

**EFFECT OF DEBT LITERACY ON THE OVER-INDEBTEDNESS
OF EMPLOYEES WORKING IN THE FORMAL SECTOR OF
NEPAL**

A Dissertation submitted to the Office of the Dean, Faculty of Management, in partial
fulfilment of the requirements for the Degree of Masters of Business Studies

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I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**EFFECT OF DEBT LITERACY ON THE OVER-INDEBTEDNESS OF EMPLOYEES WORKING IN THE FORMAL SECTOR OF NEPAL**” The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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REPORT OF RESEARCH COMMITTEE

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Krishna Jung Thapa
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Abbreviations

et.al.:	Latin "et alii" meaning ' all others'
GRP:	Graduate Research Project
i.e.:	that is
N:	No. of respondents
Sig.:	Significance Level
SPSS:	Statistical Package for the Social Sciences
Std.deviation:	Standard deviation

Abstract

The study aims to investigate the impact of debt literacy on over-indebtedness among employees in Nepal's formal sector and to examine whether personality traits, such as materialism and emotions, moderated this relationship. A quantitative research approach was employed, and convenience sampling was used for data collection. Surveys were distributed to 386 respondents, and the questionnaire was adapted from previous studies by Lusardi and Tufano (2009) and Rahman et al. (2020), with additional questions included to gather demographic details. The collected data were organized and analyzed using Microsoft Excel and SPSS. Descriptive and inferential statistical methods, including frequency, percentage, mean, standard deviation, correlation, and regression analyses, were conducted to address the study's objectives.

The findings revealed that employees in Nepal's formal sector possessed a high level of basic debt literacy and an above-average level of advanced debt literacy. The results demonstrated significant associations between components of debt literacy—such as knowledge of compound interest, the time value of money, and debt management—and over-indebtedness. Furthermore, the study provided empirical evidence that materialism and emotions moderated the relationship between knowledge of compound interest and time value of money with over-indebtedness. However, these traits did not moderate the relationship between debt management knowledge and over-indebtedness.

These findings may prove valuable to educational institutions, financial organizations, individual employees, policymakers, and government bodies. They offer a basis for developing strategies to enhance debt literacy and reduce the risk of over-indebtedness among employees.

Keywords:

Chapter I

Introduction

1.1 Background of the study

Researchers in personal finance have explored topics such as personal debt, household debt, and consumer debt. This study focuses on personal debt, which can be categorized based on its source as formal or informal. Personal debt can also be classified into secured and unsecured debt depending on the presence of collateral. Additionally, based on its purpose, it can be grouped into categories like housing loans, car loans, education loans, medical loans, bank overdrafts, and mortgage loans, as noted by Chawla and Uppal (2012). Debt is a normalized behavior that has been practiced in society for centuries, involving nearly everyone in the country. Debt refers to the sum of money owed by an individual or the situation of being unable to repay borrowed money. In Nepal, providers of debt include commercial banks, development banks, finance companies, microfinance institutions, and cooperatives. Borrowing from merchants is also common, particularly in rural areas. Given its prevalence, personal debt has emerged as a critical topic for study in personal finance.

In today's complex financial markets, debt literacy has become increasingly important. Kariuki et al. (2016) defined debt literacy as a combination of abstract skills, education, and up-to-date information about managing financial obligations. Similarly, Lusardi and Tufano (2009) describe debt literacy as the ability to make informed decisions about debt contracts and apply basic mathematical knowledge about interest compounding in daily financial choices. Loke and Hageman (2013) emphasized debt literacy as the capacity to assess debt contracts and compound interest when making financial decisions related to loans, credit cards, interest rates, and fees. Bartley (2011) highlighted the benefits of debt literacy, including lower credit card charges and fees, reduced debt-to-income ratios, higher net worth, and better emergency and retirement savings. A debt-literate person understands the fundamental concepts of money management and debt financing.

Numerous theoretical and empirical studies highlight the negative consequences of debt illiteracy, including over-indebtedness, loan defaults, declining wealth, poor

investment decisions, and inadequate retirement planning. Research by Lusardi and Tufano (2009), Disney and Gathergood (2011), Van Rooij and Ooijen (2014), and Lusardi and Mitchell (2014) links these adverse outcomes to poor decision-making and a lack of debt literacy. People often turn to credit markets to maintain a stable living standard, but some may accumulate debts beyond their ability to repay. Brennan and Gallagher (2007) defined over-indebtedness as a situation where existing and foreseeable resources are insufficient to meet financial commitments without lowering living standards. Disney and Gathergood (2011) attributed over-indebtedness to financial imprudence, such as a poor understanding of repayment costs, while Kilborn (2005) identified psychological biases and mental shortcuts as contributing factors.

Debt service ratios and debt-to-income ratios are commonly used to measure over-indebtedness, though no universally accepted indicator exists. Schicks (2012) argued that existing indicators focus primarily on avoiding delinquency, and there is a need for measures that identify debt problems before delinquency occurs. Dew (2008) and Keese and Schmitz (2014) noted that excessive debt negatively impacts mental and physical health and leads to social, financial, and market exclusion. Hossain (2013) reported cases of mental disorders, homelessness, divorce, and even suicides resulting from over-indebtedness. For instance, Kaur and Dey (2013) reported 54 suicides in Andhra Pradesh in 2010 linked to excessive microfinance borrowing. Additionally, studies by Djoudad (2011) and Kreamer (2016) demonstrated that aggregate personal debt can lead to economic and financial instability. These findings underscore the importance of improving debt literacy to mitigate the adverse effects of over-indebtedness.

The International Labour Organization (ILO) (2010) defined the formal sector as one where employment is governed by national legislation, income tax requirements, social protection, and benefits such as paid leave, life and health insurance, and pensions. This sector is characterized by organized employment systems with clear agreements, rules, and responsibilities, offering employees fixed hours and salaries. According to the Business Dictionary (2020), the formal sector includes all jobs with regular hours and wages recognized as taxable income. A survey by the National Planning Commission (2018) found that 37.8% of respondents worked in the formal

sector, while 62.2% were employed in the informal sector. However, details about work hours and earnings in the informal sector remain unclear.

This context raises questions about whether employees in the formal sector of Nepal possess sufficient debt literacy and how it affects their levels of indebtedness. This study, therefore, aimed to evaluate the relationship between debt literacy and over-indebtedness among employees in Nepal's formal sector.

1.2 Problem statement

Mugambi and Okech (2016) asserted that personal indebtedness is a global issue affecting many nations. Similarly, Bicakova et al. (2011) highlighted that the ratio of personal debt to GDP has been increasing over recent years, leading to significant challenges, including household vulnerability, financial sector instability, and broader economic repercussions. The context provided underscores the adverse microeconomic and macroeconomic impacts of rising personal debt.

Extensive research has been conducted in Western countries to examine the relationship between debt literacy and over-indebtedness. For instance, Kariuki et al. (2016) investigated the impact of debt knowledge on employee indebtedness in Kenya's formal sector. Lusardi and Tufano (2009) explored the relationship between debt literacy, financial experiences, and over-indebtedness. In Malaysia, Idris et al. (2013) examined the link between financial literacy and financial distress among youths. French and McKillop (2016) studied the association between financial literacy and over-indebtedness in low-income households in Ireland, while Brown and Graf (2013) investigated the relationship between financial literacy, household investments, and debt in Switzerland. Disney and Gathergood (2011) also examined how financial literacy affects indebtedness in the UK.

While these studies provide valuable insights, most are centered on developed nations, with limited focus on developing countries. In Nepal, some research has addressed financial literacy and over-indebtedness. For example, Risal (2018) analyzed the status of microfinance institutions and their role in indebtedness in Nepal, and Bhattarai et al. (2018) used case studies to evaluate over-indebtedness among clients of Nirdhan Utthan Bank. Thapa and Nepal (2015) conducted a survey to assess financial literacy levels among college students. Although financial literacy encompasses debt literacy, no specific studies have been conducted in Nepal that

focus exclusively on debt literacy. Furthermore, no research linking debt literacy to over-indebtedness has been identified in the Nepalese context.

This gap highlights the need for an empirical study examining the effect of debt literacy on indebtedness in Nepal. This research aims to address this gap by measuring the impact of debt literacy on over-indebtedness among employees in Nepal's formal sector, with a focus on the moderating effects of behavioral factors. The study seeks to answer the following questions:

- How do materialism and emotions moderate effect of debt literacy variables on over-indebtedness?
- How do knowledge of interest compounding, understanding of the time value of money, and debt management skills influence over-indebtedness?

1.3 Objectives of the study

The primary aim of this study is to investigate how various aspects of debt literacy affect employees' experiences with over-indebtedness. The study's specific objectives are outlined as follows:

- To assess the impact of materialism and emotions on the influence of debt literacy variables on over-indebtedness.
- To examine the relationship between knowledge of interest compounding, understanding of the time value of money, and debt management skills with over-indebtedness.

1.4 Hypothesis

The following hypotheses were developed and tested for empirical validation based on theoretical foundations:

Hypothesis 1

H1: There is a significant relationship between knowledge of compound interest and over-indebtedness.

Studies by Stango and Zinman (2009) and Van Rooij, Lusardi, and Alessie (2011) suggested that individuals with a solid understanding of compound interest tend to save more, carry less debt, participate in the stock market, and plan effectively for

retirement. Similarly, Song (2015) concluded that increased knowledge of compound interest enhances pension fund contributions and reduces debt during retirement.

Hypothesis 2

H2: There is a significant relationship between knowledge of the time value of money and over-indebtedness.

Fathia et al. (2012) noted that the understanding of the time value of money differs under Islamic principles, which prohibit interest and focus on contracts like markup and deferred sales. Van Rooij and Ooijen (2014) found that households often exhibit lower literacy regarding debt compared to general financial concepts, leading to higher rates of over-indebtedness.

Hypothesis 3

H3: There is a significant relationship between debt management knowledge and over-indebtedness.

Addaney et al. (2016) demonstrated that a lack of debt management knowledge among small business owners often results in over-indebtedness. Similarly, Maswati et al. (2015) argued that insufficient financial knowledge and poor debt management skills are key factors leading to indebtedness.

Hypothesis 4

H4: Materialism moderates the relationship between knowledge of compound interest and over-indebtedness.

