AUCKLAND CENTRE FOR FINANCIAL RESEARCH

AUT

PROBLEM DEBT, BUY NOW PAY LATER (BNPL) & YOUNG ADULTS IN AOTEAROA NEW ZEALAND: REPORT

Prepared by Professor Aaron Gilbert and Dr Ayesha Scott
August 2023

Contact:

Media – Dr Ayesha Scott, ayesha.scott@aut.ac.nz
All other enquiries – Professor Aaron Gilbert, aaron.gilbert@aut.ac.nz

Suggested Citation: Gilbert, A. and Scott, A. (2023). *Problem Debt, Buy Now Pay Later (BNPL) & Young Adults in Aotearoa New Zealand: Report.* Auckland Centre for Financial Research: Auckland, NZ.

Funding:
This research was funded by the AUT Business School, a project entitled "Buy Now, Pay Later: Young Adults and Problem Debt".

Acknowledgements:
We thank our partners for early consultation on the project, especially Shaun Adams and Debtfix's Christine Liggins, and Sorted's Tom Hartmann with the Te Ara Ahunga Ora (NZ Retirement Commission) team.

To all the young adults who participated in the research, thank you for sharing your money situation with us.

About AUT Business School:
At the AUT Business School, we believe in high-quality research that addresses important societal challenges. Our world-class researchers work in all major disciplines in business and in our multidisciplinary research groups.

At the heart of our research is collaborative engagement with our external stakeholders in business, the professions, government, and the community.

About the Auckland Centre for Financial Research:
The Auckland Centre for Financial Research (ACFR) bridges the gap between academia and the finance industry in Aotearoa New Zealand. We build knowledge and understanding in social and sustainable finance, commodity and financial markets, and empirical finance. Through engagement with industry partners and government agencies, we produce world-class research, share knowledge and expertise, and offer valuable insights to the finance industry. Find out more about our work at https://acfr.aut.ac.nz/.

CONTENTS

Young adults, problem debt & buy now, pay later in Aotearoa NZ

705

Kiwi aged 18-34 surveyed to ask about debt use, attitudes, demographics, behavioural traits

2 in 5

Reported having 1 debt, with a **median of 2 debts** per young adult surveyed

1 in 3

Met at least 3 of the 5 **overindebtedness** indicators

20%

One in five concern us based on their BNPL use patterns

One in four are constantly repaying buy now pay later

One in five disagree buy now pay later is debt

A further one in five aren't sure if buy now pay later is debt

How BNPL providers describe themselves likely drives increased use. Respondents viewing it as cheaper and having fewer consequences than other debt types tend to use BNPL more heavily. However, the claims of being cheaper and less damaging, especially for heavy users, are debatable.

INDICATOR 1

36%

of respondents had debt repayments greater than 30% of income

INDICATOR 2

35.6%

of respondents had unsecured debt repayments greater than 15% of income

INDICATOR 3

55.7%

of respondents had monthly income below the median income in the previous month

INDICATOR 4

31.5%

of respondents had 3 or more credit contracts

INDICATOR 5

37.9%

of respondents reported their debt repayments were a heavy burden

Average users and *abstainers* collectively represent over 70% of respondents and appear to either use BNPL appropriately or not at all.

One in five respondents in our sample exhibit *problematic* buy now pay later use patterns, falling into either of the two problem use groups

1. INTRODUCTION

Problem debt and over-indebtedness has serious and wide-reaching wellbeing consequences. Young adults (aged 18-34 years) are at acute risk due to their low and sometimes unstable incomes, persistently low financial capability, and lack of financial experience. Financial mistakes made in early adulthood are difficult to undo and may impact financial stability and future opportunities, such as greater difficulty getting onto the property ladder.

In Aotearoa New Zealand (NZ), Te Ara Ahunga Ora (Retirement Commission) has identified young people as requiring strategic focus and intervention, finding lower scores across financial capability components including knowledge, experience, and confidence (Galicki, 2021). Young adults also score lower on behavioural aspects that relate to financial decision-making such as money management, spending restraint (driven by psychological factors like impulsivity and values, like social status), and informed product choices.

In addition to the threat of over-indebtedness from 'traditional' borrowing, like credit cards, personal loans, student loans or mortgages, new innovative debt products, like buy now pay later (BNPL), have grown considerably in popularity, particularly with young adults. Young adults are the largest users of BNPL schemes, with most Kiwi users under the age of 45. BNPL is not yet captured by consumer finance law, allowing providers to lend with few restrictions, and present themselves as either not being debt, or fundamentally different from traditional forms of debt. Perceiving BNPL differently from other debt may impact how users interact with the product.

We conducted a survey of 705 young adults aged 18-34 years in NZ, aiming to:

- assess young adults' debt use, including the prevalence of buy now pay later (BNPL)
- better understand young adults' attitudes to debt
- explore BNPL as a driver of over-indebtedness and problem debt in young adults
- investigate financial education as a mediating effect on BNPL use.

Our dataset, collected by market research company Qualtrics, is broadly representative of Aotearoa's ethnic diversity.[1] The survey asked for demographic information, financial and living circumstances, respondents' use of debt, detailed questions on their use of BNPL, their financial knowledge and behaviours, behavioural traits that may influence their financial decisions, and questions to allow us to generate an over-indebtedness measure for each respondent. Alongside providing detailed information on young adults' debt use, we group respondents based on their debt use patterns. Using an analysis method known as latent class analysis, we identified four types of debt users (based on the type of debt they use) and separately, five types of buy now pay later users (based on the quality of their BNPL use).

The outcome is a comprehensive overview of young adults' debt use in NZ, focusing on buy now pay later, providing insights into problem debt and over-indebtedness now, and where we should focus research next.

This report is organised as follows:

- Executive Summary
- Young adults' general debt use, including over-indebtedness
- Young adults' buy now pay later use
- Young adults' buy now pay later use as a driver of over-indebtedness
- Financial education and buy now pay later use
- Supplementary tables (appendices), including data overview

[1] We used a Qualtrics online (blended) panel, and females are slightly over-represented (55.7% vs. 43.3% males).

2. EXECUTIVE SUMMARY

- Young adults (aged 18-34 years) are at acute risk of serious wellbeing consequences if over-indebted, due to their low and sometimes unstable incomes, persistently low financial capability, and lack of financial experience. Financial mistakes made in early adulthood are difficult to undo, impacting current and future financial stability.
- Buy now pay later (BNPL) has grown considerably in popularity, but is not yet captured by consumer finance law, allowing providers to lend with few restrictions, especially in terms of assessing the suitability and adequacy of the lender. Therefore, unwise BNPL use could allow users to borrow their way into over-indebtedness. Additionally:
    - BNPL providers have presented themselves as either not being debt, or different from traditional forms of debt, potentially impacting how users interact with the product.
    - Young adults are the largest users of BNPL schemes, with most NZ users under the age of 45.[2]
- We conducted an online survey of 705 young adults (aged 18-34) in Aotearoa New Zealand to:
    - assess young adults' debt use, including the prevalence of buy now pay later (BNPL)
    - better understand young adults' attitudes to debt
    - explore BNPL as a driver of over-indebtedness and problem debt in young adults
    - investigate financial education as a mediating effect on BNPL use.
- We present an overview of general debt use and identify four types of Debt User based on the types of debt they have: the *Debt Experienced*, *Mortgagees*, *Debt Junkies*, and *Debt Avoiders*. Our median young adult has 2 types of debt across 2 credit contracts and paid $330 in repayments the month prior to the survey – about half on unsecured debt. However, the average repayment is much higher at $1,868 with over half on unsecured debt (62%).

- Along with buy now pay later prevalence, we identify five BNPL user groups: *Heavy but okay* (7.8%), *heavy and problematic* (10.8%), *average users* (43.7%), *light but problematic* (9.2%) and *no experience* (28.5%). Over half appear to be using BNPL wisely – potentially exploiting the low-cost convenience and accessibility BNPL platforms offer to those making their repayments on time. One in five (20%) exhibit problematic use, while an additional 8% of respondents (*Heavy but okay*) are at risk should they experience an income shock.

[2] Ministry of Business, Innovation & Employment (2021).

- We measure over-indebtedness (OID) using five indicators. The least common was '3 or more credit contracts' (31.5%), the most common was the previous month's income being below the median income (55.7%), with the remaining three indicators ranging from 35.6 to 37.9%. One in six score 4 or 5 over-indebtedness indicators out of 5, approx. 192,000 young adults in NZ (population of 1.155 million).

AVERAGE OVER-INDEBTEDNESS SCORE = 2.06*

In population terms, roughly 192,000 young Kiwi adults are over-indebted.*

- We find strong evidence over-indebtedness indicators are significantly more prevalent in those who use BNPL poorly (20% of users had problematic use patterns), i.e., incurring fees frequently and needing to borrow to repay their BNPL balance.

We find strong evidence over-indebtedness indicators are more prevalent for those who use BNPL poorly.

- Financial education is often cited as key to building financial knowledge, capability, and well-being. However, existing research suggests financial education is less effective for some groups and some behaviours, including debt use. Ideally, effective financial education would prepare consumers for new financial products allowing consumers to correctly classify a product, e.g., viewing BNPL as debt, and manage its use accordingly. We find past financial education does not improve young adults' BNPL use. While financially educated respondents incurred BNPL late fees less often, those with financial education were less likely to identify BNPL as debt and more likely to borrow to make their BNPL repayments. Using debt to repay BNPL debt is a worrying practice. It is possible financial education is improving confidence in using financial products without imparting the skills required to manage these products wisely.
- Our study fills a crucial gap in understanding how (NZ) young adults use debt, including buy now pay later products, and may allow policymakers to better support young adults toward sound debt decision-making.

