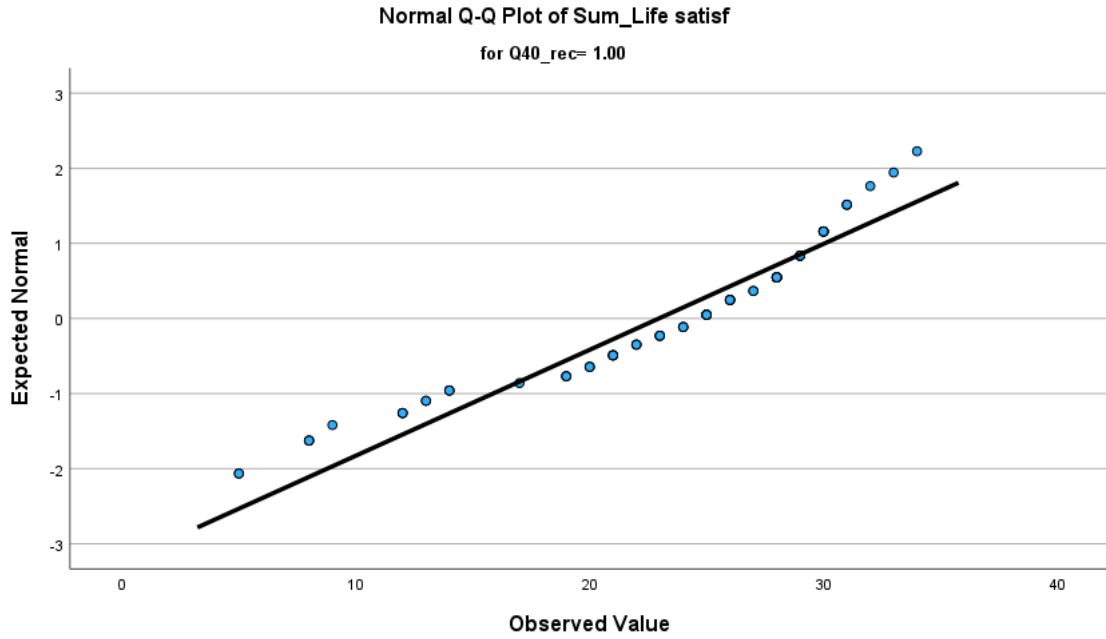
Group Statistics

	Q40_rec	N	Mean	Std. Deviation	Std. Error Mean
Sum_Life satisf	.00	54	23.2963	5.88452	.80078
	1.00	76	22.9605	7.09073	.81336

Independent Samples Test							
		Levene's Test for Equality of Variances		t-test			
		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Sum_Life satisf	Equal variances assumed	2.010	.159	.285	128	.388	.776
	Equal variances not assumed			.294	124.857	.385	.769







Appendix V – Credit card debt Pearson correlation test

Correlations

		Sum_Life satisf	Crcard_Curr
Sum_Life satisf	Pearson Correlation	1	-.195
	Sig. (2-tailed)		.106
	N	130	70
Crcard_Curr	Pearson Correlation	-.195	1
	Sig. (2-tailed)	.106	
	N	70	70

Appendix W – Credit card debt multiple regression analysis

Having credit card debt:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	.017	6.53928	.040	1.728	3	126	.165	
2	.209 ^b	.043	.013	6.55182	.004	.518	1	125	.473	1.965

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Q40_rec

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221.662	3	73.887	1.728	.165 ^b
	Residual	5388.038	126	42.762		
	Total	5609.700	129			
2	Regression	243.899	4	60.975	1.420	.231 ^c
	Residual	5365.801	125	42.926		
	Total	5609.700	129			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Q40_rec

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	2.345		8.798	<.001		
	Gender	-.695	1.255	-.050	-.554	.581	.933	1.072
	Age	.248	.681	.033	.364	.716	.942	1.062
	Own_income	.443	.235	.173	1.887	.061	.902	1.108
2	(Constant)	20.706	2.352		8.805	<.001		
	Gender	-.546	1.274	-.039	-.428	.669	.908	1.101
	Age	.298	.686	.039	.434	.665	.932	1.073
	Own_income	.481	.241	.188	1.995	.048	.860	1.163
	Q40_rec	-.876	1.217	-.066	-.720	.473	.917	1.090

a. Dependent Variable: Sum_Life satisf

Credit card amount:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	-.004	6.60805	.040	.905	3	66	.443	
2	.269 ^b	.072	.015	6.54417	.033	2.295	1	65	.135	1.828