Gardarsdóttir and Dittmar (2012) discovered that while materialism positively correlates with spending tendencies, this relationship diminishes among individuals with knowledge of compound interest. Watson (1998, 2003) found that materialism is positively associated with spending habits and debt accumulation.

Hypothesis 5

H5: Materialism moderates the relationship between knowledge of the time value of money and over-indebtedness.

McNair et al. (2016) indicated that materialistic values often result in poor money management and lower savings. Conversely, Schmidt (2018) emphasized the importance of understanding the time value of money in improving debt-related decision-making and reducing over-indebtedness.

Hypothesis 6

H6: Materialism moderates the relationship between debt management knowledge and over-indebtedness.

McNair et al. (2016) noted that individuals with debt management knowledge are less likely to indulge in unnecessary expenditures. Gardarsdóttir and Dittmar (2012) observed that individuals with lower debt management skills and high materialistic values experience more financial stress, poor money management, and compulsive spending, often resulting in over-indebtedness.

Hypothesis 7

H7: Emotions moderate the relationship between knowledge of compound interest and over-indebtedness.

Rihab and Lotfi (2016) found that overconfident managers tend to overuse debt, underestimating the risk of financial distress. Stango and Zinman (2009) and Van Rooij, Lusardi, and Alessie (2011) highlighted that individuals knowledgeable about compound interest are more likely to save and carry less debt.

Hypothesis 8

H8: Emotions moderate the relationship between knowledge of the time value of money and over-indebtedness.

Knutson and Samanez (2012) showed that emotions significantly influence financial decisions and increase susceptibility to debt. Mohamed (2013) observed that understanding the time value of money, from a Shariah perspective, reduces borrowing tendencies, promoting better mental health and lower stress levels.

Hypothesis 9

H9: Emotions moderate the relationship between debt management knowledge and over-indebtedness.

Cwynar (2020) argued that individuals with strong debt management knowledge are more confident in handling debt and are less reliant on external financial advisors. Custers (2015) demonstrated that inadequate debt management knowledge exacerbates debt levels, triggering negative emotions such as stress, anxiety, and unhappiness.

1.5 Rationale of the study

Debt literacy refers to the capability to make informed decisions about debt contracts and apply basic mathematical knowledge, such as interest compounding, to everyday financial choices. It involves understanding debt-related information and using it effectively to make sound financial decisions. In today's complex financial environment, debt knowledge is more critical than ever, as financial markets offer increasingly intricate debt products. Having a good understanding of debt empowers individuals to choose suitable financial products and services, ultimately contributing to improved economic well-being.

To make informed financial decisions, individuals must be aware of the diverse debt products and services available in the financial market. While debt literacy levels often correlate with education and income, evidence suggests that even highly educated and high-income individuals may lack awareness of debt-related issues. Conversely, although lower-income and less-educated individuals generally exhibit lower levels of debt literacy, exceptions exist.

This study is particularly relevant for banks, as understanding customers' debt literacy can help them design and promote targeted debt awareness programs. Additionally, it provides valuable insights into debt literacy among employees in Nepal's formal sector, laying a foundation for further research. Analyzing the impact of debt literacy on the over-indebtedness of formal sector employees in Nepal is, therefore, crucial.

1.6 Limitations of the study

The data for this study was gathered using a self-administered questionnaire, and respondents were encouraged to provide honest answers. Consequently, the

accuracy of the findings relies on the reliability of the responses provided. Additionally, the scope of the study is confined to employees working in the formal sector, excluding those employed in the informal sector.

The study employs conventional sampling methods, which may introduce sampling bias. Furthermore, due to time constraints, the research adopts a cross-sectional design. The questionnaire used was adapted from the works of Lusardi and Tufano (2009) and Rahman et al. (2020). However, since these questions were originally developed and tested in the context of developed countries, some of the statements may not fully align with the Nepalese context.

Chapter II

Literature Review

This chapter has three sections. The first section is theoretical review. Similarly, the second section is empirical review and third one is research gap.

2.1 Theoretical review

1. Theory of Financial Literacy

This theory posits that financial literacy, which includes debt literacy, is essential for individuals to make informed financial decisions. Debt literacy involves understanding basic concepts such as interest compounding, time value of money, and debt management. When employees possess higher debt literacy, they are better equipped to evaluate financial products, avoid high-cost borrowing, and make choices that prevent over-indebtedness.

2. Behavioral Economics Theory

Behavioral economics highlights how cognitive biases and emotions impact financial decision-making. Even if individuals are debt-literate, they may still make poor financial choices due to:

Present Bias: Overvaluing immediate benefits over long-term costs, leading to unnecessary borrowing.

Overconfidence: Overestimating their ability to repay debt.

Emotional Decision-Making: Allowing material desires or stress to influence borrowing decisions.

3. Time Value of Money Theory

This theory emphasizes understanding the concept that money has a time-based value, often used in evaluating loans or investments. Employees with knowledge of time value of money can better comprehend the long-term implications of their borrowing decisions, including interest costs and repayment schedules.

4. Debt Spiral Theory

This theory suggests that once individuals accumulate debt beyond their repayment capacity, they enter a "debt spiral," where they borrow more to repay previous loans. Poor debt literacy exacerbates this situation as individuals fail to manage their existing debt effectively or choose inappropriate financial products.

5. Materialism and Over-Indebtedness Theory

Materialism is a personality trait that drives individuals to prioritize acquiring goods, often through borrowing. Studies show that materialism can override financial prudence, leading to overspending and accumulation of debt, even among debt-literate individuals.

6. Social Learning Theory

This theory asserts that individuals learn behaviors, including financial habits, through observation and interaction with their environment. Employees exposed to peers or communities that normalize borrowing or demonstrate poor financial behavior may replicate those patterns, regardless of their debt literacy.

7. Debt Stress Theory

This theory connects financial stress to over-indebtedness, emphasizing how debt burden affects mental well-being and decision-making. Debt-literate employees under significant stress may still make poor financial choices due to cognitive overload or emotional distress.

8. Theory of Planned Behavior

This theory suggests that individuals' intentions to manage debt are influenced by their attitudes toward debt, subjective norms, and perceived behavioral control. Debt literacy enhances perceived control, equipping employees to make more responsible borrowing and repayment decisions.

2.2 Empirical review

This section includes review of literature on Interest compounding Knowledge, Time Value of Money knowledge, Debt Management Knowledge and Over-indebtedness and relationship between them along with Materialism and Emotions affecting both

Debt literacy variables and Over-Indebtedness. It also includes theoretical framework that relates to the study.

Interest compounding knowledge

Many studies have tried to define the Compound interest in different ways. As per Kagan (2019), Compound interest can be defined as interest calculated on the initial principal, which also includes all of the accumulated interest of previous periods of a deposit or loan. Lusardi and Mitchell (2014), and Lusardi and Tufano (2009) stated that less than one-third of US population understand the concept of interest compounding and the understanding of how the credit card works. A study was conducted by Almenberg and Gerdes (2012) to measure the understanding of compound interest and its linkage to household financial decision making. The findings of the study showed that majority of the respondents displayed bias while answering the question of compound interest. However, the findings contradict with the study conducted by Lusardi and Mitchell (2014), where the respondents were asked questions on compound interest 67.1% of respondents gave correct answers. OECD/ INFE (2016) concluded many people struggled with the questions related to compound interest, which indicates the difficulties people face when making informed product choices.

Hubbard et.al., (2016) used online compound interest tools to improve financial literacy which used three tools i.e. text, linear graph and volumetric graph. The findings of the study showed that text and volumetric graph were most effective for improving the understanding of interest compounding whereas the linear graph had little contribution for improving financial literacy. This indicates the superiority of text over the linear tools and contradicts with theories that believe that graphics superiority over text. Song (2015) conducted a field experiment in china for having understanding of people's knowledge on compound interest. This study aimed in understanding whether misunderstanding of compound interest is responsible for low pension contributions in rural china. The findings of the study showed that increase in knowledge of compound interest helps to increase the contributions to pension fund. This indicates that knowledge of compound interest allows a person to make better financial decisions.

Understanding compound interest has been essential to become debt literate and make sound financial decisions. Beal and Delpachitra (2003) conducted a study

among Australian university level students to measure their level of financial literacy by asking questions related to compound interest. More than fifty percent of respondents gave correct answers, while twenty nine percent felt there was no difference between simple and compound interest and fifteen percent gave wrong answer. Stango and Zinman (2009) and Van Rooij, Lusardi and Alessie (2011) claimed that people who have good understanding of compound interest are likely to save more and have less amount of debt, participate in stock market and plan for retirement.

Many studies have shown the importance of having knowledge of compound interest. However, the lack of good knowledge of compound interest also creates problem for people leading to poor financial decisions. Zankiewicz (2014) highlighted the pitfalls investors have to face due to not having good knowledge on compound interest. There are many options available for investors in market ranging from least risky options like pension insurance to high- risky equity funds. Despite the presence of many options the investors make poor investment decisions which increase the chances of having losses. Binswanger and Carman (2010) explained the miracle of compound interest in their research article. In case of retirement savings if people have good knowledge of interest compounding, they might immediately involve in retirement planning and grab the foregone benefits quickly.

Time value of money

The concept of time value of money is needed by individuals while making rational financial decisions like where to invest, how much to invest, how much to borrow and so on. Hence, the knowledge of time value of money allows an individual to make good decision on how much to borrow, so they can protect themselves from over-indebtedness. Many studies have been conducted on the concept of time value of money and some of them are presented as follows. Zaman and Movassaghi (2002) and Thomi (2014) conferred if a certain amount of money will be received at a future time, in the present value, then the amount of money should be discounted with a certain interest rate.

Chen (2020) defined time value of money as the concept that the money available at the present time is worth more than the identical sum in future due to its potential earning capacity. OECD/ INFE (2016) used a survey method to conduct an international survey of adult financial literacy competencies on time value of money.

The findings of the study showed that highest score on time value of money came from Finland and Hongkong where 83% of respondents gave correct answers followed by Poland having correct response rate of 80%. Schmidt (2018) argued that the concept of time value of money plays a vital role in field of commercial real estate and finance. However, many professionals working in commercial real estate and finance lack the solid understanding of time value of money. Hence, it can be concluded that having clear cut understanding of the concept of time value of money will provide dividends for the years to come.