Taken together, our results support regulatory efforts to mitigate or limit poor use of BNPL.

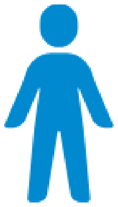
- Further research is needed to:
    - establish the reasons young adults are entering into so many credit commitments, and what may be done to build their current and future financial resilience.
    - explore the social and economic constraints for those using buy now pay later badly, i.e., for essential living expenses, and how best to support problem BNPL use through regulation.
    - know how young adults move between the debt use groups – and whether this is impacted by financial capability, knowledge, and education.

3. AN OVERVIEW OF YOUNG ADULTS' DEBT USE

This section provides a summary of young adults' debt use in Aotearoa New Zealand, using our survey sample of 705 young adults aged 18-34 years. Following the Summary section, we describe four distinct debt use patterns identified (named 'debt junkies', 'debt experienced', 'mortgagees', and 'debt avoiders'), before examining over-indebtedness within our sample.

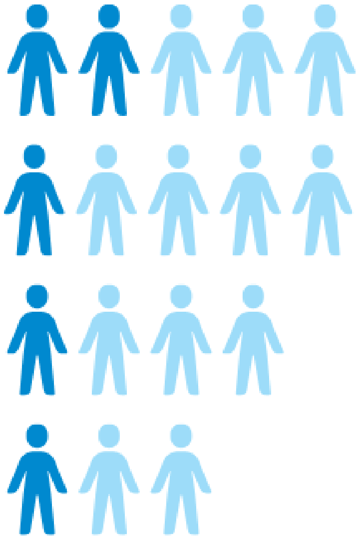
Key Takeaways

- We asked respondents about their current debt situation. Specifically, whether they currently have any of 11 types of personal credit options, and if they do, we ask about the number of individual credit contracts, and the repayments made on that type of debt in the last month.[3]



Our median young adult has 2 types of debt, across 2 credit contracts, and paid $330 in repayments the month prior to the survey - about half on unsecured debt.

However, the *average* repayment is much higher at $1,868 with over half on unsecured debt (62%).



Two in five have a student loan

One in five has a mortgage

One in four has a fixed-term contract (e.g., mobile phone)

One in three has a credit card or buy now pay later

Other debt types, such as hire purchases and store cards (7%), non-bank personal loans (9.4%), bank personal loans (14.3%), overdrafts (16.6%), and car loans (17.6%) were reported less often.

Borrowers with a fixed-term contract have a median of two individual fixed-term contracts, as do BNPL users.

- One third of respondents reported having one current debt contract. Forty-two percent of the sample had exposure to only one type of debt, for these respondents the student loan was most common (31.2% of 295 respondents), followed by sole use of credit card or BNPL.
- Credit cards are a so-called 'neutral' debt facility, in that heavy use does not necessarily equate to higher debt burden – if the balance is repaid in full each month, there is no interest cost, and may even be fee-free. A little over half of our credit card users repay their full credit card balance most of the time (27%) or always (28%). However, 30% of credit card users in our sample report repaying in full only sometimes (18%) or never (12%), indicating concerning use patterns of what can be an expensive product.

[3] We include 11 debt types: Mortgage, Student Loan, Bank Personal Loan, Non-Bank Personal Loan, Car Loan, Credit Card, Overdraft, Hire Purchase, Store Card, Fixed Term Contract (including mobile phone, etc), and Buy Now Pay Later.

Background: Over-Indebtedness and Young Adults

> *A household is over-indebted when its existing and expected resources are insufficient to meet its financial commitments (including recurrent necessary expenses) without lowering its standard of living, potentially below an acceptable standard.*
>
> – D'Alessio and Lezzi (2013)

Disney, Bridges and Gathergood (2008) summarise several ways in which households can become over-indebted, including financial imprudence (including both over-borrowing and under-insuring), income shocks due to job losses, health issues, and relationship breakdowns, and macro-economic shocks such as increasing interest rates or cost of living. While temporary circumstances can tip 'indebted' into 'over-indebted', the issue is ultimately structural and only addressed with a change in expenses or income.

Problem debt and over-indebtedness has serious and wide-reaching wellbeing consequences including financial exclusion (Russell, Maître and Donnelly, 2011), limited and/or poorer food choices (Goode, 2012) and health problems (Turunen and Hiilamo, 2014). Consumer finance laws requiring affordability and suitability checks prior to lending are designed to limit over-borrowing, limiting the risk of becoming over-indebted and reducing the potential impact of economic shocks.

Young adults have been identified as more vulnerable to over-indebtedness (Legge & Heynes, 2009; Galicki 2021), due to a combination of factors including:

- low incomes – life-cycle theories predict young adults at the start of their careers typically start on low incomes which rapidly increase
- unstable incomes – especially for those undertaking part-time work while studying
- low financial literacy, capability, and experience (see Appendix A2)

However, most over-indebtedness research has been conducted in Europe or elsewhere; apart from Legge and Heynes (2009) and Hunt (2015) – both providing analysis of household problem debt. To the best of our knowledge, ours is the first exploration of individual debt use and over-indebtedness for young adults in NZ.

3.1. Summary of Debt Use by Young Adults in Aotearoa New Zealand

An Overview of Young Adults' Debt

We start with a general view of the current debt situation for young adults in Aotearoa New Zealand by considering each respondent's range of debt types, their total number of current credit contracts, and their monthly repayments. Table 1 also reports the unsecured debt repayments (defined as all debts except mortgages and student loans[4]). Our average young adult has 2.2 types of debt, and 3.25 credit contracts, and paid $1,869 in repayments over the previous month, of which over half is on unsecured debt. It is worth noting that the relatively high number of debts and high repayments are driven by a small number of respondents; the median respondent reports two debts and $330 in repayments for the previous month. The most indebted respondents ('top 10%') report 23 different credit contracts, across seven types of debt, and are repaying $4,500 per month, slightly more than half of that in unsecured debt.

[4] Car loans can be secured by the vehicle; however, we did not differentiate between secured and unsecured personal loans in the survey and thus, only exclude mortgage lending here.

	Types of Debt	Number of Debts	Total Repayments	Unsecured Repayments
Average	2.22	3.25	$1,868.71	$1,160.62
Median	2	2	$330	$172
90th Percentile	4	7	$4,500	$2,580

Table 1: Debt overview for young adults (N = 705)

Figures 1 and 2 show the distribution of debt types and total number of debts, respectively. Only two respondents reported they currently have no debt. About one third reported having one current debt contract while 42% of the sample had exposure to only one type of debt. These respondents generally had student loans (31.2% of 295 respondents), followed by sole use of credit card or BNPL. Three respondents were exposed to 7 of the 11 debt types included in the survey. The total number of debt commitments is a strong indicator of problem debt and over-indebtedness (see, e.g., Disney, Bridges and Gathergood, 2008). Those with 3+ credit commitments are viewed as being 'of concern'; in our sample, around one in four respondents meet this threshold. A staggering 60 respondents (8.5% of the sample) reported having 8+ credit contracts**.**

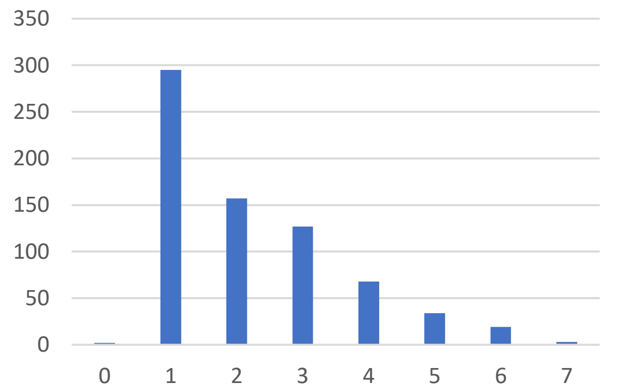


Figure 1: Distribution of debt types (by respondent)

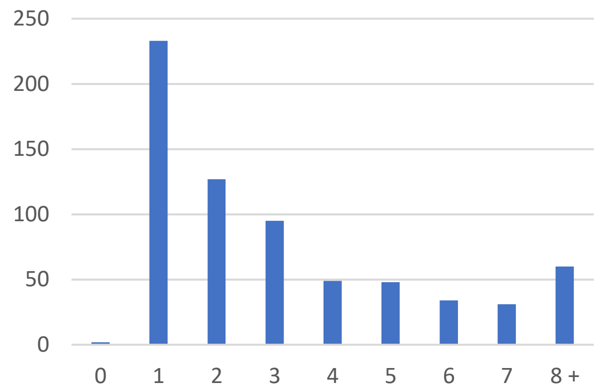


Figure 2: Distribution of debt contracts (by respondent)

Further research is needed to establish the reasons young adults are entering into so many credit commitments, and what may be done to build their current and future financial resilience.

By Debt Type

Unsurprisingly for the young adult cohort, student loans were the most common debt type. We did not ask respondents about their student loan repayment amount or the total loan amount, as repayments are automatically deducted from wages, and it is not unusual for young adults to not know this information.

One in five respondents reported having a mortgage, with the average of 1.2 mortgages per respondent with a mortgage driven upward by 11 respondents with two mortgages and six reporting they had three.

After student loans, the next most common debts were credit cards and buy now pay later (BNPL), both at just over one third of the sample. Other consumer debt, such as hire purchases and store cards (7%), non-bank personal loans (9.4%), bank personal loans (14.3%), overdrafts (16.6%), and car loans (17.6%) were less common. One in four respondents reported having fixed-term contracts (e.g., mobile phones), with those using fixed-term contracts having a median of two contracts each. Likewise, respondents reporting BNPL use had a median of two current BNPL contracts.