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Crcard_Curr

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	118.563	3	39.521	.905	.443 ^b
	Residual	2881.974	66	43.666		
	Total	3000.537	69			
2	Regression	216.839	4	54.210	1.266	.292 ^c
	Residual	2783.698	65	42.826		
	Total	3000.537	69			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Crcard_Curr

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	3.239		6.369	<.001		
	Gender	-.695	1.734	-.050	-.401	.690	.933	1.072
	Age	.248	.941	.033	.264	.793	.942	1.062
	Own_income	.443	.324	.173	1.366	.177	.902	1.108
2	(Constant)	21.543	3.264		6.600	<.001		
	Gender	-.667	1.717	-.048	-.388	.699	.933	1.072
	Age	.443	.941	.059	.471	.639	.924	1.082
	Own_income	.383	.324	.150	1.183	.241	.889	1.125
	Crcard_Curr	-4.773E-5	.000	-.184	-1.515	.135	.970	1.031

a. Dependent Variable: Sum_Life satisf

Appendix X – Personal loan independent t-test

Group Statistics

	Q53_rec	N	Mean	Std. Deviation	Std. Error Mean
Sum_Life satisf	.00	89	24.9101	5.26489	.55808
	1.00	41	19.1707	7.49300	1.17021

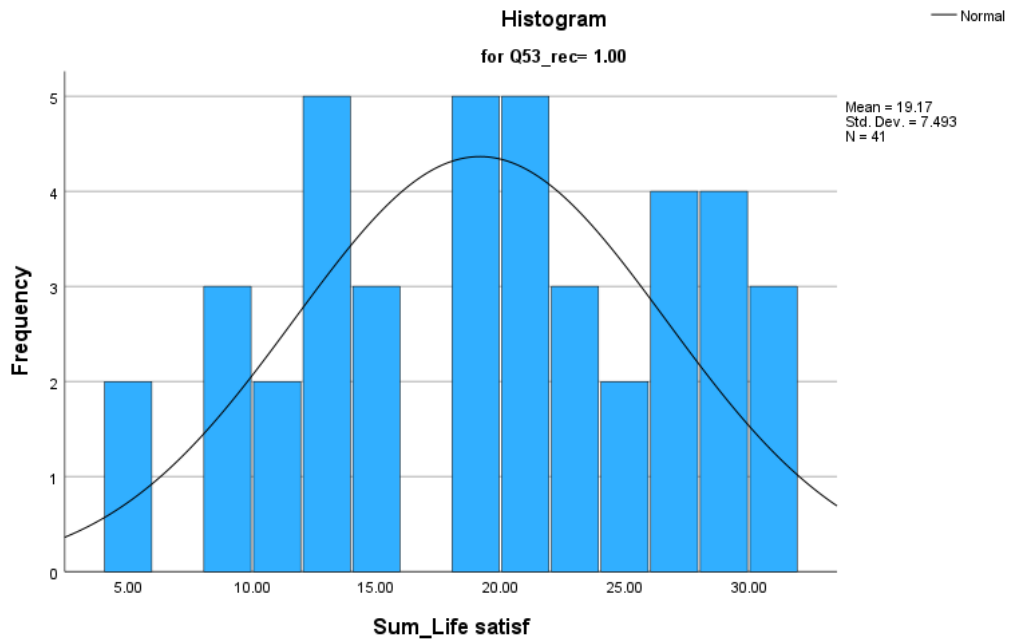
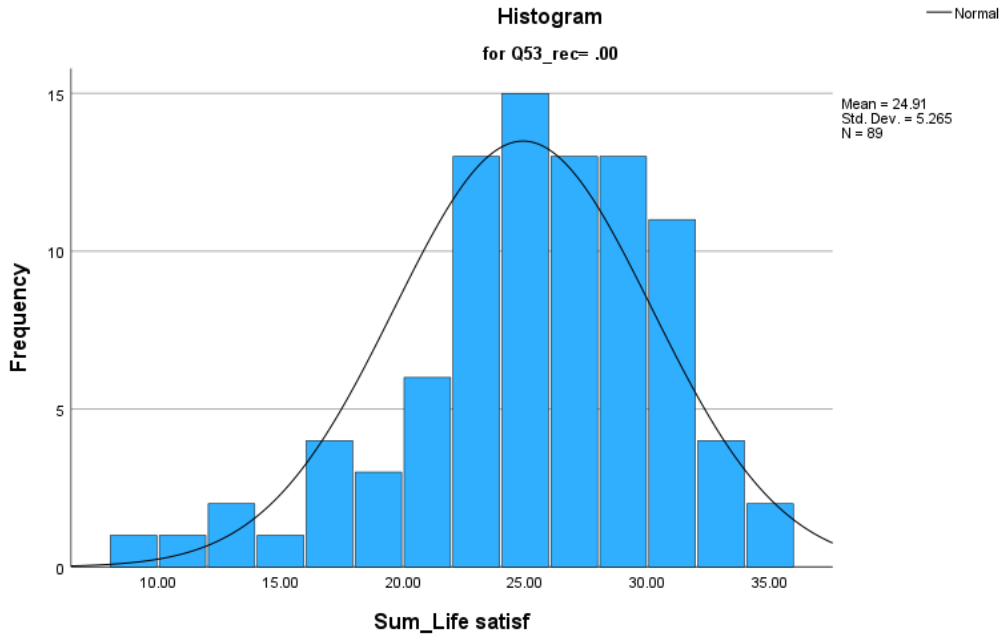
Independent Samples Test