Many researchers have made studies on Islamic perspective on Time value of Money. Mohamed (2013) conducted a library research on time value of money from the view point of Shariah Law, which found that Islam legally recognizes the value of time value of money. However, the application of time value of money does not match with the concept of Riba where earning of interest is prohibited in Islam, and it can be applied only to contracts like mark-up sales and deferred sales. Fathia et.al (2012) contend that the concept of time value of money is different in Islam rather than for conventional practices. Even though Islam restricts the charging of interest it is not totally against the concept of time value of money. Hence, the time value of money is applicable to assets pricing not to the concepts of loan. Hence, it indicates that in Islam time value of money is prohibited in loan contracts but not to the trading of business and goods.

Debt Management Knowledge

Debt management is a strategy which helps a debtor to repay or handle the debt in better manner. According to Pandey (2004), the term debt management refers to ensuring that the collection of book debts is done. Monyoncho (2010) conducted a study on Effect of Financial Literacy on Personal Financial Management Practices, where two questions on debt management practices were asked. The respondents were categorized on two groups i.e. financially literate and financially illiterate group. The respondents from both groups recorded very high mean value of above 4.4 for both categories of debt management. This indicates a high level of discipline in regard to paying bills and creditors on time. Of the two groups those who are not financially literate are more sensitive sorting out their bills on time compared to those who are financially literate.

In Ghana, Addaney et.al., (2016) conducted a study regarding how debt management impacts the performance of small-scale enterprises by interviewing 120 small businesses. The study revealed that most of small business lacked the depth understanding of debt management practices which leads to over-indebtedness. The study therefore suggests that Small businesses must hire financial experts to help them manage their businesses through proper record keeping. It also argues that small scale businesses should work within their budgets in order to avoid higher expenditure and subsequent incurring of debts which could be detrimental to the running of their business. Maswati et al. (2015) asserted that most people face with indebtedness issue due to lack of financial knowledge and the inability to manage the debt. Hence, it indicates that lack of debt management causes individuals as well as businesses to face the problem of over-indebtedness.

Yunus et.al (2015) contended that debt management is an aspect of personal financial planning. For the study multi-stage random sampling was done by taking sample from 600 employees. Different predictors of debt management were used like self-esteem, financial skills, marital status, gender and among them self-esteem was the strongest predictor of debt management. Williams et.al (1996) explained having a lot of financial problems is one of the indicators of having difficulty in debt management. A study on the factors of debt management among youth was done by Ahmed. et.al, (2010) showing that financial management practices and financial problems are found to be significant factors. The findings of the study show that respondents having more financial problems tend to have low debt management knowledge.

Moty et. al, (2019) conducted an experiment to explain how people manage their multiple debts by asking the respondents given the number of debts which debt would they pay fast. They concluded that in order to manage the given number of debts the person shall start paying debt with highest interest rate which will eventually help to reduce overall debt more quickly. Sharma and Kuknor (2017) used a survey method to measure the relationship between compulsive buying, debt management and financial wellbeing. The findings indicate that there is requirement of creating awareness on debt management and reduce taboo that debt is not a bad phrase, in order to enhance wellbeing of individuals.

Hence it can be concluded from reviewed literatures that inefficiencies in debt management may lead to many possible consequences ranging from financial

problems, financial stress and being declared bankrupt. So, the concerned authorities shall create awareness on debt management to protect people from severe cases of indebtedness.

Synthesis on key literature review of Debt Knowledge

Variables	Author	Methods	Findings
Interest compounding Knowledge	Beal and Delpachitra (2003)	Structured-Questionnaire	More than half of respondents gave correct answers indicating the good knowledge of Australian university students on compound interest.
	Song (2015)	Field experiment	The findings of the study showed that increase in knowledge of compound interest helps to increase the contributions to pension fund.
	Hubbard et.al., (2016)	Online compound interest tools	The text and volumetric graph were most effective whereas the linear graph had little contribution for improving the understanding of interest compounding
Time Value of Money Knowledge	Mohamed (2013)	Literature review	The application of time value of money applies to the case of trading of business and goods but not to loan contracts in Islamic perspective.
	INFE (2016)	Structure Questionnaire	Among the selected countries, highest score on time value of money came from Finland and Hongkong of 83% of respondents giving correct response followed by 80% in

Debt Management Knowledge	Yunus et.al (2015)	Multi-stage random sampling	Poland. Among the given predictors self-esteem, financial skills, marital status and gender, self-esteem is the strongest predictor of debt management
	Addaney et.al., (2016)	Depth Interview	Most of small business lacked the depth understanding of debt management practices which led to over-indebtedness
	Moty et.al, (2019)	Experimental research design	If the person has many debts to pay, the person shall start paying debt with highest interest rate which will eventually help to reduce overall debt more quickly.

Over-Indebtedness

Fondeville, Ozdemir and Ward (2010) defined an over-indebted household as one whose existing and foreseeable resources are insufficient to meet its financial commitments without lowering its living standards, which has both social and policy implications if this means reducing them below what is regarded as the minimum acceptable in the country concerned. Marron (2012) argues that over-indebtedness emanates from three sites namely the market, the individual's agency, and the subject's lived personal and social context. Raffinot (2013) considered three approaches to measure over-indebtedness namely payment default, excessive debt and altruistic approach. Lezzi and Alessio (2013) stated the four indicators for measuring over-indebtedness which are cost of servicing debt, arrears, number of loans and subjective perceptions.

Nieto et. al, (2017) used a comprehensive explanatory model in Spain to explain both the causes and consequences of over-indebtedness. Eight different variables were used for conducting the study and the survey was conducted among individuals and experts. The findings of the study showed there exist statistically significant differences between individuals and expert's opinions in the asked variables.

However, both individuals and experts agree that consequences of over-indebtedness are high poverty growth and decline in welfare. Mwase (2017) conducted a study to measure the level of over-indebtedness of public servants in South Africa which showed that public servants were relatively more indebted than the general public. On basis of demographics majority of women were over indebted. Whereas, public servants in age group of 18-25 and 61-65 less were over-indebted than other age groupings. Bhattarai et.al (2018) used a descriptive analytical research design method to measure the over-indebtedness in Nepalese microfinance institution. The findings of the study showed the reasons of over-indebtedness which are: loss of income, seasonality of income, unexpected emergencies and multiple borrowing. Similarly, high level of education of borrower is negatively associated with over-indebtedness.

Idris (2018) interviewed twenty-four workers to measure the influence of financial knowledge and debt literacy on over-indebtedness. The findings of the study showed that the respondents were indebted mostly with home and car loan in comparison of other loans. However, the findings of the study contradict with previous studies. It shows that despite having good debt literacy the respondents are having problem of indebtedness. Schicks (2012) conducted a study in Ghana to measure over indebtedness of Micro borrowers. This study defined over-indebtedness as continuous struggle and unacceptable sacrifices made by borrowers for repayment of their debt. It also states that 30% of borrowers in Africa are over-indebted. However, the previous indicators of over-indebtedness come mainly from the risk management perspective of avoiding delinquency, for purposes of customer protection the industry needs to develop indicators that recognize debt problems before customers become delinquent. So, there is a need of developing the uniform standards to measure over-indebtedness of customer around the world.

Anderloni and Vandone (2012) highlighted the link between over indebtedness and behavioral factors in order to help households to tackle financial fragility. The study shows that demand for debt is not always caused by economic and socio-demographic factors but also guided by emotions of individuals. The emotions like over-confidence, social comparison and impulses in consumption attitude causes a person to become irrational and borrow more which eventually leads to over-indebtedness. Gathergood (2012) examined the relationship between financial literacy, self-control and over-indebtedness on consumer credit debt in United

Kingdom. The findings of the study showed that consumers who had lower levels of self-control made the quick access to the debt but at high cost. Similarly, the ones with lower self-control faced the problem of income shortage, unforeseeable expenses on durables and credit withdrawals. Lower levels of both self-control and financial literacy have positive relationship with nonpayment of credit and over-indebtedness. But, the stronger cause for over-indebtedness is lack of self-control rather than financial literacy. From the above-mentioned literatures, it has been found that behavioral factors like over-confidence and lack of self-control causes over-indebtedness, which indicates that a person must be able to control his emotions in order to minimize the burden of debt to some extent.

Fatoki (2015) conducted a study in South Africa to analyze the cause and consequences of over-indebtedness. The study analyzed the causes of over-indebtedness are both demand and supply factors. The demand side factors include lack of patience with need of current consumption and reduction in risk aversion. The supply side factors are attributed to financial innovations and deregulations which have increased the easy access of consumers towards credit. The consequences of this over-indebtedness are that it makes households financially fragile which leads to suicides, broken marriages, negative affect to physical and mental health and lower productivity. The findings are similar to the study conducted by Warth et.al (2019) which showed that positive relationship exists between over-indebtedness and sleep problems. Since, sleep is essential for good functioning of health, over-indebtedness causes detrimental health affects which leads to major illness, poor mental health.

Hence, it can be concluded that debt is not a bad thing if used properly, but if not used properly it raises health related problems like insomnia and major illness. People shall take debt during the time of requirements. The debt shall be taken for productive purposes like raising the future incomes or making investments rather than for consumption purposes. Similarly, if consumers have taken more debt than they can afford, they shall go for proactive debt counseling.

Materialism

Richins (2011) defined Materialism as a personal value that is reflected by people's beliefs about the importance that possessions play in their lives. Roberts (2011)

conferred that people with materialistic beliefs value their acquisitions and display their acquired assets.

Rahman et.al. (2020), and Munoz-Murillo et al., (2020) highlighted behavioral factors like materialism, emotions, financial literacy and risk perception might influence the propensity towards indebtedness. Mishra and Mishra (2016), and Richins and Dawson (1992) defined materialism as the act of consumption. Kuan (2017) conducted a study in Malaysia to analyze the attitude of Malaysian generation Y towards money and materialism. The findings of the study show that there are variations in attitude of Generation Y towards materialism. The materialism is influenced by factors like anxiety and power-prestige but not by distrust and retention time dimension. Another study was conducted by Abdul Adzis et. al., (2017) in Malaysia to measure the influence on spending behavior of vulnerable youths who are frequently bombarded by materialistic media messages. However, the findings show that the youths did not possess materialistic attitudes which led to indebtedness. Watson (1998, 2003) highlighted the relationship between materialism to spending tendencies, saving and debt. The findings of the study showed that there exist positive relations between materialism and spending tendencies and debt. However, the relationship between materialism and saving is negative. It indicates that people with materialistic values see themselves as spenders rather than savers.