Unsurprisingly, the highest average repayments in the past month were for mortgages at around $3,200, followed by credit card repayments at $1,358 (we unpack credit card use in more detail below, to explore problematic versus smart product use). Relatively higher monthly repayment amounts were reported for overdrafts ($1,507) and bank personal loans ($1,283). The BNPL average repayment was $311 per month, indicative of its use for generally smaller purchase amounts.

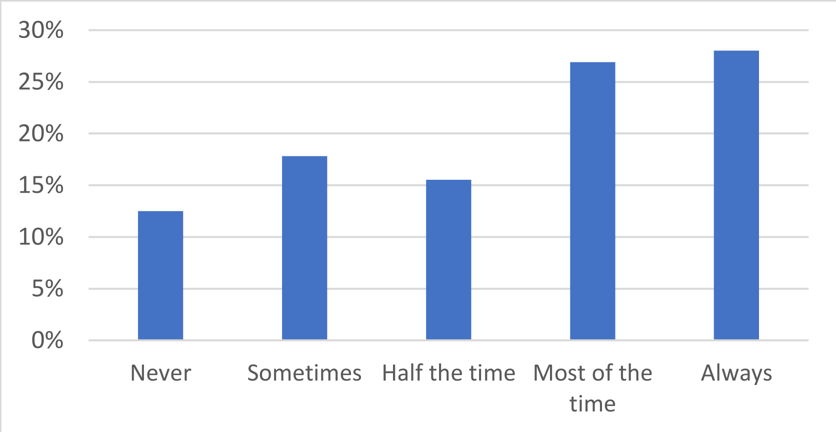


Figure 3: Credit card users – "Do you repay your credit card in full each month?"

Credit cards are a so-called 'neutral' debt facility, in that heavy use does not necessarily equate to higher debt burden – if the balance is repaid in full each month, there is no interest cost, and may even be fee-free. To capture additional context, we asked survey respondents if they repaid their credit card(s) in full each month on a five-point scale. Results are presented in Figure 3, with a little over half repaying the full balance most of the time (27%) or always (28%). However, 30% of credit card users in our sample report repaying in full only sometimes (18%) or never (13%), indicating concerning use patterns of what can be an expensive product.

It has been suggested that borrowers are substituting credit card use with BNPL, as aside from coverage differences in consumer law, the two products bear many similarities, including cost neutrality depending on use quality. Table 2 provides a comparison of the credit card and BNPL use for our sample. For current BNPL users, we find that around one in eight respondents have both a credit card and outstanding BNPL debt. Roughly equal numbers of respondents have either BNPL or a credit card but not the other, while 40% of the sample currently have neither. We do see some evidence of substitution; however, it is possible that the argument is one of *inclusion* as not all young adults are able to obtain a credit card, but all have the option of BNPL.

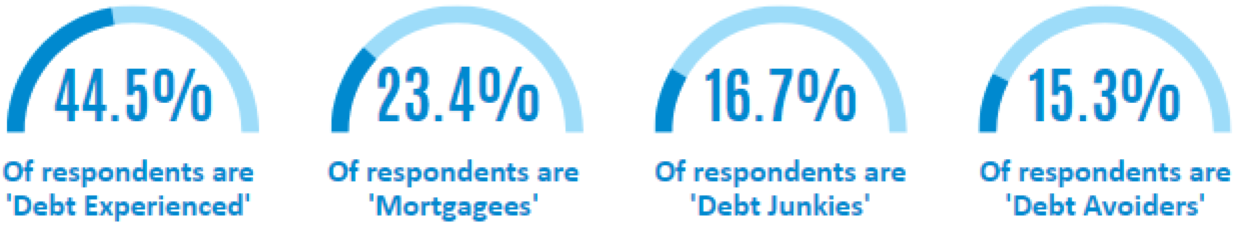
	Buy Now Pay Later – Current Users		
	BNPL – No	BNPL - Yes	Total
Credit Card – No	285 (40.4%)	156 (22.1%)	441 (62.6%)
Credit Card – Yes	173 (24.5%)	91 (12.9%)	264 (37.4%)
Total	458 (65.0%)	247 (35.0%)	705

Table 2: Credit cards versus buy now pay later

Note: Percentages given in parentheses are of the full sample (N = 705).

3.2. Patterns of Debt Use

To further explore the debt use of the young adults surveyed, we use a clustering method known as latent class analysis (LCA) to identify patterns in the use of debt by respondents, and group them by these characteristics. We identify four groups of debt users in our sample, and label them *Debt Junkies*, *Debt Experienced, Mortgagees*, and *Debt Avoiders*. Table 3 provides the likelihood a member in a particular group has a particular debt type, compared to the full sample. The brief summaries below highlight defining characteristics of each group, with full results in Table 4.



Debt Experienced

- No member of this group has a credit card.
- The group uses the various debt types broadly in line with the full sample (expected given its size), except for credit cards, and a lower likelihood of having a student loan (12.5% lower than the full sample).
- Respondents in this group are more likely to be women and less likely to identify as Asian, with a much higher likelihood of reporting they are not working (14% versus 9.7% for the full sample).
- On average, about half the monthly repayments reported by this group are unsecured – compared to almost two-thirds for an average respondent in the full sample – spread over 1.9 debt types with 2.8 different contracts.
- Despite money management and debt tolerance in line with the full sample averages, a young adult in the *Debt Experienced* group scores below the full sample and all other debt users for financial capability and debt literacy.
- Behavioural traits, i.e., impulsivity, present orientation (living for today), and materialism, are mostly in line with the full sample, although present orientation is slightly lower for these respondents (2.76 versus 2.85).

Mortgagees

- Most likely to have a mortgage compared to other groups and the full sample (31% versus 20.1%).
- All *Mortgagee* group members have a credit card and are less likely to have all other forms of consumer debt, apart from car loans which is on par with the full sample.
- Unsurprisingly, *Mortgagees* report the highest average monthly income, most likely to be in full-time work and are 2.7 years older than the average respondent.
- Less likely to be women (12.4% less than the full sample), about half as likely to be studying or not working than average, and much more likely to identify as Asian or MELAA.
- Like the *Debt Experienced* group, an average *Mortgagee* has 2.7 credit contracts across 2.1 debt types. Unsurprisingly, this group pays a higher-than-average monthly repayment ($2,358 versus $1,869).
- Young adult *Mortgagees*, unsurprisingly, have higher financial capability on average, debt literacy about the same as the full sample, and the highest debt tolerance (albeit marginally). Interestingly, their money management scores are lower than the full sample.
- On average, *Mortgagees* are less impulsive and materialistic, although they exhibit higher-than-average present orientation.

Debt Junkies

- We refer to this group as *Debt Junkies*, due to their higher-than-average use of all debt types (except mortgages, where their use is lower than average).
- Given their relatively high exposure to consumer debt, almost double the full sample across all types, this group is likely to struggle if they experience income or expense shocks.
- Student loan use is roughly on par with the full sample (40.7% versus 38.6%). Given these respondents are older on average and less likely to be studying, these student loan balances are likely being paid off and no longer growing.
- More likely to be male, Māori, and in full-time work, this group reports a slightly higher-than-average monthly income ($4,187 versus $3,817 for the full sample).
- However, their average monthly repayments are more than twice the full sample average, with almost 80% of that on unsecured (non-mortgage) debt, spread across 7 credit contracts and 4.4 types of debt, on average. The amount of debt on depreciating assets is a significant concern, with this group at severe risk of over-indebtedness (see Section 3.3 below).
- *Debt Junkies* are marginally more financially capable than the average respondent but are on average the least capable money managers; they are also the most impulsive, materialistic, and present-orientated, all traits linked to increased debt use.

Debt Avoiders

- All members of this group have student loans and very little exposure to any other debts.
- The youngest group (average age of 23.7 years versus 25.7 for the full sample), *Debt Avoiders* are more likely to be women, NZ European or Pasifika, and least likely to identify as Māori.
- Unsurprisingly, this group reports the lowest average monthly income ($2,935, almost $1,000 below NZ's median income) and is much more likely to be studying and/or in part-time work, rather than employed full-time.
- An average *Debt Avoider* has only 1.1 contracts across 1.1 debt types, with a very low average monthly repayment of $228.
- Unsurprisingly, *Debt Avoiders* have the highest average money management score (5% above the full sample), debt literacy (15% higher on average), and the lowest debt tolerance (10.5% below the full sample). This group has markedly lower impulsivity and present orientation than the full sample and other debt users.