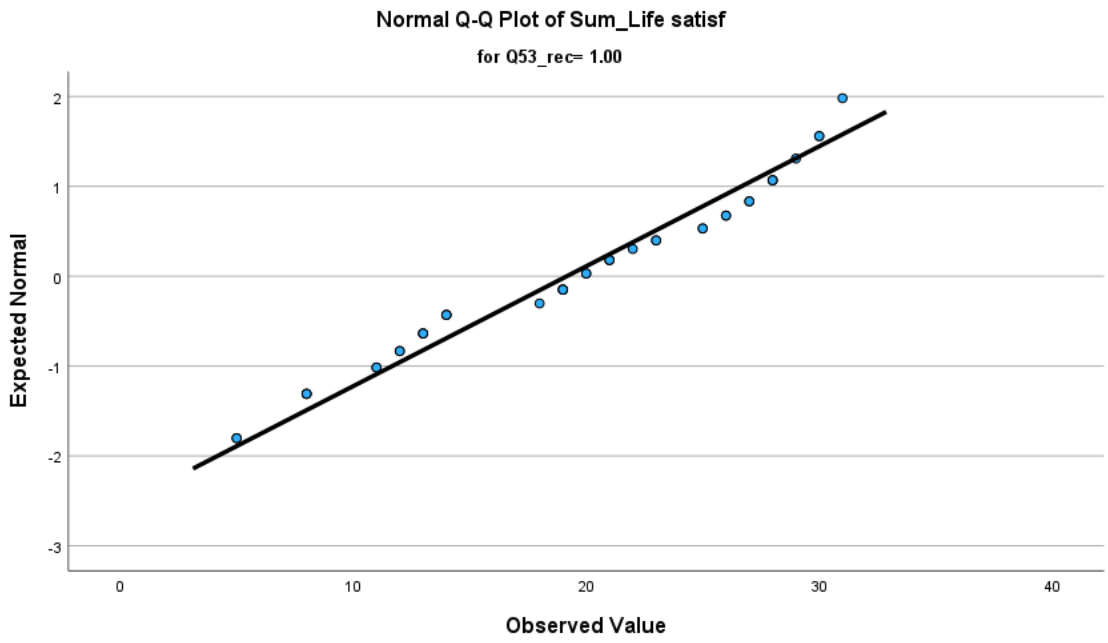
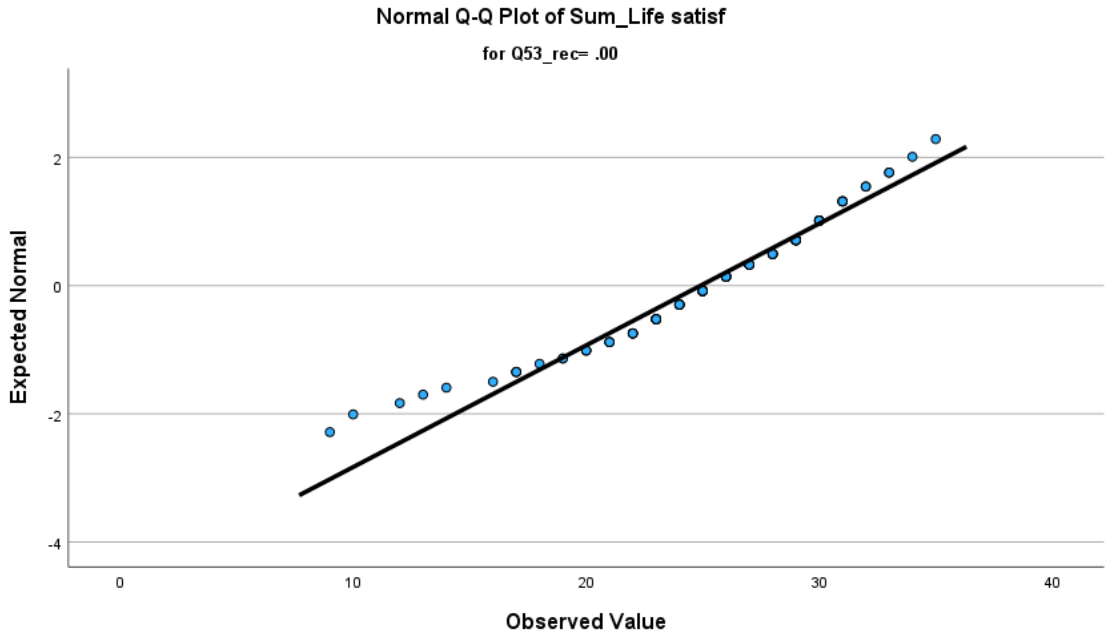
		Levene's Test for Equality of Variances		t-test			
		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Sum_Life satisf	Equal variances assumed	11.071	.001	5.026	128	<.001	<.001
	Equal variances not assumed			4.427	58.880	<.001	<.001