The study conducted by Gardarsdóttir and Dittmar (2012) in Iceland found out that there is positive relationship between materialism and person's tendency to spend money. The study also concluded that materialism strongly predicts the amount of debt a person will take to satisfy his needs. There are many evidences of existence of negative relationship between proactive financial behavior and materialistic values. Gardarsdóttir and Dittmar (2012), and McNair et al., (2016) have claimed the materialistic values have been associated with lower savings and poor money management skills. This indicates that materialism influences the person to spend and borrow more, whereas the lower level of materialism encourages the saving behavior in an individual.

Aranha and Ponchio (2008) used a questionnaire to collect data from 450 low income households in a poor area of Brazil to examine the influence of materialism on consumer indebtedness. A logistic regression model was used which confirmed

materialism as a variable which can be used to predict the chances of people having consumption-related debt. Similar study was conducted on low-income consumers in South Africa by Jacobs and Smit (2010) to explore the relationship between materialism and indebtedness. The finding of the study shows that the low-income consumers are highly materialistic in comparison of high-income consumers which leads to indebtedness. Hartney (2019) explained materialism has been problem for people because it gives rise to the debt people have to pay. She mentions that Americans end up with huge amount of debt after extravagant weddings, too much shopping and expensive holidays.

Structural equations modeling was used by Yeniaras (2016) using 267 samples to investigate the relationship between materialism, status consumption and attitude towards debt by showing mediating effect of Islamic religion. The results showed that there exists positive relationship materialistic values and status consumption for Islamic people. But the Islam religion rejects the status consumption as it gives rise to over indebtedness. Hence, it shows that people following Islam are also moving towards materialistic culture. Pham et.al, (2012) used a survey method to measure the impact of materialism with compulsive buying using financial management practices and financial attitudes as moderating variable. The results showed that there exists moderate positive relationship between materialism and compulsive buying. Likely, the financial management practices had more moderating effect in the relationship between materialism and compulsive buying rather than financial attitudes. Hence, it can be concluded that people who have materialistic values were more involved in compulsive buying, if they had poor financial management practices and Vice-versa. The good financial management practices act as a protective buffer between materialistic values and compulsive buying.

From the above-mentioned literature, it can be highlighted that people who are materialistic in nature are also prone to indebtedness.

Emotions

Cherry (2019) contends emotion as a complex state of feeling that results in physical and psychological changes which influences thought and behavior. Many studies have shown the influence of emotions while making financial decisions. Ong et al., (2019) found out that the impact of high debt is not only functional but also psychological.

This study compared the mental state of poor people before and after debt payment. The findings showed that when poor people paid off their debts it resulted to improvement in their cognitive functioning and reduced their level of anxiety. Barros and Botelho (2012) used an experimental method to measure the influence of hope on propensity on indebtedness. The findings of the study showed that the higher level of hope in the samples increased their willingness to be indebted in order to pay for their studies.

Knutson and Samanez (2012) conducted a study on brain decision and debt, and found out that emotions affect financial decisions and promote proneness to debt. Rihab and Lotfi (2016) conducted a study in Tunisian firms to check whether managerial overconfidence affects debt decisions or not. The findings of the study show that over confident managers make high use of debts by underestimating the probability of financial distress. Sweet et.al, (2013) found out that higher amount of household debts results to higher stress, worse general health and depressive syndromes. Hence, it can be concluded the emotions affect the financial decisions taken by an individual, especially those related to debt.

Stratton (2015) collected data from 4600 students of age group 25-31 studying in University of South Carolina to measure the effect of debt on mental health. The findings of the study showed the graduates who have debt are more likely to have poor mental health. The reasons behind this are due to stress and depression due to the anxiety of carrying thousands of dollars in debt. Vozza (2016) mentioned in her blog how paying the debt changes the life of a person. Paying debt helps a person to eliminate all the worries, which gives a sense of security that they do not own anything to pay. Kuchar (2019) highlighted that over-indebtedness are associated with negative emotions like depression, anxiety, resentment, denial, stress, regret, anger, frustration, shame, embarrassment and fear, whereas payment of debt gives feeling of relief, freedom and accomplishment. Turunen and Hillamo (2014) used a systematic literature review method to measure the health effects of indebtedness, where they concluded that individuals with unmet loan payments had faced the problem of depressions and eventually suicide than those without loan burden. Hence, it can be concluded that debt creates burden for people and when they pay the debt it gives them feeling of freedom.

Ottaviani and Vandone (2011) used a probit model to measure the influence of emotions in household participation in debt market. The sample was collected from 445 employees working full time in international assets Management Company, where they concluded that participants with high degree of impulsiveness traits had higher probability of holding debt. Doosti and Karampour (2017) have found negative relationship between risk propensities and indebtedness. Whenever risk propensity increased the indebtedness condition of person decreased and vice-versa. Likewise, increase in debt level gives rise to negative emotions. Custers (2015) made a use cross-sectional dataset of over-indebted individuals, to prove that higher levels of debt increase information avoidance, through negative emotions such as unhappiness, anxiety or stress associated with that problem debt.

From the above-mentioned literature, it can be concluded that people who have higher amount of debt face various negative emotions which even leads to severe health problems and even suicide. Hence, people shall borrow the amount of loan they can afford otherwise it will lead to negative consequences.

Synthesis on key literature review of Over-indebtedness, Materialism and Emotions

Variables of the study	Authors	Variables	Methods	Findings
Over-indebtedness	Gathergood (2012)	literacy, self-control and over-indebtedness	cross-sectional survey	Lower levels of both self-control and financial literacy have positive relationship with nonpayment of credit and over-indebtedness.
	Nieto et.al, (2017)	External adverse shocks, Internal adverse shocks, Financial	comprehensive explanatory model	The experts attribute lack of financial literacy, whereas

		illiteracy		individuals attribute the factors of externals and internal shocks like economic crisis and unemployment as a reason of over- indebtedness.
Materialism	Yeniaras (2016)	Materialism, status consumption and attitude towards debt	Structural equations modeling	There exists positive relationship between materialistic values and status consumption. But the Islam religion rejects the status consumption as it gives rise to over indebtedness.
	Kuan (2017)	Power, prestige, distrust, anxiety , retention time dimension	Descriptive research design method	The materialism is influenced by factors like anxiety and power-prestige but not by distrust and retention time dimension.

Emotions	Ottaviani and Vandone (2011)	Emotions, Household debt holding, age, education Level	Probit model	The participants with high degree of impulsiveness traits have higher probability of holding debt.
	Stratton (2015)	Mental health, anxiety, depression, Debt-holding	Structured questionnaire	The graduates are more likely to have poor mental health due to stress and depression because of having anxiety of carrying thousands of dollars in debt.
	Custers (2015)	Debt levels, unhappiness, anxiety and stress	Cross sectional research design	The higher levels of debt increase information avoidance, through negative emotions such as unhappiness, anxiety or stress associated with that debt.

2.3 Research Gap

There are many studies that have been conducted in western nations to show the influence of Debt-literacy and over-indebtedness. A study was conducted by Kariuki et.al., (2016) to show the Effect of Debt Knowledge on the Indebtedness of Employees in the Formal Sector in Kenya. Similarly, Lusardi and Tufano (2009)

conducted a study on Debt literacy, Financial Experiences and Over-indebtedness. Idris et. al, (2013) examined the relationship between financial literacy and financial distress among youths in Malaysia. Likewise, Brown and Graf (2013) conducted a study in Switzerland the relationship between financial literacy, household investment and household debt. Disney and Gathergood (2011) studied the effect of financial literacy on indebtedness in UK.

However, these studies are limited to most of developed countries and only few studies have been done in developing countries. In Nepal, many studies have been conducted on topic of financial literacy as well as over-indebtedness. Risal (2018) conducted a study to analyze the status of microfinance institutions and indebtedness in Nepal. Likewise, Bhattarai et.al., (2018) used a case study method to measure the over-indebtedness of clients of Nirdhan Utthan Bank. Thapa and Nepal (2015) conducted a survey to measure the level of financial literacy among college students. The term financial literacy comprises of debt literacy, but no specific study has been done in Nepal regarding debt literacy. In the same manner, no study linking the two variables i.e. debt-literacy and over-indebtedness has been found in the Nepalese context. Therefore, there is need for an empirical study on the effect of debt literacy on the indebtedness in Nepal to fill this research gap. So, the study focuses on measuring the Effect of Debt literacy on the Over-Indebtedness of Employees with the moderation of behavioral factors in the Formal Sector in Nepal.

Chapter III

Research Methodology

This chapter outlines the methodology employed to address the research questions and achieve the study's objectives. It includes details on the research design, target population and sample, sources and nature of data, instrumentation, data analysis methods, and the reliability and validity of the tools used.

3.1 Research design

The study utilizes a combination of descriptive and causal-comparative research designs. The descriptive research design is applied to characterize respondents based on their demographic, educational, and economic attributes. Additionally, the analytical research design examines the moderating effect of behavioral factors, such as materialism and emotions, on the relationship between debt literacy and over-indebtedness. To gather relevant data, the study adopts a survey-based approach, employing a structured questionnaire developed from insights found in previous literature.

3.2 Population and sample, and sampling design

The population of employees working in the formal sector of Nepal is unknown. By using the Cochran's 1977 formula, the sample size for unknown population can be computed using following formula.

$$n = \frac{pqz^2}{\varepsilon^2} \dots\dots\dots (3.1)$$

Where, n= sample size

p = Population proportion with given characteristic

q = Population proportion without given characteristic

z = Standard normal deviation at the required confidence level

ε = Error margin

For the unknown population it is recommended the value of p and q shall be set at 50%. By considering the confidence level of 95 %, with z value = 1.96 and sampling error $\varepsilon = 5\%$.

$$n = \frac{50*50*(1.96)^2}{\varepsilon^2} = 384 \dots\dots\dots (3.2)$$

So, the optimal sample size for this study is 384 employees working in formal sector of Nepal. However, this study has considered 386 samples for conducting the study.