	Full Sample	Debt Junkies	Debt Experienced	Mortgagees	Debt Avoiders
Student Loans	38.6%	40.7%	26.1%	21.2%	100.0%
Mortgage	20.1%	17.0%	21.1%	31.0%	5.1%
Personal Loan	14.3%	27.3%	13.9%	10.6%	0.8%
Non-bank Loans	9.4%	20.7%	11.4%	0.0%	0.0%
Car Loans	17.6%	32.7%	13.6%	17.0%	6.2%
Credit Card	37.4%	67.8%	0.0%	100.0%	0.0%
Overdraft	16.6%	31.3%	19.5%	6.8%	0.0%
Hire Purchase and Store Cards	7.0%	17.5%	6.9%	0.9%	0.0%
Fixed Term Contracts	26.2%	64.1%	24.9%	5.2%	3.1%
Buy Now Pay Later	35.0%	63.1%	40.1%	15.0%	6.8%
Number of Respondents	705	118	314	165	108
Percentage of Respondents	-	16.7%	44.5%	23.4%	15.3%

Table 3: Patterns of debt use for young adults, using latent class analysis

	Full Sample	Debt Junkies	Debt Experienced	Mortgagees	Debt Avoiders
% Women	0.563	0.483	0.613	0.439	0.698
Age (years)	25.7	27.1	25.4	27.0	23.7
Ethnicity					
European	0.648	0.627	0.675	0.564	0.722
Māori	0.204	0.237	0.217	0.188	0.157
Pasifika	0.095	0.093	0.096	0.079	0.120
Asian	0.154	0.178	0.108	0.248	0.130
MELAA	0.030	0.008	0.025	0.048	0.037
Employment Status					
Full-time Work	0.596	0.703	0.554	0.721	0.407
Part-time Work	0.190	0.127	0.162	0.200	0.324
Studying	0.192	0.127	0.210	0.103	0.343
Not working	0.097	0.085	0.140	0.055	0.046
Employment Other	0.054	0.034	0.070	0.024	0.037
Av. Monthly Income	$3,817	$4,187	$3,707	$4,305	$2,935
Financial Knowledge					
Financial Capability	10.43	10.67	9.76	11.35	10.67
Debt Literacy	1.11	1.11	1.04	1.14	1.31
Money Management	32.70	31.76	32.56	32.29	34.67
Debt Attitudes	2.73	2.80	2.74	2.82	2.47
Behavioural Traits					
Impulsivity	2.78	3.04	2.79	2.69	2.58
Present Orientation	2.85	3.12	2.76	2.93	2.67
Materialism	3.23	3.33	3.21	3.19	3.20
Type of Debts	2.22	4.4	1.9	2.1	1.1
Num Debts	3.25	7.0	2.8	2.7	1.1
Repayments Total	$1,869	$3,979	$1,383	$2,358	$228
Repayments Unsecured	$1,161	$3,130	$668	$1,450	$ -
Average OID Score	2.06	3.11	1.97	2.09	1.07

Table 4: Summary of debt user groups

3.3. Over-Indebted Young Adults

Measuring over-indebtedness

We measure over-indebtedness (OID) by generating an OID score for each respondent based on the sum of five over-indebtedness indicators.[5] For each criterion we score a respondent as either 1 (meets the criterion) or 0 (doesn't meet the criterion), resulting in a score from 0 to 5.

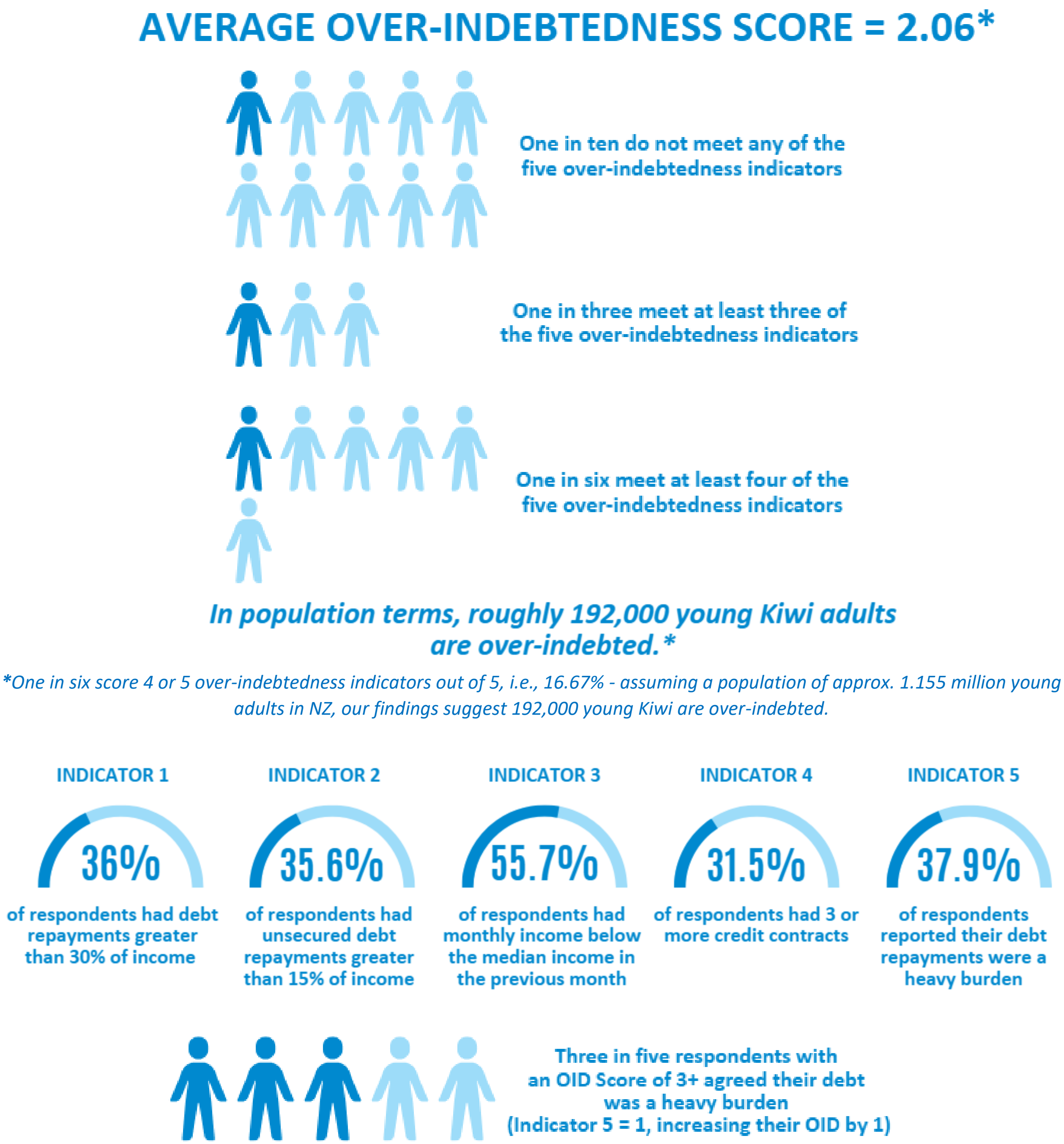
The five indicators are based on factors commonly argued as markers of problem debt levels:

1. whether debt repayments are greater than 30% of income
2. whether unsecured debt repayments are greater than 15% of income

[5] We base our OID measure on the work of Davydoff et al. (2008), originally developed for use in the European Union, and adapt it based on subsequent studies for our context in Aotearoa New Zealand.

3. whether income is below the median income (currently $3,942.19/month in Aotearoa New Zealand)
4. whether respondents have more than three credit commitments
5. a subjective indicator based on the question, “Are your debt repayments a heavy burden?”, using on a five-point Likert scale (a higher score indicates a heavier burden).

Indicators 1-4 measure an individual’s capability to cover their debt repayments. Having debt repayments that are too great in comparison to income leaves little remaining for ordinary essential expenses like food, while the likelihood of failure to repay debts has been strongly linked to the number of individual debt commitments a person or household has (see, e.g., Disney, Bridges and Gathergood, 2008). To calculate these measures, we asked respondents the types of debt they had (of 11 options, see above). For each type of debt, we ask how many current credit contracts they have (e.g., they might have two credit cards which we count as two credit contracts) and finally, how much they repaid on each type of debt in the last month. Finally, we ask their monthly income for the month prior to taking the survey.



Over-indebtedness and debt use patterns

The average over-indebtedness score for each debt user group is provided in Table 4. Compared to the full sample (2.06 OID indicators, on average), OID scores for respondents in the *debt junkie* group are 50% higher. Unsurprisingly, the *debt avoiders* have the lowest average OID scores – almost 50% lower than the full sample. *Mortgagees* and the *debt experienced* score on par with the full sample.

Over-indebtedness and demographic factors

Over-indebtedness is driven by societal factors including:

- the gender pay gap, and
- 'age and stage' lifestyle factors
    - a higher proportion of younger respondents are studying resulting in lower average incomes
    - the oldest respondents more likely to have mortgage debt rather than unsecured debt

Demographic differences in the individual indicators are presented below in Figures 4 through 8, while the average OID Scores are presented in Table 5.

	Average OID Score		Average OID Score
Full sample	2.06		
Gender		*Ethnicity*	
Men	2.14	NZ European	2.02
Women	2.02	Māori	2.19
Age (years old)		Pasifika	2.12
18-20	2.03	Asian	2.10
21-23	2.00	MELAA	1.85
24-26	2.05	*Housing*	
27-29	2.10	Own home, no mortgage	2.24
30-32	2.27	Own home, mortgage	2.22
33-34	1.78	Renting	1.91
Employment Status		Rent free	2.26
Full-time work	2.01	Other	2.07
Part-time work	2.09		
Studying	2.10		
Not Working	2.35		
Other	1.97		

Table 5: Average over-indebtedness scores and demographic factors

Gender and Over-indebtedness Indicators

Male respondents have a higher average over-indebtedness (OID) score, 2.14, than their female counterparts, who score slightly lower (2.02) than the full sample average of 2.06. Men meet the threshold proportionately more often than women in the sample for three of the five indicators, with the exception being Indicator 3 (previous month's income lower than the NZ median) where women met the threshold more often, and Indicator 4 (3 or more separate contracts) where there was no gender difference.

Male respondents meet 3 of the 5 indicators more often than females, with similar rates of 3+ contracts & female respondents earning less income.

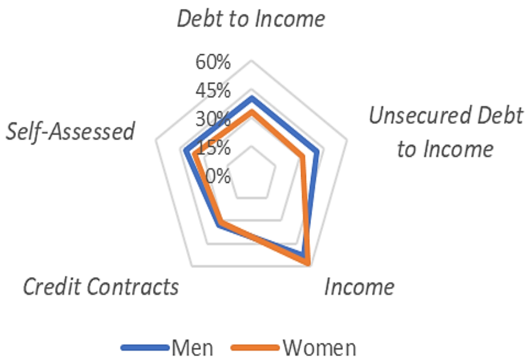


Figure 4: Over-Indebtedness Indicators and Gender (binary)

Age and Over-indebtedness Indicators

The average OID score peaks at 30-32 year olds (2.27), although it is also above the full sample average for the 27-29 year old cohort (2.10 versus 2.06). Despite this, 24-29 year old respondents reported feeling the heaviest debt burden, potentially due to their higher debt use than younger respondents without the higher incomes of older respondents.