Tests of Normality

	Q53_rec	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Sum_Life satisf	.00	.111	89	.009	.957	89	.005
	1.00	.121	41	.139	.952	41	.080

a. Lilliefors Significance Correction





Appendix Y – Personal loan Pearson correlation test

Correlations

		Sum_Life satisf	Pers_Curr
Sum_Life satisf	Pearson Correlation	1	-.135
	Sig. (2-tailed)		.426
	N	130	37
Pers_Curr	Pearson Correlation	-.135	1
	Sig. (2-tailed)	.426	
	N	37	37

Appendix Z – Personal loan multiple regression analysis

Having personal loan:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	.017	6.53928	.040	1.728	3	126	.165	
2	.439 ^b	.193	.167	6.01758	.154	23.795	1	125	<.001	2.112

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Q53_rec

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221.662	3	73.887	1.728	.165 ^b
	Residual	5388.038	126	42.762		
	Total	5609.700	129			
2	Regression	1083.297	4	270.824	7.479	<.001 ^c
	Residual	4526.403	125	36.211		
	Total	5609.700	129			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Q53_rec

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	2.345		8.798	<.001		
	Gender	-.695	1.255	-.050	-.554	.581	.933	1.072
	Age	.248	.681	.033	.364	.716	.942	1.062
	Own_income	.443	.235	.173	1.887	.061	.902	1.108
2	(Constant)	21.931	2.174		10.087	<.001		
	Gender	-.528	1.155	-.038	-.457	.648	.932	1.073
	Age	.561	.630	.074	.891	.375	.932	1.073
	Own_income	.323	.217	.127	1.488	.139	.891	1.123
	Q53_rec	-5.605	1.149	-.396	-4.878	<.001	.977	1.024

a. Dependent Variable: Sum_Life satisf

Personal loan amount:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	-.048	6.75017	.040	.453	3	33	.717	
2	.284 ^b	.080	-.035	6.70742	.041	1.422	1	32	.242	1.282