3.3 Nature and Source of Data

This research follows a quantitative approach, employing a survey method to collect primary data. A structured questionnaire serves as the primary instrument for data collection, with pilot testing conducted to ensure its reliability and validity.

3.4 Instrumentation

The study relies on a structured questionnaire to gather data from employees working in the formal sector. The questionnaire is divided into two sections:

Respondent Profile: This section includes demographic questions such as gender, age, education level, marital status, organizational affiliation, and monthly income range.

Main Variables: This section focuses on assessing the impact of independent variables on the dependent variable, moderated by behavioral factors. Topics include compound interest, time value of money, debt management, emotions, materialism, and over-indebtedness.

Questions on compound interest and time value of money are formatted as single-choice, multiple-option questions.

For topics like debt management, emotions, materialism, and over-indebtedness, a five-point Likert scale is used, where 1 represents "strongly disagree" and 5 represents "strongly agree."

The second section of the questionnaire is adapted from previous studies, including those by Lusardi and Tufano (2009) and Rahman et al. (2020).

3.5 Data Analysis Methods

The data collected is first coded and entered into SPSS Statistics 20 for analysis. SPSS and Microsoft Excel are used for organizing, managing, analyzing, and interpreting the data. The following methods are employed for analysis:

Descriptive Analysis

Descriptive statistics, including frequency, percentage, mean, and standard deviation, are used to summarize the data characteristics. Frequency and percentage are applied to describe respondent profiles, while the mean is used to evaluate average responses related to advanced debt literacy, emotions, materialism, and over-indebtedness.

Correlation Analysis

Correlation analysis examines the strength and direction of relationships between variables. This method evaluates the association between the independent variable (debt literacy) and the dependent variable (over-indebtedness).

Regression Analysis

Simple linear regression is employed to assess the moderating effect of behavioral factors on the relationship between independent and dependent variables. This analysis helps determine how emotions and materialism influence the impact of debt literacy on over-indebtedness. The structural equation for the research is,

$$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + e$$

Where,

Y= Over-indebtedness

β_0 = Intercept of Over-indebtedness

X1=Moderating variable

β_1 = Intercept of Moderating variable

X2=Independent Variable

β_2 = Intercept of Independent variable

X3= Dummy Variable

β_3 = Intercept of Dummy variable

e = Error

3.6 Conceptual framework and definition of variables

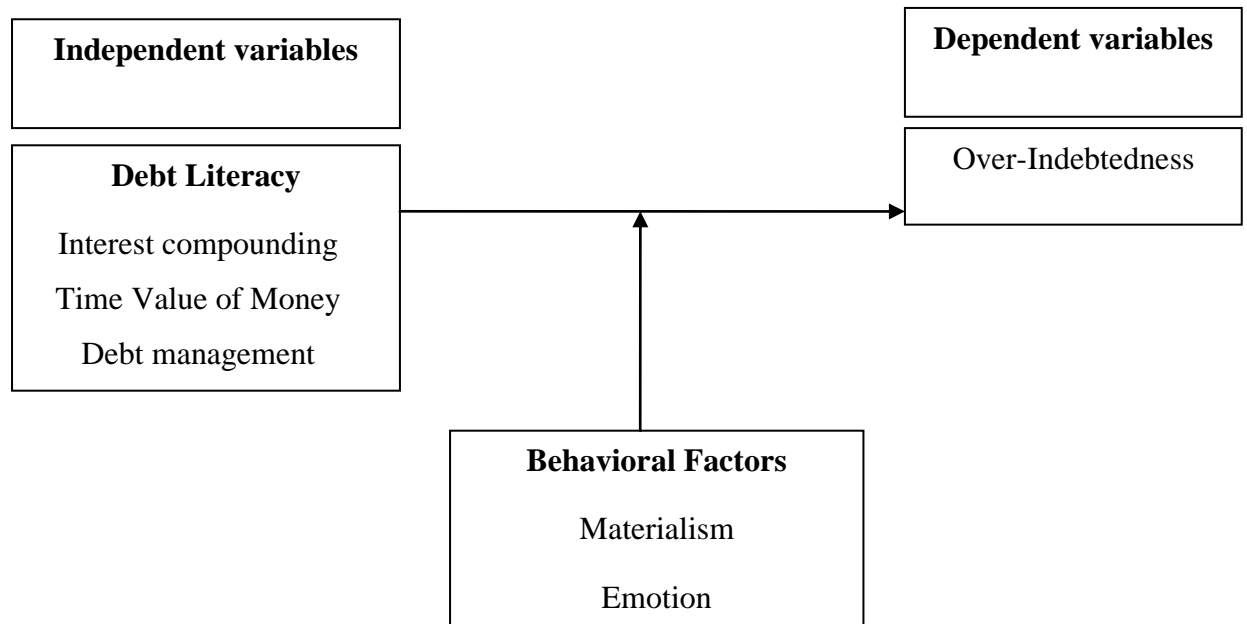


Figure 1 Conceptual Framework

The conceptual framework for the study is presented in Figure 1. The dependent variable is over-Indebtedness and independent variables are Interest compounding Knowledge, Knowledge on Time Value of Money and Debt management Knowledge. The moderating variables are Materialism and Emotions.

Independent Variables

Independent variables are those variables that affect the dependent variable. The independent variables describe the dependent variable. Here the independent variables are knowledge on interest compounding, Time value of Money and Debt Management.

Dependent Variables

The dependent variables are the variables that depend on the independent variables. Here the dependent variable is over-indebtedness which is influenced by knowledge on interest compounding, Time value of Money and Debt Management.

Moderating Variables

The moderating variables are the variables that moderate the relationship between the dependent and independent variables. Here, the moderating variables are Materialism and Emotions.

Definition of Terms

Interest Compounding Knowledge

Compound interest refers to interest calculated not only on the initial principal but also on the accumulated interest from previous periods of a deposit or loan (Kagan, 2019). Binswanger and Carman (2010) emphasized the importance of understanding compound interest, stating that individuals with this knowledge are more likely to engage in retirement planning early and take advantage of long-term benefits.

Time Value of Money

The time value of money is the concept that a sum of money available today is more valuable than the same amount in the future because of its potential earning capacity (Chen, 2020). Schmidt (2018) highlighted that a clear understanding of this concept yields long-term financial benefits.

Debt Management Knowledge

Debt management refers to strategies designed to help individuals or entities effectively handle and repay their debt. Maswati et al. (2015) found that a lack of financial knowledge and debt management skills often leads to over-indebtedness, affecting both individuals and businesses.

Over-Indebtedness

According to Fondeville, Ozdemir, and Ward (2010), over-indebtedness occurs when a household's resources are insufficient to meet its financial commitments without reducing its living standards below the acceptable minimum. This has significant social and policy implications.

Materialism

Materialism is defined as a personal value that reflects the importance individuals place on possessions in their lives (Richins, 2011). Roberts (2011) noted that materialistic individuals often emphasize acquisitions and the display of their assets, while Dittmar (2008) described materialism as potentially leading to excessive and impulsive buying behaviors, even during adverse circumstances.

Emotions

Emotion is a complex state of feeling that triggers physical and psychological changes, influencing thought and behavior (Cherry, 2019). Emotions encompass strong feelings such as anger, love, joy, or fear, often accompanied by physical reactions.

3.7 Reliability and validity

The questionnaire used in this study was adapted from the works of Lusardi and Tufano (2009) and Rahman et al. (2020), with additional questions included to gather demographic information about the respondents. Questions deemed relevant to the Nepalese context were selected for the study. To ensure content validity, a pretest was conducted by distributing twenty questionnaires to respondents. The feedback indicated that the questions were easily understandable and could be answered without difficulty. The questionnaire was made available in both Nepali and English to accommodate respondents' preferences.

Reliability testing was employed to assess the internal consistency of the survey instrument. Since the questionnaire was adapted to fit the Nepalese context, Cronbach's alpha was used to measure its reliability. The Table 3.1 displays the Cronbach's alpha values for the variables included in the study.

Table 1

Table Displaying Cronbach's Alpha for Variables

Variables	Number of items	Cronbach's alpha
Debt-management	8	0.672
Emotions	8	0.902
Materialism	8	0.831
Over indebtedness	6	0.670
Overall	42	0.795

The overall Cronbach's alpha is 0.795 which ensures the good reliability of questionnaire. The alpha of all variables is higher than 0.60, thus it ensures the reliability of questionnaire.

Chapter IV

Results and Discussions

This chapter presents and analyzes the primary data collected through a questionnaire survey. It includes a discussion of respondents' profiles in terms of age, gender, income level, educational qualifications, and employment sector (private or government). Additionally, this chapter provides descriptive statistics, inferential analyses, and the key findings, aligning with the study's objectives and scope.

4.1 Descriptive Statistics

Descriptive analysis is conducted to summarize the characteristics of the respondents and establish their demographic profile.

4.1.1 Demographic Profile of Respondents

The demographic details of 386 respondents, categorized by gender, age, education level, marital status, organization type, and income range, are presented in Table 1.

Gender Distribution: Out of the total respondents, 76.7% are male, while 23.3% are female. This indicates that the proportion of male employees in the formal sector is approximately three times higher than that of female employees.

Age Distribution: The majority of respondents fall within the age group of 20–30 years (40.9%), followed by the 31–40 age group (23.1%). This highlights a significantly higher participation of younger individuals in the formal sector compared to older age groups.

Educational Qualifications: Regarding education, 51% of respondents hold a master's degree or higher, while 38.6% have a bachelor's degree. This demonstrates that most employees in the formal sector possess advanced educational qualifications.

Marital Status: The data indicates that 61.9% of respondents are married, whereas 38.1% are unmarried. This shows that the majority of employees in the formal sector are married.

These findings highlight the demographic trends and characteristics of employees in the formal sector, providing a foundation for further analysis in this study.