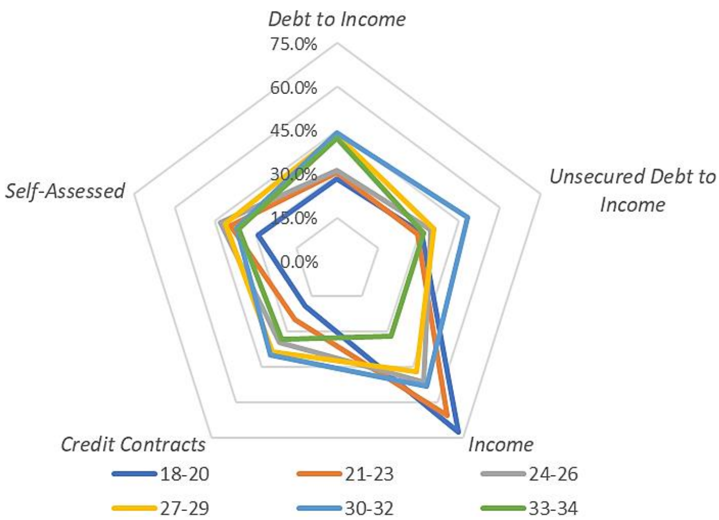


Figure 5: Over-Indebtedness Indicators and Age

Ethnicity and Over-indebtedness Indicators

In line with prior expectations, NZ European respondents had a slightly lower than average OID score (2.02 versus 2.06 for the full sample), while Māori and Pasifika respondents had higher average OID scores (2.19 and 2.12, respectively). Cultural attitudes to debt are likely to be important, especially for Indicator 5, a subjective measure, and require further exploration in future research.

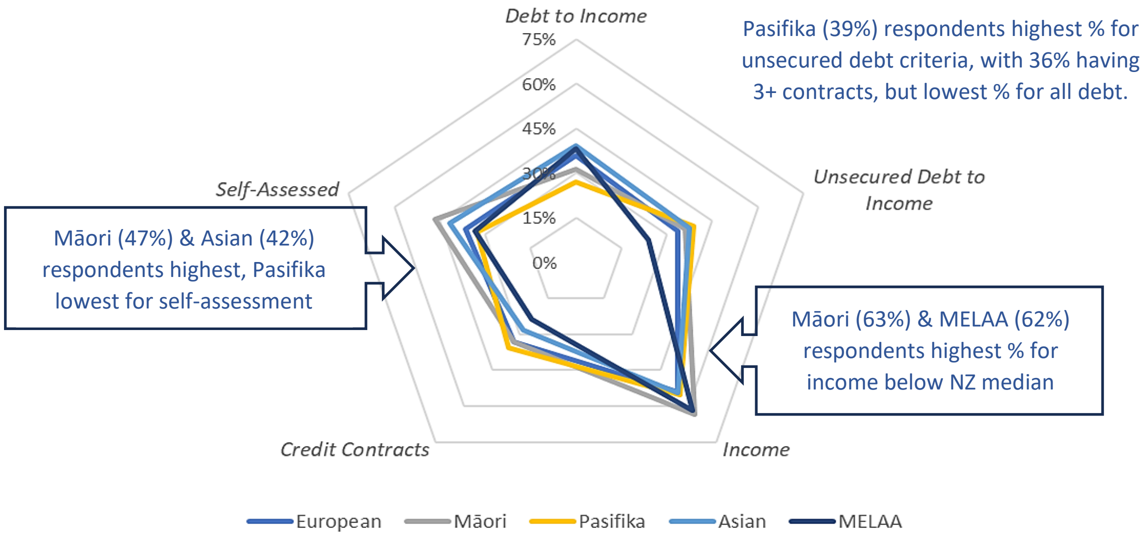


Figure 6: Over-Indebtedness Indicators and Ethnicity

Employment Status and Over-indebtedness Indicators

Unsurprisingly, those respondents not working scored higher than those studying or in paid employment. Those in part-time employment were slightly less likely to meet all the criteria compared with full-time employees except for Indicator 4 (3+ credit contracts) where they were much less likely to meet the criteria and Indicator 3 (previous months' income in relation to median incomes) where they were much more likely to meet the criteria. Part-time employees and students share similar attributes, although those in part-time employment were more likely to meet the debt repayments to income (Indicator 1) and unsecured repayments to income (Indicator 2) criteria.

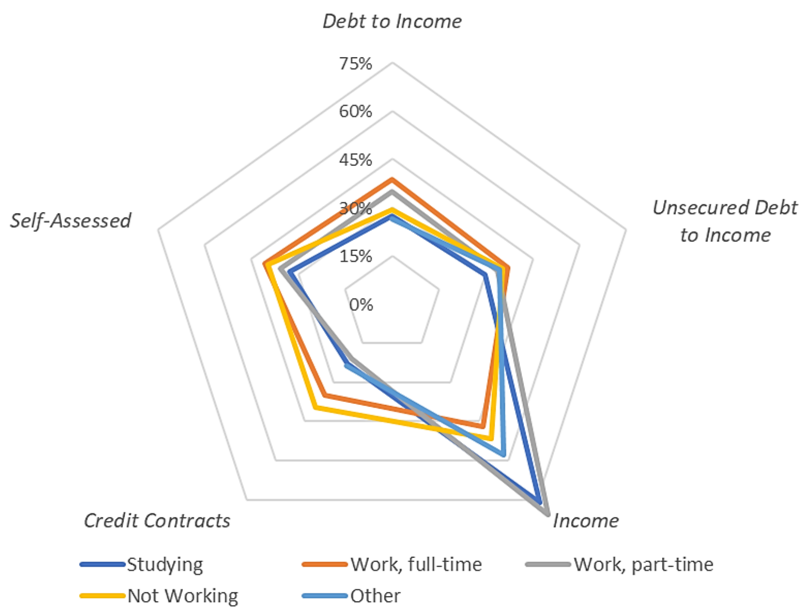


Figure 7: Over-Indebtedness Indicators and Employment Status

Housing Situation and Over-indebtedness Indicators

Housing appears to play a larger role across indicators than other demographic factors, despite the average OID scores being somewhat counterintuitive: those respondents in arguably the best housing situation from an expense perspective have higher average OID scores, *Own home, no mortgage* (2.24) and *Rent-free* (2.26). Those living rent-free tend to be younger (see below), and therefore have lower (and likely unstable) incomes.

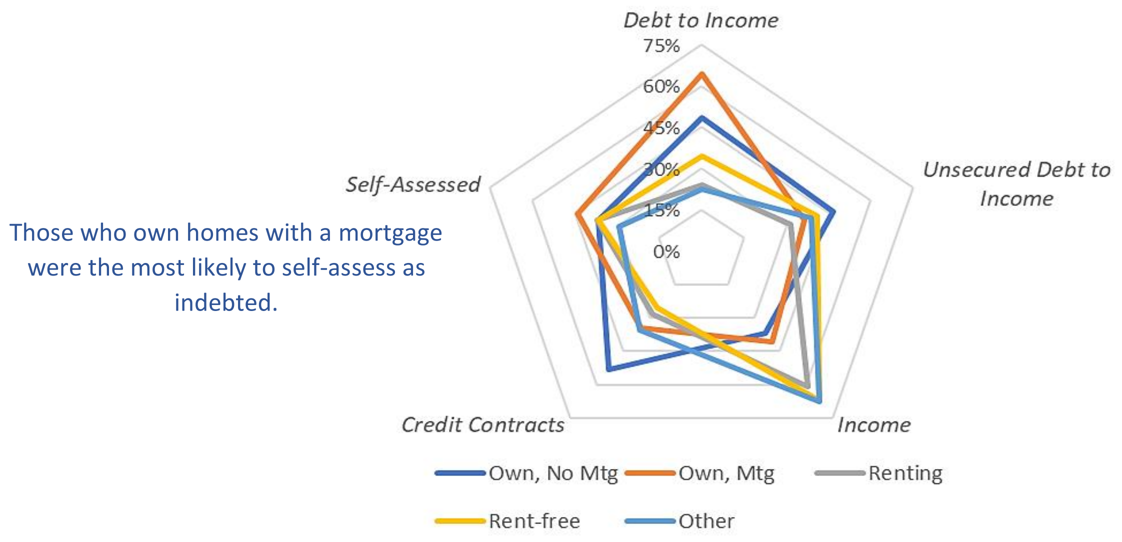


Figure 8: Over-Indebtedness Indicators and Housing

Given the affordability of housing, those with their *own home and a mortgage* also have a high average OID score (2.22).

Who do young adults live with?

Given the relevance of housing to the over-indebtedness indicators, we looked at who the young adults in our sample live with and various demographic factors.

- 18.5% of respondents live with their parents – those respondents had an average age of 22.8 years and a monthly income of $2,775.74
- A futher 5.26% live with other relatives – those respondents are slightly older on average (24.2 years) and report higher average monthly income ($3,232.03)

As expected, there are differences in the average ages of respondents who live with flatmates (24 years) versus living alone (26.3 years), and those who live with their partner but no children (28.9 years) versus with their children and no partner (26.9 years) or with both a partner and children (28.35 years).

Over-indebtedness and financial knowledge

Table 6 displays the measures of financial capability, debt literacy and general money management of those who meet the five indicators of over-indebtedness. We also report the average financial knowledge measures by over-indebtedness score (a scale of 0-5, the sum of a respondent's OID indicators).