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Pers_Curr

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.859	3	20.620	.453	.717 ^b
	Residual	1503.638	33	45.565		
	Total	1565.498	36			
2	Regression	125.834	4	31.459	.699	.598 ^c
	Residual	1439.663	32	44.989		
	Total	1565.498	36			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Pers_Curr

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	4.579		4.505	<.001		
	Gender	-.695	2.452	-.050	-.284	.779	.933	1.072
	Age	.248	1.330	.033	.186	.853	.942	1.062
	Own_income	.443	.459	.173	.966	.341	.902	1.108
2	(Constant)	20.977	4.559		4.601	<.001		
	Gender	-.679	2.437	-.049	-.279	.782	.933	1.072
	Age	.367	1.326	.048	.277	.784	.936	1.068
	Own_income	.595	.473	.233	1.257	.218	.837	1.194
	Pers_Curr	-1.380E-5	.000	-.212	-1.192	.242	.908	1.101

a. Dependent Variable: Sum_Life satisf

Appendix AA – Other debt independent t-test

Group Statistics

	Q66_rec	N	Mean	Std. Deviation	Std. Error Mean
Sum_Life satisf	.00	91	23.5824	6.45336	.67650
	1.00	39	21.9744	6.86520	1.09931

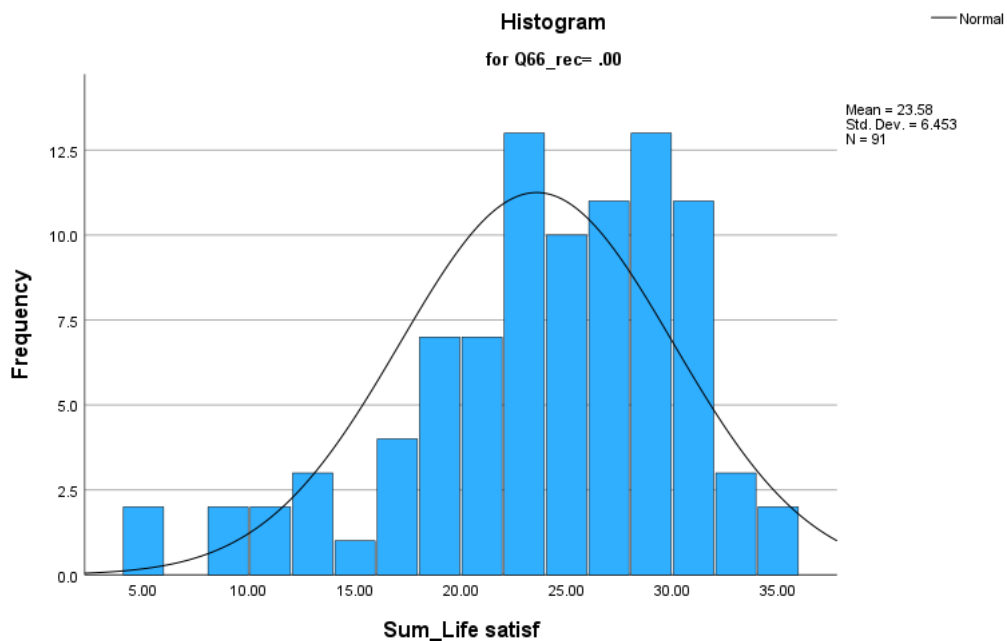
Independent Samples Test

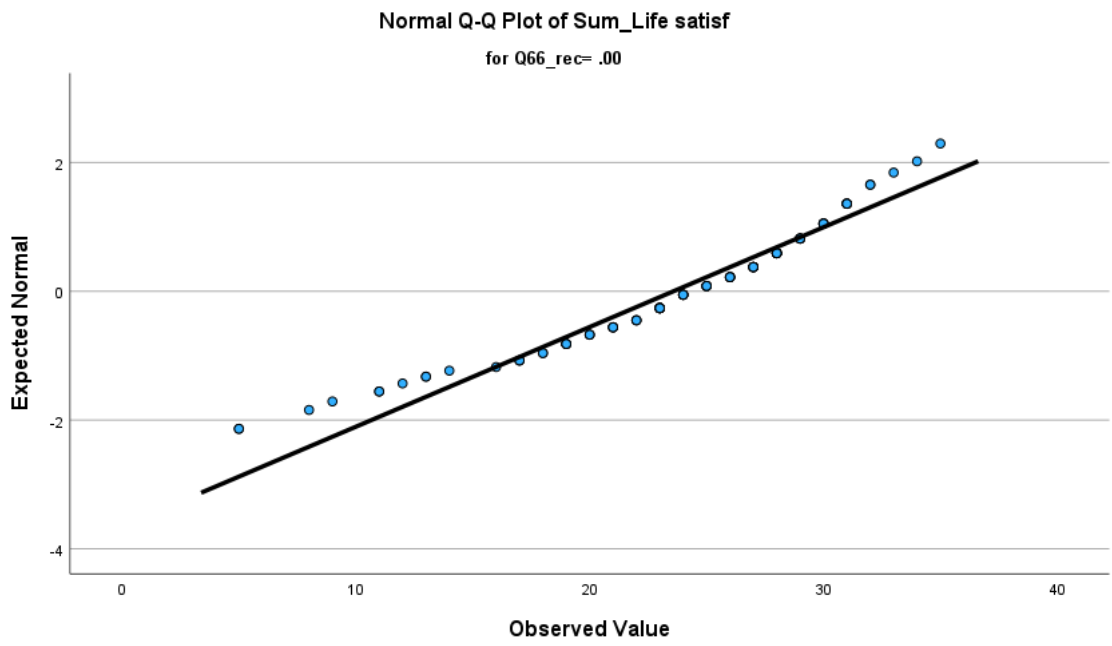
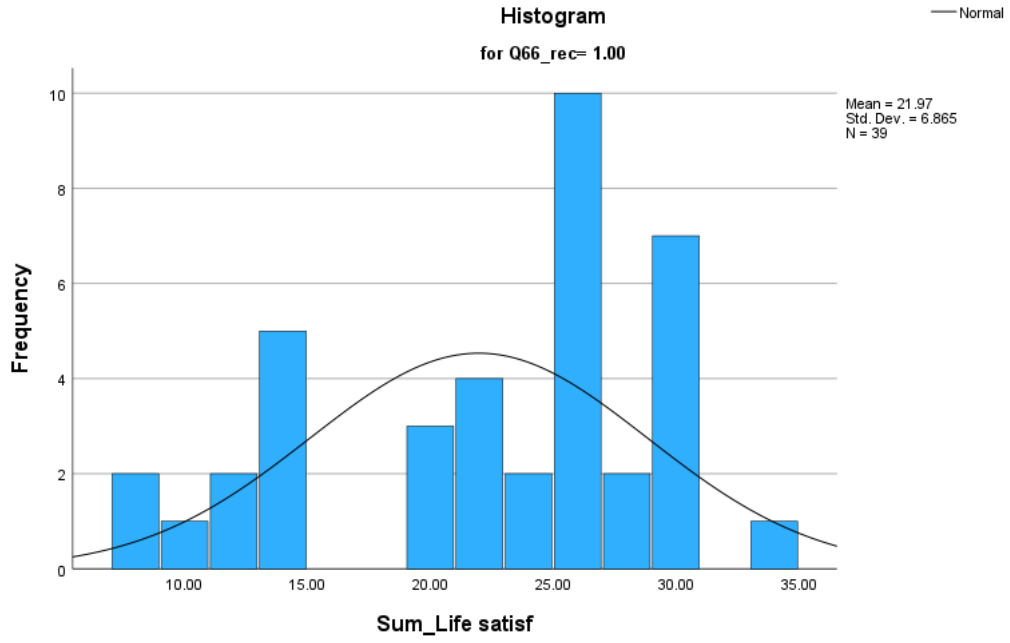
		Levene's Test for Equality of Variances		t-test			
		F	Sig.	t	df	Significance	
						One-Sided p	Two-Sided p
Sum_Life satisf	Equal variances assumed	.770	.382	1.277	128	.102	.204
	Equal variances not assumed			1.246	68.107	.109	.217