Table 2
Demographic Profile of Respondents

Basis	Category	N	Percentage
Gender	Male	296	76.7
	Female	90	23.3
Age	20-30	158	40.9
	31-40	89	23.1
	41-50	74	19.2
	51-60	60	15.5
	61 and above	5	1.3
Education Level	SLC	16	4.1
	Plus, Two	24	6.2
	Bachelors	149	38.6
	Masters and above	197	51
Marital Status	Married	239	61.9
	Unmarried	147	38.1
Nature of organization	Private	162	42
	Public	224	58
Monthly Income Range	20000-30000	91	23.6
	30001-40000	142	36.8
	40001-50000	79	20.5
	50001-60000	24	6.2
	60001 and above	50	13

The Table 2 illustrates the monthly income distribution of the respondents, categorized into five income groups. Among them, 36.8% of the respondents earn between NPR 30,001–40,000, followed by 23.6% who fall within the NPR 20,000–30,000 range, and 20.5% with earnings between NPR 40,001–50,000. Additionally, 13% of respondents earn NPR 60,001 or more, while 6.2% fall into the NPR 50,001–60,000 income bracket. This indicates an uneven distribution of income, with the

majority of respondents receiving a monthly income in the range of NPR 30,001–40,000.

The table also highlights the proportion of respondents employed in the public and private sectors. Of the total, 42% work in the private sector, while 58% are employed in the public sector. Although there is a relatively balanced representation from both sectors, the results cannot be fully generalized to the entire formal sector since the sample was intentionally selected to include equal proportions from each sector for assessing debt literacy behavior.

4.1.2 Debt Literacy

The respondents were requested to self-assess their level of knowledge regarding debt-related concepts using a 5-point scale. The scale ranged from 1, indicating no knowledge or skills, to 5, signifying excellent knowledge and skills. The self-evaluation results of the respondents' understanding of debt concepts are summarized in Table 3.

Table 3

Self-Assessment of Debt-literacy

Ranking	N	Percent
1	28	7.3
2	43	11.1
3	137	35.5
4	121	31.3
5	57	14.8
Total	386	100

The respondents evaluated their debt knowledge on a scale from 1 to 5. Rankings of 1 and 2 were categorized as a lower level of debt knowledge, while rankings of 4 and 5 were classified as a higher level of debt knowledge. A total of 18.4% of respondents rated themselves at levels 1 or 2, whereas 46.1% rated themselves at levels 4 or 5. This suggests that the majority of respondents perceive themselves as having a sufficient understanding of debt concepts.

4.1.3 Basic Debt Literacy

The respondents were asked basic debt literacy questions on compound interest and time value of money.

Table 4

Response on Basic Debt-Literacy Questions

Questions	Responses		
	Correct	Incorrect	Don't Know
Compound Interest 1	89.4	5.2	5.4
Compound Interest 2	66.6	27.2	6.2
Time Value of Money 1	80.8	10.6	8.5
Time Value of Money 2	66.8	28.2	5

The Table 4 shows that majority of the respondents answered the questions correctly on compound interest and time value of money. This means they understand basic mathematics related to debt.

4.1.4 Advanced Debt Literacy

The respondents were asked five-point likert scale questions on advanced debt literacy questions on debt management knowledge.

Table 5

Response on Advanced Debt-Literacy Questions

Statements	Mean	Std.deviation
I will not change my expenditure pattern even though I have to be in debt	2.24	1.041
I am able to have many goods by being in debt	2.02	0.981
I have had problems with loan repayment in the past 12 months	2.72	1.191
I have to borrow to pay for medical cost	2.65	1.135
I have to take loans for my family to spend more	2.62	1.282
I do not mind being in debt to go on vacation	2.27	1.159
I will take loans to buy home equipment	2.54	1.076
I sell jewelry/ investments to pay for my loans.	2.68	1.142
Average	2.468	1.1259

Table 5 presents the levels of debt knowledge assessed using a scale ranging from 1 to 5, where 1 represents "strongly disagree" and 5 represents "strongly agree." The mean values of the responses are below 3, indicating that respondents generally disagreed with the given statements. The least supported statement was the second one, concerning the possession of many goods (M=2.02, SD=0.981). Conversely, the most agreed-upon statement was the third, relating to experiencing difficulties in debt repayment (M=2.72, SD=1.191).

The overall disagreement with the statements suggests that respondents possess strong debt management knowledge.

4.1.5 Emotions

The respondents were asked five-point likert scale questions on emotions.

Table 6

Response on Questions Related to Emotions

Statements	Mean	Std.deviation
I would feel ashamed if I were indebted	2.19	1.102
I would feel nervous if I were indebted	2.66	1.105
I would feel depressed if I were indebted	2.60	1.082
My dietary habits would be affected if I were indebted	2.89	1.074
My family relations would suffer if I were indebted	2.38	1.053
My relations with friends would be harmed if I were indebted	2.33	0.952
My work performance would be affected if I were indebted	2.67	1.149
I would sleep less than usual if I were indebted	2.58	1.162
Average	2.538	1.085

Table 6 reveals that the mean values of the statements are below 3, indicating that respondents generally disagreed with the provided statements. The least supported statement was the first one, which addressed feeling ashamed of being in debt (M=2.19, SD=1.102). The most supported statement was the fourth one, relating to the impact of debt on dietary habits (M=2.89, SD=1.074).

The respondents' disagreement with these statements suggests that their emotional well-being was not significantly affected by being in debt.

4.1.6 Materialism

The respondents were asked five-point likert scale questions on materialism.

Table 7

Response on Questions Related to Materialism

Statements	Mean	Std.deviation
I admire people who possess expensive houses, cars and clothes	1.93	0.920
I like to spend money on expensive things	2.10	0.921
My life would be much better if I had things, I actually do not have	2.89	1.103
Buying gives me pleasure	2.89	0.987
I would be happier if I could buy more things	2.90	1.097
I like to possess things to impress other people	1.92	0.938
It bothers me when I cannot buy everything, I want	2.47	1.062
Spending much money is among the most important things in my life	2.14	1.050
Average	2.405	1.1348

Table 7 indicates that the mean values for the statements are below 3, reflecting respondents' general disagreement with the statements. The least agreed-upon statement was the sixth, concerning owning items to impress others (M=1.92, SD=0.938). The most agreed-upon statement was the fifth, which suggested respondents would feel happier if they could purchase more items (M=2.90, SD=1.097).

The respondents' disagreement with these statements suggests that they do not exhibit materialistic tendencies.

4.1.7 Over-Indebtedness

The respondents were asked five-point likert scale questions on over-indebtedness.

Table 8

Response on Questions Related to Over-Indebtedness

Statements	Mean	Std.deviation
It is not correct to spend more money than I make	4.06	1.055
It is better to gather money first and then spend it	3.52	1.089
I know exactly how much I owe in stores, credit cards or to the bank	3.99	0.920
I would rather buy in installments than to wait to gather money to buy in cash	2.84	1.131
It is important to know how to control the expenses in my house	4.11	0.905
I would rather pay in installments even if the total is more expensive.	2.89	1.075
Average	3.568	1.029

Table 8 shows that respondents rated most items above average, except for the fourth and sixth statements, indicating general agreement with the given statements. The statement most favored by respondents was regarding the importance of controlling household expenses (M=4.11, SD=0.905). On the other hand, the least favored statement was about preferring to buy in installments rather than saving to pay in cash (M=2.84, SD=1.131).

The responses suggest that respondents do not typically accumulate large amounts of debt or become over-indebted.

4.2 Inferential Statistics

Inferential analyses are conducted to test the hypothesis to meet the research objectives.

4.2.1 Interests compounding knowledge and over-indebtedness

Table 9

Correlation between Interests Compounding Knowledge and Over-indebtedness

	Value
<hr/>	
Interest Compounding Knowledge and Over-indebtedness	
Pearson Correlation	-0.476
Sig. (2 tailed)	0.002

Table 9 shows a moderate negative correlation between interest compounding knowledge and over-indebtedness, suggesting that a higher level of knowledge about interest compounding reduces the likelihood of over-indebtedness. Since the p-value is less than 0.05, we fail to reject hypothesis 1, confirming that there is a significant relationship between interest compounding knowledge and over-indebtedness.

4.2.2 Time value of money knowledge and over-indebtedness

Table 10

Correlation between time value of money knowledge and over-indebtedness

	Value
<hr/>	
Time Value of Money Knowledge on Over-indebtedness	
Pearson Correlation	-0.807
Sig. (2 tailed)	0.000

Table 10 demonstrates a strong negative correlation between knowledge of the time value of money and over-indebtedness. This suggests that as individuals acquire more knowledge about the time value of money, the likelihood of over-indebtedness decreases. Since the p-value is less than 0.05, hypothesis 2 is not rejected, confirming a significant relationship between time value of money knowledge and over-indebtedness.

4.2.3 Debt management knowledge and over-indebtedness

Table 11 reveals a moderate negative correlation between knowledge of debt management and over-indebtedness. This suggests that a higher level of debt

management knowledge reduces the likelihood of over-indebtedness for respondents. Since the p-value is less than 0.05, hypothesis 3 is not rejected, indicating a significant relationship between debt management knowledge and over-indebtedness.

Table 11

Correlation between Debt management knowledge and over-indebtedness

	Value
<hr/>	
Debt Management Knowledge on Over-indebtedness	
Pearson Correlation	-0.314
Sig. (2 tailed)	0.002

4.2.4 Materialism on the relationship between Interest Compounding Knowledge and Over-indebtedness

Table 12

Regression coefficients of materialism on the relationship of Interest Compounding Knowledge and Over-indebtedness

Model	Coefficient	Standard Error	t-value	Significance
Constant	3.881	0.251	15.484	0.000
Materialism	0.111	0.097	1.146	0.252
Compound Interest knowledge	-0.341	0.158	-2.152	0.036
Compound Interest and Materialism	0.127	0.059	2.149	0.032

The fitted model equation, using the unstandardized coefficients, is represented as $Y = 3.881 + 0.111X_1 - 0.341X_2 + 0.127X_3$. The positive B-coefficient suggests that over-indebtedness increases as materialistic values rise, even with knowledge of interest compounding. The table indicates that the p-value for materialism's moderating effect is 0.032, which is less than 0.05. Therefore, hypothesis 4 is not rejected, confirming that materialism significantly moderates the relationship between interest compounding knowledge and over-indebtedness.