There is some evidence of a correlation between financial knowledge and over-indebtedness:

- As OID score increases, financial capability and money management scores fall; debt literacy does not show a clear pattern.
- Moving from 0 to 1 OID indicators results in a noticeable reduction in financial capability and money management scores across most measures.
- The one in six respondents with an OID score of four or five have the lowest financial capability, driven by financial knowledge (objective financial literacy) and confidence (perceived capability).

Indicator 1 – Debt repayments >30% of income (36% of respondents)

- Display slightly higher than average scores across the financial capability components.
- However, show lower debt literacy and money management.

Indicator 2 – Unsecured debt repayments >15% of income (35.6% of respondents)

- Score slightly below average for overall financial capability, driven by their lower-than-average scores for financial behaviours and perceived capability rather than financial knowledge (objective financial literacy).
- Predictably, their money management scores are markedly below the full sample and other indicators.
- Have below-average debt literacy.

Indicator 3 – Previous month's income below NZ median income (55.7% of respondents)

- Those with low incomes also have the lowest scores for three of the four financial capability components, resulting in the lowest overall financial capability score by a considerable margin (9.73 versus 10.56 for the full sample).
- Age is likely a key factor as younger people have lower incomes on average and have consistently been found to have lower financial capability.
- In contrast, these respondents have the highest debt literacy scores, on average, across the indicators.

Indicator 4 – Three or more credit contracts (31.5% of respondents)

- Those displaying this indicator have slightly lower-than-average financial capability scores overall and across all components.
- Their money management scores are amongst the highest across the indicators (albeit below the full sample average for money management).

Indicator 5 – Are your debt repayments a heavy burden? (5-pt scale) (37.8% of respondents)

- Those self-assessing as over-indebted and burdened by their repayments have the lowest debt literacy and second-lowest money management scores, on average.
- Overall financial capability is in line with the full sample average, with relatively high financial knowledge scores (both objective and subjective) and lower financial behaviours and confidence.

Over-indebtedness and behavioural traits

Table 7 displays the behavioural trait average scores of those who meet the five indicators of over-indebtedness. We also report the average scores by over-indebtedness score (a scale of 0-5, the sum of a respondent's OID indicators).

We find a connection between behavioural traits (materialism, impulsivity, present orientation) and debt attitudes with over-indebtedness:

- Respondents with higher materialism, impulsivity and a stronger "living for today" attitude, on average meet more OID indicators.
- Debt tolerance increases up to an OID Score of three, then falls, suggesting over-indebted respondents (OID of 4 or 5) have become less tolerant of debt, on average.

	Objective Fin. Literacy (0-6)	Subjective Fin. Literacy (1-7)	Financial Behaviours (0-4)	Perceived Capability (1-5)	Financial Capability (1.7-20)	Debt Literacy (0-3)	Money Mgmt. (0-45)
Full Sample	2.18	2.65	2.40	3.51	10.56	1.13	32.83
Over-Indebtedness Score (0-5)							
0	2.33	2.96	2.76	3.64	11.47	1.13	34.65
1	2.15	2.61	2.61	3.57	10.76	1.26	33.52
2	2.21	2.59	2.34	3.53	10.51	1.07	33.31
3	2.26	2.58	2.10	3.38	10.20	1.00	31.41
4	2.00	2.68	2.15	3.48	10.12	1.11	31.28
5	2.09	2.63	2.23	3.36	10.04	1.09	31.12
Indicator 1 – Debt repayments >30% of income							
	2.20	2.74	2.46	3.57	10.81	1.06	32.39
Indicator 2 – Unsecured debt repayments >15% of income							
	2.21	2.68	2.24	3.44	10.41	1.08	31.55
Indicator 3 – Previous month's income below NZ median income							
	2.00	2.41	2.05	3.44	9.73	1.16	32.21
Indicator 4 – 3 or more credit contracts							
	2.13	2.60	2.32	3.47	10.33	1.12	32.26
Indicator 5 – Are your debt repayments a heavy burden? (5-pt scale)							
	2.25	2.75	2.31	3.42	10.54	1.02	31.99

Table 6: Financial knowledge measures by over-indebtedness score and indicators

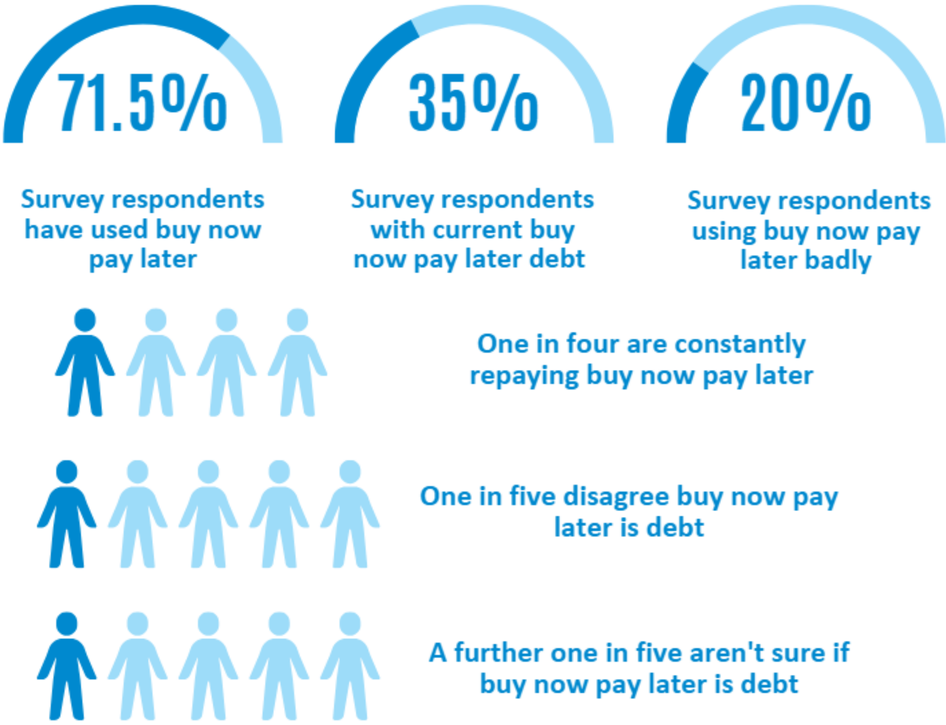
	Materialism (1-5)	Impulsivity (1-5)	Present Orientation (1-5)	Debt Attitudes (1-5)
Full Sample	3.24	2.76	2.84	2.73
Indicator 1 – Debt repayments >30% of income				
	3.35	2.88	2.93	2.89
Indicator 2 – Unsecured debt repayments >15% of income				
	3.35	2.97	3.03	2.87
Indicator 3 – Previous month's income below NZ median income				
	3.20	2.76	2.78	2.67
Indicator 4 – 3 or more credit contracts				
	3.29	3.00	3.05	2.76
Indicator 5 – Are your debt repayments a heavy burden? (5-pt scale)				
	3.40	3.16	3.11	2.76
Over-Indebtedness Score (0-5)				
0	3.00	2.25	2.50	2.59
1	3.12	2.57	2.72	2.64
2	3.33	2.82	2.83	2.70
3	3.28	2.98	2.99	2.94
4	3.43	3.07	3.17	2.89
5	3.31	3.18	3.00	2.56

Table 7: Behavioural traits measures by over-indebtedness score and indicators

4. YOUNG ADULTS AND BUY NOW PAY LATER (BNPL)

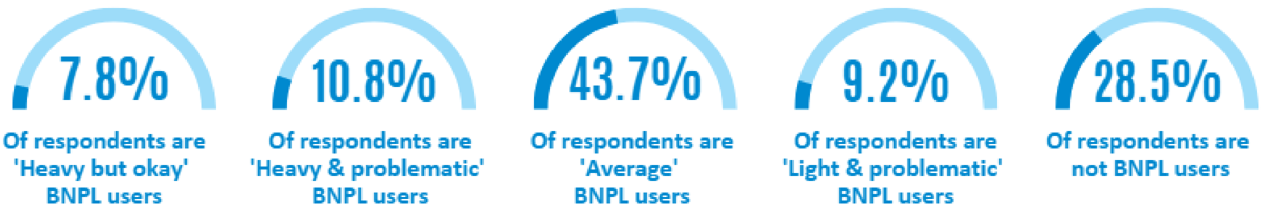
This section provides a summary of young adults' buy now pay later (BNPL) use in Aotearoa New Zealand. The survey assessed the prevalence of young adults' BNPL use and its frequency of use. We also ask how they use the product including why they use BNPL, incurrence of late repayment fees, suspension, and understanding and attitudes toward BNPL. Based on their responses, we identify five distinct BNPL use patterns (named 'heavy but okay', 'heavy and problematic', 'average use', 'light and problematic', and 'no BNPL experience'), and relate these to the four general debt use groups defined in Section 3.2.

Key Takeaways



How BNPL providers describe themselves likely drives increased use. Respondents viewing it as cheaper and having fewer consequences than other debt types tend to use BNPL more heavily. However, the claims of being cheaper and less damaging, especially for heavy users, are debatable.

- Approximately 40% had incurred late fees at some point. This is much higher than the average for all adults reported by BNPL providers, supporting our concerns in relation to young adults.
- One in ten respondents had incurred late fees on at least three occasions.
- Of those users who have incurred late repayment fees, a little over half forgot their repayment, and two in five incurred fees because they were unable to repay – approximately 17% of all BNPL users surveyed.
- A little under 15% of BNPL users reported they had been suspended by a provider.