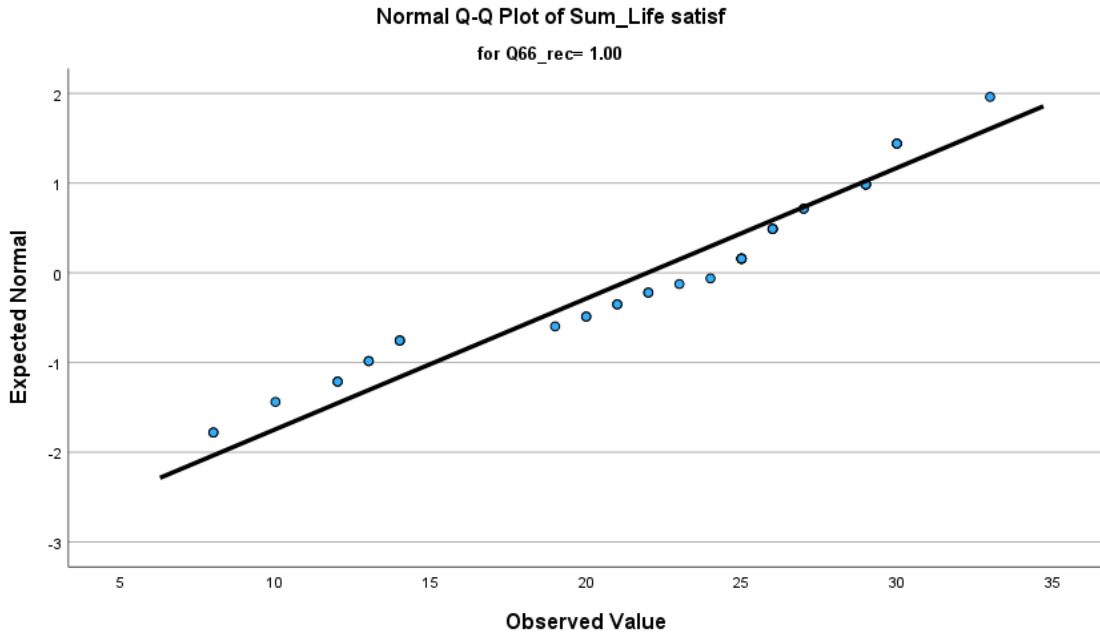
Tests of Normality

Sum_Life satisf	Q66_rec	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Sum_Life satisf	.00	.123	91	.002	.944	91	<.001
	1.00	.183	39	.002	.917	39	.007

a. Lilliefors Significance Correction







Appendix AB – Other debt Pearson correlation test

Correlations

		Sum_Life satisf	Other_Curr
Sum_Life satisf	Pearson Correlation	1	.149
	Sig. (2-tailed)		.416
	N	130	32
Other_Curr	Pearson Correlation	.149	1
	Sig. (2-tailed)	.416	
	N	32	32

Appendix AC – Other debt multiple regression analysis

Having other debt:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	.017	6.53928	.040	1.728	3	126	.165	
2	.227 ^b	.052	.021	6.52419	.012	1.584	1	125	.211	1.986

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Q66_rec

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221.662	3	73.887	1.728	.165 ^b
	Residual	5388.038	126	42.762		
	Total	5609.700	129			
2	Regression	289.070	4	72.268	1.698	.155 ^c
	Residual	5320.630	125	42.565		
	Total	5609.700	129			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Q66_rec

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	2.345		8.798	<.001		
	Gender	-.695	1.255	-.050	-.554	.581	.933	1.072
	Age	.248	.681	.033	.364	.716	.942	1.062
	Own_income	.443	.235	.173	1.887	.061	.902	1.108
2	(Constant)	20.873	2.347		8.892	<.001		
	Gender	-.517	1.260	-.037	-.411	.682	.921	1.086
	Age	.274	.680	.036	.404	.687	.941	1.063
	Own_income	.450	.234	.176	1.920	.057	.902	1.109
	Q66_rec	-1.583	1.258	-.110	-1.258	.211	.985	1.015

a. Dependent Variable: Sum_Life satisf

Amount of other debt:

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.199 ^a	.040	-.063	6.80021	.040	.384	3	28	.765	
2	.218 ^b	.048	-.093	6.89545	.008	.232	1	27	.634	1.168

a. Predictors: (Constant), Own_income, Age, Gender

b. Predictors: (Constant), Own_income, Age, Gender, Other_Curr

c. Dependent Variable: Sum_Life satisf

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	53.268	3	17.756	.384	.765 ^b
	Residual	1294.800	28	46.243		
	Total	1348.067	31			
2	Regression	64.291	4	16.073	.338	.850 ^c
	Residual	1283.776	27	47.547		
	Total	1348.067	31			

a. Dependent Variable: Sum_Life satisf

b. Predictors: (Constant), Own_income, Age, Gender

c. Predictors: (Constant), Own_income, Age, Gender, Other_Curr

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	20.628	4.970		4.150	<.001		
	Gender	-.695	2.662	-.050	-.261	.796	.933	1.072
	Age	.248	1.444	.033	.172	.865	.942	1.062
	Own_income	.443	.498	.173	.890	.381	.902	1.108
2	(Constant)	19.737	5.369		3.676	.001		
	Gender	-.097	2.972	-.007	-.033	.974	.770	1.299
	Age	.325	1.473	.043	.221	.827	.930	1.075
	Own_income	.383	.520	.150	.738	.467	.851	1.175
	Other_Curr	2.520E-5	.000	.105	.482	.634	.736	1.359

a. Dependent Variable: Sum_Life satisf

Appendix AD – Perception of debt as “debt” Spearman correlation test

Correlations

		Sum_Life satisf	Mortdebt_Perc	Vehloan_Perc	Crcard_Perc	Pers_Perc	Other_Perc	
Spearman's rho	Sum_Life satisf	Correlation Coefficient	--					
		Sig. (2-tailed)						
	Mortdebt_Perc	Correlation Coefficient	-.071	--				
		Sig. (2-tailed)	.539					
	Vehloan_Perc	Correlation Coefficient	-.301*	.057	--			
		Sig. (2-tailed)	.030	.746				
	Crcard_Perc	Correlation Coefficient	-.104	.353*	.319	--		
		Sig. (2-tailed)	.372	.013	.051			
	Pers_Perc	Correlation Coefficient	-.306	.345	.257	.357	--	
		Sig. (2-tailed)	.052	.126	.355	.053		
	Other_Perc	Correlation Coefficient	-.008	.163	-.074	.321	.604*	--
		Sig. (2-tailed)	.962	.470	.792	.096	.017	

*. Correlation is significant at the 0.05 level (2-tailed).

Appendix AE – Benefit from debt Spearman correlation test

Correlations

		Sum_Life satisf	Vehloan_Perc	Crcard_Perc	Pers_Perc	Other_Perc	Mortdebt_Perc	
Spearman's rho	Sum_Life satisf	Correlation Coefficient	1.000	.058	.280*	.312*	.067	.142
		Sig. (2-tailed)		.682	.014	.047	.687	.221
	N		130	52	76	41	39	76
	Vehloan_Perc	Correlation Coefficient	.058	1.000	.173	.559*	.227	.504**
		Sig. (2-tailed)	.682		.299	.030	.415	.002
	N		52	52	38	15	15	35
	Crcard_Perc	Correlation Coefficient	.280*	.173	1.000	.174	-.128	-.014
		Sig. (2-tailed)	.014	.299		.357	.517	.925
	N		76	38	76	30	28	49
	Pers_Perc	Correlation Coefficient	.312*	.559*	.174	1.000	.646**	.075
		Sig. (2-tailed)	.047	.030	.357		.009	.746
	N		41	15	30	41	15	21
	Other_Perc	Correlation Coefficient	.067	.227	-.128	.646**	1.000	.235
		Sig. (2-tailed)	.687	.415	.517	.009		.294
	N		39	15	28	15	39	22
	Mortdebt_Perc	Correlation Coefficient	.142	.504**	-.014	.075	.235	1.000
		Sig. (2-tailed)	.221	.002	.925	.746	.294	
	N		76	35	49	21	22	76

*. Correlation is significant at the 0.05 level (2-tailed).

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