4.2.5 Materialism on the relationship between Knowledge on Time value of Money and Over-indebtedness

Table 13

Regression coefficients of materialism on the relationship of Knowledge on Time value of Money and Over-indebtedness

Model	Co-efficient	Standard Error	t-value	Significance
Constant	3.995	0.348	11.495	0.000
Materialism	0.120	0.138	0.872	0.006
Time Value	-0.320	0.176	-1.820	0.045
Time value and materialism	0.102	0.069	2.666	0.008

The fitted model equation, based on the unstandardized coefficients, is $Y = 3.995 + 0.120X_1 - 0.320X_2 + 0.102X_3$. The positive B-coefficient suggests that over-indebtedness increases as materialistic tendencies rise, even when there is knowledge of the time value of money. The table indicates that the p-value for materialism's moderating effect is 0.008, which is less than 0.05. Therefore, hypothesis 5 is not rejected, confirming that materialism significantly moderates the relationship between knowledge of the time value of money and over-indebtedness.

4.2.6 Materialism on the relationship between Debt Management Knowledge and Over-indebtedness

Table 14

Regression coefficients of materialism on the relationship of Debt Management Knowledge and Over-indebtedness

Model	Co-efficient	Standard Error	t-value	Significance
Constant	3.678	0.251	13.872	0.000
Materialism	0.400	0.028	3.093	0.000
Debt management	-0.026	0.029	-0.898	0.023
Debt management and materialism	0.080	0.018	0.679	0.497

The fitted model equation, based on the unstandardized coefficients, is $Y = 3.678 + 0.400X_1 - 0.026X_2 + 0.080X_3$. The table reveals that the p-value for materialism's moderating effect is 0.497, which is greater than 0.05. Therefore, hypothesis 6 is rejected, indicating that materialism does not have a significant moderating effect on the relationship between debt management knowledge and over-indebtedness.

4.2.7 Moderation Effect Caused by Emotions on the relationship between Interest Compounding Knowledge and Over-indebtedness

Table 15

Regression coefficients of emotions on the relationship of Interest Compounding Knowledge and Over-indebtedness

Model	Co-efficient	Standard Error	t-value	Significance
Constant	3.606	0.218	16.508	0.000
CI	-0.0672	0.0777	-0.8643	0.038
Emotions	0.308	0.050	6.163	0.000
CI and Emotions	0.164	0.056	2.953	0.005

The fitted model equation, derived using the unstandardized coefficients, is $Y = 3.606 - 0.0672X_1 + 0.308X_2 + 0.164X_3$. The positive B-coefficient suggests that individuals who lack control over their emotions are more likely to experience over-indebtedness, even with knowledge of interest compounding. The table indicates that the p-value for emotions moderating the effect is 0.005, which is less than 0.05. Therefore, hypothesis 7 is not rejected, confirming that emotions significantly

moderate the relationship between interest compounding knowledge and over-indebtedness.

4.2.8 Moderation Effect Caused by emotions on the relationship between Knowledge on Time value of Money and Over-indebtedness

Table 16

Regression coefficients of emotions on the relationship of Knowledge on Time value of Money and Over-indebtedness

Model	Co-efficient	Standard Error	t-value	Significance
Constant	3.3085	0.3729	8.8729	0.000
Emotions	0.1868	0.0680	2.7492	0.006
Time Value	-0.1416	0.0891	-1.5896	0.0150
Time value and emotions	0.0371	0.0160	2.3230	0.0203

The fitted model equation, based on the unstandardized coefficients, is $Y = 3.3085 + 0.1868X_1 - 0.1416X_2 + 0.0371X_3$. The positive B-coefficient suggests that individuals who lack emotional control are more likely to become over-indebted, even with knowledge of the time value of money. The table indicates that the p-value for emotions moderating this effect is 0.0203, which is less than 0.05. Therefore, hypothesis 8 is not rejected, demonstrating that emotions significantly moderate the relationship between knowledge of the time value of money and over-indebtedness.

4.2.9 Moderation Effect Caused by emotions on the relationship between Debt Management Knowledge and Over-indebtedness

Table 17

Regression coefficients of emotions on the relationship of Debt Management Knowledge and Over-indebtedness

Model	Co-efficient	Standard Error	t-value	Significance
Constant	3.694	0.351	10.509	0.000
Emotions	0.339	0.139	2.4348	0.0158
Debt management	-0.108	0.146	-0.743	0.002
Emotions and Debt management	0.039	0.026	1.495	0.136

The fitted model equation, based on the unstandardized coefficients, is $Y = 3.694 + 0.339X_1 - 0.108X_2 + 0.039X_3$. The table reveals that the p-value for emotions moderating this effect is 0.136, which is greater than 0.05. Therefore, hypothesis 9 is rejected, indicating that emotions do not have a significant moderating effect on the relationship between debt management knowledge and over-indebtedness.

4.3 Summary of Hypotheses

Hypothesis	Results
There is significant relationship between interests compounding knowledge and over-indebtedness.	Accepted
There is significant relationship between knowledge on time value of money and over-indebtedness.	Accepted
There is significant relationship between Debt management knowledge and over-indebtedness.	Accepted
Materialism will moderate the relationship between Interest	Accepted

Compounding Knowledge and Over-indebtedness

Materialism will moderate the relationship between Knowledge on time value of money and Over-indebtedness Accepted

Materialism will moderate the relationship between Debt Management Knowledge and Over-indebtedness Rejected

Emotions will moderate the relationship between Interest Compounding Knowledge and Over-indebtedness Accepted

Emotions will moderate the relationship between Knowledge on time value of money and Over-indebtedness Accepted

Emotions will moderate the relationship between Debt management knowledge and Over-indebtedness Rejected

4.4 Major Findings

- Respondents were asked to rate their knowledge of debt concepts on a scale of 1 to 5, where 1 represents no knowledge or skills and 5 represents excellent knowledge and skills. A total of 46.1% of respondents rated themselves as 4 or 5, suggesting that a majority believe they have sufficient knowledge about debt concepts.
- Four questions on basic debt literacy related to compound interest and the time value of money were posed. Over 60% of respondents answered these questions correctly, reflecting a basic understanding of the mathematics involved in debt.
- The debt management knowledge index reported a mean value of 2.468 (out of 5). This indicates disagreement with the statements posed, suggesting respondents possess good debt management knowledge.
- The emotions index recorded a mean value of 2.538 (out of 5), indicating that respondents were not emotionally affected even in situations of indebtedness.

- The materialism index revealed a mean value of 2.405 (out of 5), showing disagreement with the posed statements and suggesting that respondents were not materialistic.
- The over-indebtedness index showed a mean value of 3.568 (out of 5). Respondents' agreement with the statements indicates that they generally do not accumulate excessive debts or fall into over-indebtedness.
- Significant relationships were found between interest compounding knowledge, knowledge of time value, debt management knowledge, and over-indebtedness. Negative correlation values suggest that greater knowledge of interest compounding, time value, and debt management reduces the likelihood of over-indebtedness.
- Linear regression results indicate that materialism and emotions moderate the relationship between interest compounding knowledge, knowledge of the time value of money, and over-indebtedness. This implies that even when individuals have knowledge of concepts like interest compounding and time value, materialistic tendencies or lack of emotional control can contribute to over-indebtedness.
- Linear regression also showed that materialism and emotions do not moderate the relationship between debt management knowledge and over-indebtedness. This suggests that, once individuals acquire debt management knowledge, their level of materialism or emotional control does not significantly impact their likelihood of over-indebtedness.

4.5 Discussion

The primary objective of this research is to explore the impact of debt literacy on the over-indebtedness of employees working in the formal sector. The study employs three independent variables, two moderating variables, and one dependent variable, with hypotheses tested accordingly.

The results of the correlation analysis indicate a significant relationship between debt literacy variables—such as knowledge of interest compounding, understanding of the time value of money, and debt management knowledge—and over-indebtedness. These findings align with Kariuki et al. (2018), who demonstrated that debt literacy is negatively correlated with over-indebtedness.

Previous research has extensively examined the interplay between materialism, debt literacy, and indebtedness. For instance, Ponchio (2006) found that individuals with higher levels of materialism are more susceptible to elevated levels of indebtedness. Similarly, Rahman et al. (2020) reported a strong statistical relationship between materialism and over-indebtedness. The regression analysis in this study reveals that materialism moderates the relationship between knowledge of interest compounding and over-indebtedness. This aligns with Gardarsdóttir and Dittmar (2012), whose research in Iceland found a positive correlation between materialism and spending tendencies. However, their study also indicated that interest compounding knowledge could mitigate this effect. The current study concludes that despite having knowledge of interest compounding, individuals with strong materialistic values are more prone to over-indebtedness. These findings are consistent with Schmidt (2018), who emphasized the importance of time value of money in improving debt understanding and reducing over-indebtedness. However, the study also finds that materialism moderates the relationship between debt management knowledge and over-indebtedness, contradicting Gardarsdóttir and Dittmar's (2012) findings, which suggested that individuals with low debt management knowledge and high materialistic values experience more financial distress, poor money management, and compulsive spending.

The relationship between emotions, debt literacy, and indebtedness has also been widely explored in prior studies. Moderation analysis in this research indicates that emotions significantly influence the relationship between knowledge of interest compounding, understanding of the time value of money, and over-indebtedness. These findings are consistent with studies by Stango and Zinman (2009) and Van Rooij, Lusardi, and Alessie (2011), which reported that individuals with a solid grasp of compound interest tend to save more and carry less debt, thereby reducing emotional stress and depression. Mohamed (2013) explored the concept of time value of money under Shariah Law, concluding that knowledge of time value discourages excessive borrowing, leading to lower stress levels and improved general well-being. Additionally, Custers (2015) highlighted that inadequate debt management knowledge can result in higher debt volumes, triggering negative emotions such as anxiety and stress. The findings of the present study show that even with a good understanding of time value and interest compounding, individuals who lack emotional control are

more likely to become over-indebted. However, for those with debt management knowledge, the likelihood of over-indebtedness remains unaffected by their level of emotional control.

Chapter V

Summary and Conclusion

This chapter is the concluding part of the study which represents the major discussions of the findings of the study. The evidence of the previous studies on the stated factors of various researches is analyzed, and its potential implications for the debt literacy and over-indebtedness for employees working in formal sector has been presented.