- Those with no BNPL experience have lower-than-average materialism and present orientation, suggesting these individuals are planning their spending and are less likely to spend on non-essential items.
- Not all BNPL use is problematic, and over half of the survey respondents appear to be using BNPL wisely – potentially exploiting the low-cost convenience and accessibility BNPL platforms offer to those making their repayments on time.
- *Heavy but okay* users will need to alter their BNPL use to avoid moving into the *heavy and problematic* group should they experience an income or expense shock.
- General debt use and BNPL: *Heavy but okay* users are half as likely than the sample average to be classified in the *Mortgagee* or *Debt Avoider* groups identified in Section 3, *heavy and problematic (BNPL)* users are twice as likely to be *Debt Junkies*, and those with no BNPL experience are half as likely to be *Debt Junkies*.

Background: Buy Now Pay Later (BNPL)

Buy now pay later (BNPL) is a recently developed product where a consumer purchases a product and pays it off in equal instalments over a short period of time, typically 6-8 weeks. Since its introduction, BNPL has experienced rapid global growth (400% increase in BNPL sales between 2020 and 2021, see Shevlin, 2021), with 2021 transactions estimated to be more than USD$100 billion (Worldpay, 2022). To date use is concentrated in a few countries and regions including Australia and NZ, where BNPL has proven very popular. Young adults are the largest users of BNPL schemes, making up 60% of BNPL users in Australia (ASIC, 2020).

The newness of BNPL has meant that there is limited, albeit growing, research into how BNPL is being used and its impact on users. The current research done on BNPL use shows that lower financial literacy results in higher BNPL use, with Gerrans, Baur and Lavagna-Slater (2021) finding those with lower financial literacy tend to overstate the benefits of BNPL and perceive lower risks than those with better financial literacy. Other studies of BNPL have found that it is associated with greater retail spending (DiMaggio et al., 2022; deHaan et al., 2022), and impulse buying (Raj, Jasrotia, and Rai, 2023), particularly on fashion items (Fook and McNeill, 2020). Guttman-Kenny et al. (2023) also find BNPL users are using other forms of debt like credit cards to repay their BNPL purchases, and that it is most common in lower-income areas and young adults, the latter of whom are well known to have lower financial literacy and capability. Others, including Schomburgk and Hoffman (2023) consider tactics to reduce BNPL usage in their study on mindfulness, and Powell et al. (2023) find that BNPL users under the age of 25 spent less time engaged in responsible financial behaviours and had lower financial wellbeing than older users.

Finally, Lux and Epps (2022) argue that for regulators, the challenge is to ensure that the convenient and accessible nature of BNPL credit is retained for those who use it wisely while helping those more likely to use it poorly mitigate their risk of becoming over-indebted. They make a few recommendations including greater disclosure of costs and mandating reporting of BNPL to credit reporting agencies as potential options, with their general argument for stricter regulation also made by Johnson, Rodwell and Hendry (2021).

At time of writing, some BNPL providers in NZ were establishing credit rating reporting with Centrix. However, proposed government regulation has proven controversial, and there appears little regulatory appetite for affordability assessments.[6] As a result, unwise BNPL use may lead consumers to become over-indebted in ways they are prevented from with other debt types (see Section 5).

[6] In NZ, the prevailing consumer finance law (Credit Contracts and Consumer Finance Act 2003 and Fair Trading Act 1986, see MBIE [2021]) does not apply to products that are due within two months, and where the debt equals the value of the sale price of the products, i.e., there is no interest cost (at time of purchase). As BNPL providers typically offer finance for less than two months and do not charge interest, rather charging late repayment penalties, under NZ law BNPL is technically not 'consumer finance' or 'debt'.

Operationally BNPL bears strong similarities to a credit card in that it offers short-term cost-free borrowing if the principal is repaid on schedule. In contrast to credit cards, which charge interest on the outstanding amount, BNPL imposes late fees rather than interest. If repayments are late or missed, the user is charged late fees. For example, the most popular provider in NZ, Afterpay, charges an initial $10 late fee, then a further $7 if not paid within 7 days, with total fees per BNPL purchase capped at $10 for purchases below $40 or 25% of the purchase value, up to a maximum of $68. Australian data reports one in five BNPL users miss payments (ASIC, 2020). In the case of late repayments, BNPL can go from being low-cost to a very expensive way to borrow. Despite being marketed as 'fairer' than credit cards, the late fee structure is significantly more costly in the short term. For instance, a user missing a BNPL repayment on a $200 purchase would incur $10 after 24 hours of being late, and an additional $7 seven days later. Assuming the user then paid it off and avoided additional penalties, this represents an 8.5% cost of debt. In contrast, it would take a credit card user nearly four months to incur $17 in interest charges on the same purchase.

Additionally, as BNPL is interest-free and has been marketed as 'not debt' or different to traditional debt types, it is not clear whether young adults view it as credit and may underestimate its consequences (Jones, 2022). However, at its heart BNPL *is* debt. It allows a user to effectively borrow today on the promise of future repayment.

Offsetting the (lack of) regulation is that BNPL debts are usually for relatively short periods of time, and predominantly limited to small amounts. For example, the Afterpay platform requires an upfront payment of 25% of the purchase price followed by three fortnightly payments over the following six weeks. Users are limited to $1500 per transaction and a total of $2000. Additionally, their initial credit limit starts lower and only increases as the borrower builds a track record of on-time repayments. BNPL also does not charge establishment or annual fees. BNPL schemes are user-friendly, convenient, and if used wisely by consumers, can be a low-cost and accessible form of credit.

4.1. Summary of BNPL Use by Young Adults in Aotearoa New Zealand

In line with previous studies, almost three quarters of respondents (71.5%) reported having used BNPL at least once, and 35% had current BNPL debts at the time of the survey. Figure 9 shows how often respondents use BNPL, with 1 in 10 using it one time and a further 1 in 4 who reported using the product on 2 or 3 occasions.

Nearly 1 in 4 respondents are constantly repaying BNPL debts, either using it at least monthly or constantly (most BNPL providers offer repayments over six weeks).

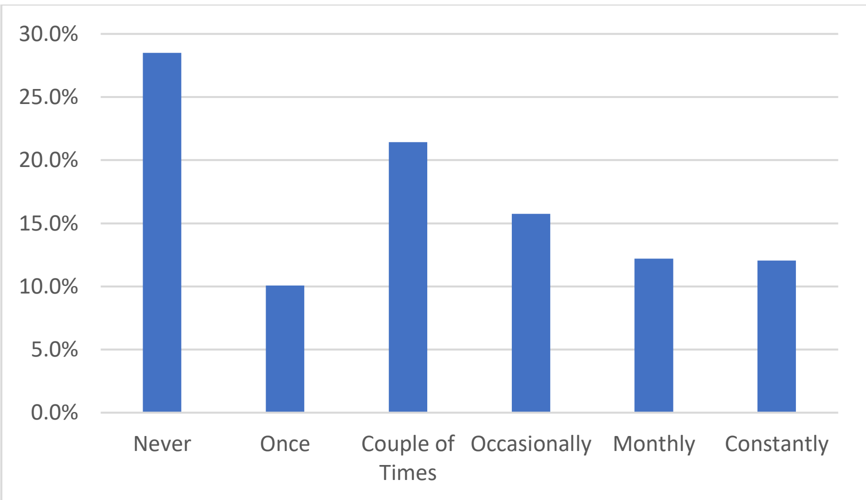


Figure 9: Frequency of Buy Now Pay Later Use (N = 705)

Why young adults use BNPL & what they use it for

Respondents were asked what they purchased with BNPL, i.e., essential items like medicines or food, small discretionary items under $200 in value, or large discretionary items of more than $200. They could select multiple categories, with the results in Figure 10 (lefthand chart).

Of those who have used BNPL, over 20% have used it to buy essential items. For the young adults in our sample, using BNPL to purchase essential items is not necessarily problematic given there is no cost for BNPL use provided repayments are made on time. Indeed, its accessibility and convenience could make it an effective way to manage unexpected emergencies. However, advocates for BNPL regulation and critics of its accessibility cite the debt product's use for essential items as indicative of financial stress, with users becoming caught in a debt cycle of borrowing to simply make ends meet. **Additional research is needed on this topic, as it speaks directly to the case for further regulation of BNPL and is beyond the scope of the current project.**

Most respondents reported using BNPL for small discretionary items, around 70% of those who had used the product, consistent with popular perception of its use. It is worth noting however, that users are initially limited in the amount they can borrow, and this credit limit increases over time.

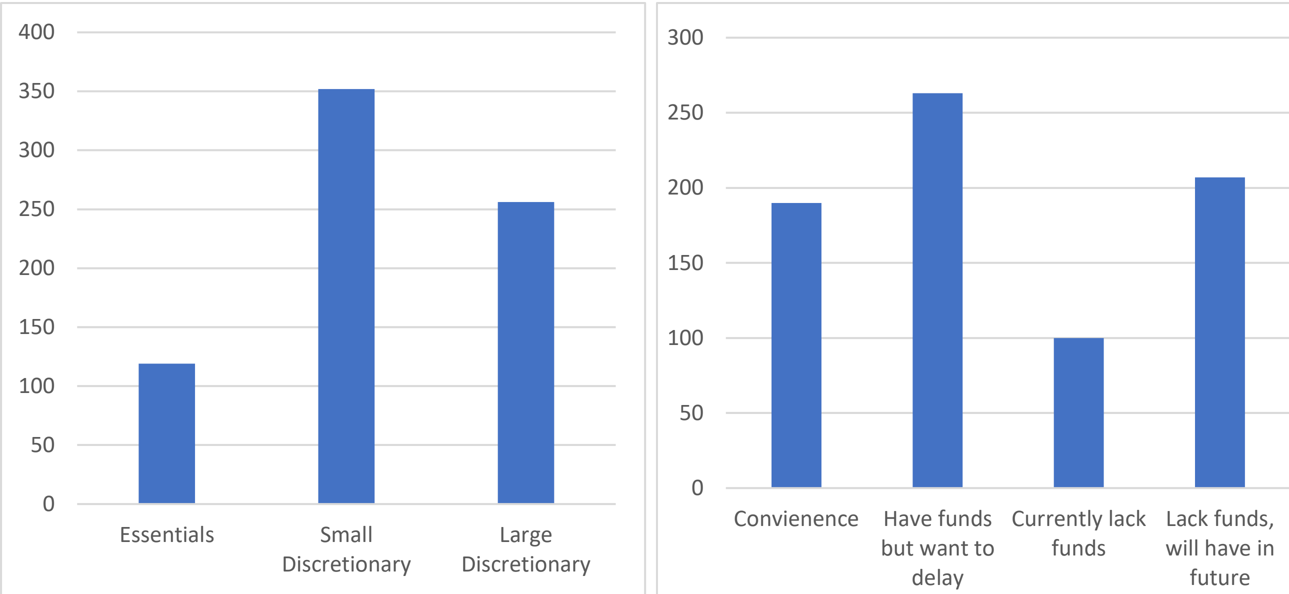


Figure 10: BNPL Purchase Type (left) & Reason for Use (right)