5.1 Summary

This study aims to explore the impact of debt literacy on over-indebtedness among employees in Nepal's formal sector, with a particular focus on examining whether personality traits, such as materialism and emotions, moderate this relationship. The research employs a quantitative approach, utilizing convenience sampling to gather data from a total of 386 respondents. The survey questionnaire was adapted from established studies by Lusardi and Tufano (2009) and Rahman et al. (2020), with additional questions included to capture demographic information. Data analysis was conducted using Microsoft Excel and SPSS, and both descriptive and inferential statistical techniques, such as frequency distribution, percentages, mean, standard deviation, correlation, and regression analyses, were applied to evaluate the research objectives.

One of the key findings of this study is that employees working in Nepal's formal sector exhibit a high level of basic debt literacy, as well as an above-average level of advanced debt literacy. This suggests that employees have a solid foundation in understanding debt-related concepts, which is crucial in avoiding over-indebtedness. The study also revealed significant associations between various components of debt literacy, including knowledge of compound interest, time value of money, and debt management, and the likelihood of experiencing over-indebtedness. Employees who demonstrated a higher understanding of these debt concepts were less likely to find themselves over-indebted, indicating that enhanced debt literacy can help prevent financial challenges.

Another critical aspect of this study was the exploration of how personality traits, particularly materialism and emotions, influence the relationship between debt

literacy and over-indebtedness. The findings suggest that materialism and emotions act as moderators in the relationship between knowledge of compound interest and time value of money with over-indebtedness. In other words, employees who possess materialistic values or have difficulty managing their emotions are more likely to experience over-indebtedness, even when they have a strong understanding of debt-related concepts. These findings highlight the complex interplay between financial knowledge and individual traits in shaping financial behavior.

However, the study also found that materialism and emotions did not moderate the relationship between debt management knowledge and over-indebtedness. This suggests that regardless of an individual's emotional control or materialistic tendencies, possessing sound debt management knowledge was sufficient to mitigate the risk of over-indebtedness. This finding underscores the importance of equipping individuals with practical debt management skills to avoid excessive borrowing and debt accumulation, irrespective of their personal characteristics.

The implications of this research are far-reaching. The findings can inform the development of targeted interventions aimed at improving debt literacy, particularly within the formal sector. Policymakers, educational institutions, and financial organizations can use these insights to design programs that not only enhance employees' financial knowledge but also address emotional resilience and reduce materialistic tendencies. For example, training programs could focus on both the cognitive aspects of financial literacy, such as understanding compound interest and time value of money, as well as behavioral components, such as managing emotions and resisting materialistic impulses. By doing so, employees would be better equipped to make informed financial decisions and avoid over-indebtedness.

In conclusion, this study provides valuable insights into the relationship between debt literacy, personality traits, and over-indebtedness. While debt literacy plays a significant role in preventing over-indebtedness, the study also emphasizes the importance of addressing emotional and materialistic tendencies to further enhance financial well-being. These findings contribute to the growing body of literature on debt literacy and offer practical guidance for future research and policy development aimed at promoting financial stability among employees in Nepal's formal sector.

5.2 Conclusion

This study examines the impact of debt literacy on the over-indebtedness behavior of employees in Nepal's formal sector. The findings reveal that employees in this sector demonstrate a high level of basic debt literacy and an above-average level of advanced debt literacy.

The study employs three variables to measure debt literacy as the independent variable: knowledge of compound interest, understanding of the time value of money, and debt management knowledge. Two moderating variables, materialism and emotions, are analyzed alongside the dependent variable, over-indebtedness. The research findings indicate a significant relationship between debt literacy variables—such as knowledge of compound interest, time value of money, and debt management—and over-indebtedness. These results suggest that an increase in debt literacy contributes to improving over-indebtedness.

However, the study also finds that materialism and emotions moderate the relationship between knowledge of compound interest, understanding of the time value of money, and over-indebtedness. This implies that individuals with strong materialistic tendencies, even with a substantial level of debt literacy, are more likely to be over-indebted. Conversely, respondents with a high degree of debt literacy who feel a sense of shame or discomfort about debt are less likely to accumulate significant debt.

In conclusion, the study highlights the critical role of materialistic values and emotional factors in determining an individual's debt levels. To reduce the burden of debt, employees in the formal sector must manage their materialistic tendencies and emotions effectively.

5.3 Implications

This study contributes to the expanding body of research on debt literacy, materialism, emotions, and over-indebtedness. Future research could explore the over-indebtedness patterns of individuals across various professions, such as private sector employees, teachers, civil servants, and others. Such studies might yield more nuanced findings that provide a deeper understanding of debt levels and over-indebtedness across different occupational groups.

The current study focuses on three variables—knowledge of compound interest, understanding of the time value of money, and debt management knowledge—to measure debt literacy. Future research could incorporate additional variables such as numerical ability and budgeting skills as dependent variables. Moreover, factors such as age, income, and educational qualifications could be introduced as moderating variables for further investigations.

Given the significant portion of the population employed in the formal sector, it is essential to assess their level of debt literacy and its influence on their over-indebtedness. The practical implications of this study include offering valuable insights to educational institutions, investment organizations, individual employees, government agencies, and policymakers. These insights can aid in designing effective strategies to improve debt literacy and reduce the risk of over-indebtedness.

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Appendix

Questionnaire

EFFECT OF DEBT KNOWLEDGE ON THE OVER-INDEBTEDNESS OF EMPLOYEES WORKING IN THE FORMAL SECTOR OF NEPAL

Section A: Demographic and Economic Background

Please tick (☑) one from each criteria group.

- A. Gender** Male (296) Female (90)
- B. Age** 20-30(158) 31-40(89) 41-50(74) 51-60(60)
61 and above (5)
- C. Education** SLC (16) Plus two (24) Bachelors (149) Masters and above (197)
- D. Marital Status** Married (239) Unmarried (147)
- E. Nature of Organization** Privately Owned (162) Government owned (224)
- F. Monthly Income Range** 20000-30000(91) 30001-40000(142) 40001-50000(79)
50001-60000(24) 60001 and above (50)

Section B: Debt Literacy

- A. Do you consider yourself a debt literate person? Please evaluate your knowledge and skills using a five-point system, as the one at school, where 1 stands for the complete absence of knowledge and skills of debt and 5 stands for excellent command of the subject in question.
- 1(28) 2(43) 3(137) 4(121) 5(57)
- B. Suppose you had Rs 100 in a savings account and the interest rate was 2% per a year. After 5 years, how much do you think you would have in the account if you left money to grow?
- More than 102(345) Exactly 102(10) Less than 102(10) Don't Know (21)
- C. Suppose you had Rs 100 in a savings account and the interest rate is 20 % per a year and you never withdraw money or interest payments. After 5 years, how much would you have in the account in total?
- More than 200(257) Exactly 200(82) Less than 200(23) Don't Know (24)
- D. Assume a friend invests Rs.10, 000 today and his sibling invests Rs 10,000 3 years from now. Who is richer because of his investment?

My Friend (312) His Sibling (20) They are equally rich (21) Don't Know (33)

E. Suppose that in 2076 your income has doubled and the prices of all goods have doubled too. In 2076, how much will you be able to buy with your income?

More than today (34) The same (258) Less than Today (75) Don't know (19)

F. Debt Management

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I will not change my expenditure pattern even though I have to be in debt	95	174	58	49	10
I am able to have many goods by being in debt	121	185	40	30	10
I have had problems with loan repayment in the past 12 months	74	96	106	85	25
I have to borrow to pay for medical cost.	67	123	93	86	17
I have to take loans for my family to spend more	89	120	53	95	29
I do not mind being in debt to go on vacation	119	129	65	59	14
I will take loans to buy home equipment	66	140	97	70	13
I sell jewelry/ investments to pay for my loans.	70	110	93	100	13

G. Emotion

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I would feel ashamed if I were indebted	114	159	55	42	16
I would feel nervous if I were indebted	59	129	97	85	16
I would feel depressed if I were indebted	55	153	88	73	17
My dietary habits would be affected if I were indebted.	38	116	99	117	16
My family relations would suffer if I were indebted	82	152	84	59	9
My relations with friends would be harmed if I were indebted	70	178	84	50	4
My work performance would be	63	131	84	88	20

affected if I were indebted.

I would sleep less than usual if I were indebted	78	125	80	87	16
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H. Materialism

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I admire people who possess expensive houses, cars and clothes.	143	159	57	23	4
I like to spend money on expensive things.	108	167	79	29	3
My life would be much better if I had things I actually do not have.	48	99	102	122	15
Buying gives me pleasure	35	96	141	104	10
I would be happier if I could buy more things	45	102	102	121	16
I like to possess things to impress other people	144	162	51	23	6
It bothers me when I cannot buy everything, I want	75	136	103	61	11
Spending much money is among the most important things in my life	125	137	78	37	9

I. Over Indebtedness

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It is not correct to spend more money than I make	24	13	20	187	142
It is better to gather money first and then spend it	21	56	72	176	61
I know exactly how much I owe in stores, credit cards or to the bank	13	15	41	209	108
I would rather buy in installments than to wait to gather money to buy in cash	45	122	96	97	26
It is important to know how to control the expenses in my house	12	12	30	198	134
I would rather pay in installments even if the total is more expensive.	38	113	105	112	18

THANK YOU!!!

EFFECT OF DEBT LITERACY ON THE OVER-INDEBTEDNES...

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Abstract The study aims

to investigate the impact **of debt literacy on** over- **indebtedness** among **employees in** Nepal's **formal sector**

and to examine whether personality traits, such as materialism and emotions, moderated this relationship. A quantitative research approach was employed, and convenience sampling was used for data collection. Surveys were distributed to 386 respondents, and the questionnaire was adapted from previous studies by Lusardi and Tufano (2009) and Rahman et al. (2020), with additional questions included to gather demographic details. The collected

data were organized and **analyzed using Microsoft Excel and SPSS. Descriptive** and **inferential**

statistical methods, including frequency, percentage,

mean, standard deviation, **correlation, and regression** analyses, **were** conducted **to** address **the** study's **objectives. The**

findings revealed that employees in Nepal's formal sector possessed a high level of basic debt literacy and an above-average level of advanced debt literacy. The results demonstrated significant associations between components of debt literacy—