We also asked respondents why they used BNPL, allowing them to select multiple responses, with the results displayed in Figure 10 (righthand chart). Over half of BNPL users reported using BNPL to delay paying the full purchase amount despite having the funds to do so, suggesting smart use given BNPL has no cost provided repayments are made on time. Expenditure smoothing was reported by over 40% of respondents, specifically those stating they currently lacked the funds but expected to have them in the future. For these respondents, however, a cashflow disruption, like an expense or income shock, could result in financial stress. Concerningly, one in five respondents reported using BNPL as they currently lacked the funds to purchase the item – we assume these young adults did not expect to have the funds in the future.

Somewhat surprisingly, given the marketing of BNPL, its ease of use and anecdotal evidence, convenience was only the third most common reason for using the product.

Borrowing to repay BNPL debt

Using another form of debt to repay one's BNPL purchases can be indicative of potential mismanagement of repayment timing and therefore problematic use. Two in five (42.7%) of respondents reported using other borrowing, such as a credit card or other debt (including loaning from family or friends), to repay their BNPL debt.

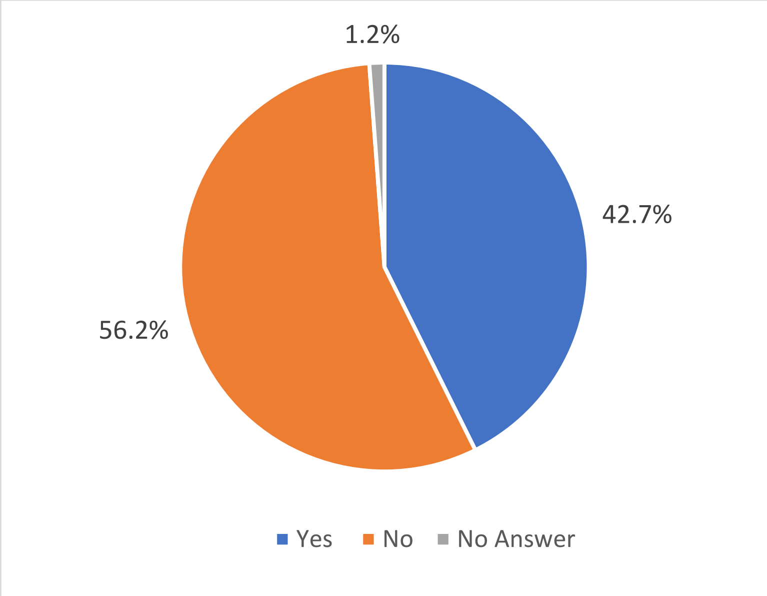


Figure 11: Using other debt types to repay BNPL purchases

Buy Now Pay Later users: Demographic factors

To simplify use frequency, we classified users into three groups: those who have never used BNPL, occasional users (identifying as once, two to three times, or occasionally), and constant users (monthly or constant use). Table 8 provides a summary of demographic factors by use frequency.

	Full Sample	Never	Occasionally	Constant
Women	56.3%	52.0%	55.8%	62.4%
Age (years)	25.8	25.5	25.4	26.8
Ethnicity				
European	64.8%	58.2%	64.3%	73.7%
Māori	20.4%	16.4%	24.0%	18.1%
Pasifika	9.5%	9.0%	9.6%	9.9%
Asian	15.4%	19.9%	14.7%	12.3%
Other	3.0%	5.0%	2.7%	1.2%
Employment Status				
Full-time Employment	59.6%	52.2%	58.6%	70.2%
Part-time Employment	19.0%	23.4%	19.8%	12.3%
Studying	19.2%	25.4%	20.1%	9.9%
Not Working	9.7%	6.0%	10.2%	12.9%
Employment Other	5.4%	8.5%	4.8%	2.9%
Average Income (month)	$3,817	$3,398	$3,916	$4,104

Table 8: BNPL users' demographic factors

Those respondents with no BNPL experience are more likely to be men, identify as Asian, work part-time and/or are studying, and on average earn less than the full sample average. Constant BNPL users are a year older on average (26.8 versus 25.8 for the full sample), work full-time (and thus earn more) or are not working and are more likely to be women and/or NZ European.

4.2. Late Repayment Fees: Overview

For the approximately 60% of BNPL users in our sample that have never incurred late repayment fees, BNPL is effectively cost-less borrowing (Figure 12). An additional 30% of BNPL users had incurred fees once or twice.

However, one in ten BNPL users surveyed had incurred late repayment fees on at least three occasions. For these borrowers, BNPL is an expensive debt product.

Respondents were also asked the most common reason they incurred the late repayment fees (Figure 13). A little over half reported they forgot their repayment, thus incurring a late fee, while two in five reported being unable to repay their BNPL debt when it was due. This equates to around one in six respondents who had used BNPL, a concerningly high number.

It is unclear how providers remind their users to repay, and if they do so prior to the due date, although this appears to be a simple matter for future regulation.

Finally, 74 respondents reported they had been suspended by a BNPL provider for missing payments, just under 15% of our sample who have used BNPL. It is worth noting that, at least until recently, suspension from one BNPL platform does not prevent an individual of signing up with provider. Recent efforts to share BNPL use data among providers via Centrix may alter this.

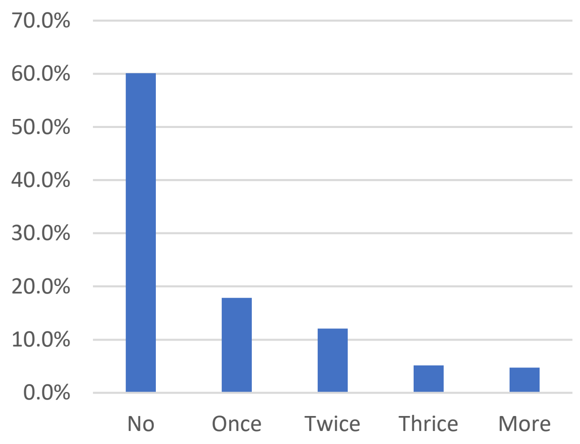


Figure 12: Late repayment fees' frequency

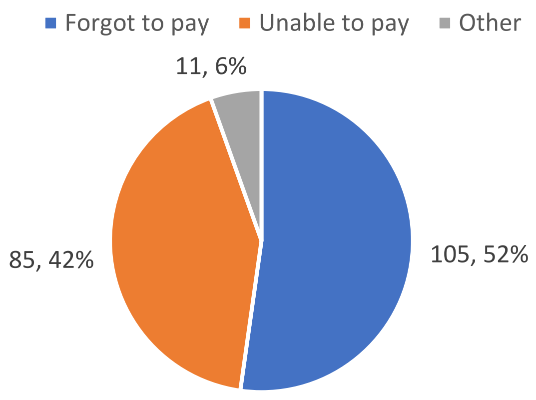


Figure 13: Reason for late repayment fee

Forgoing essentials to repay BNPL debt

Of those respondents who incurred late repayment fees, we also asked if they had forgone essential spending such as paying bills or buying food to cover BNPL repayments. Over half (51.2%) had: one in five of BNPL users in our sample. While the number of respondents is relatively small (*N* = 59 have forgone essential spending sometimes, and *N* = 44 at least half the time) and thus should be treated with caution, future research to explore how borrowers manage essential spending and general money management in relation to their debt repayments is warranted.

4.3. BNPL Understandings and Attitudes

BNPL is currently under a regulatory spotlight due to it falling into a legal 'grey area' as it currently sits outside consumer finance law in many countries, including NZ's CCCFA. By presenting BNPL as either not being debt, or different from traditional forms of debt, BNPL providers potentially impact how users interact with their product. In Figure 14, we report results to three attitudinal statements on the nature of BNPL ("…is a form of debt"), and its perceived consequences ("…is cheaper than…" and "…has fewer consequences").

Over 20% of our respondents disagreed or strongly disagreed with the statement that BNPL is a form of debt, suggesting BNPL providers have been successful in positioning their product as 'not debt'. A further 18.2% were neutral.

On whether it is cheaper than debt types like hire purchases and credit cards, about half of the respondents agreed that BNPL is cheaper. However, the question has some ambiguity as some debt types are low-cost. For instance, credit cards are interest free provided the balance is cleared in full by the required date and hire purchase providers often offer interest free periods. That said, in both cases there are often fees associated with the debt, including establishment or annual fees. Provided a BNPL user repays their purchase on time, the debt product is cheaper than other debt types.

Lastly, a little under half (48.1%) view BNPL as having fewer consequences than other debt types. Given this statement is arguably false, as late BNPL repayment incurs fees and persistent non-repayment may lead to being suspended or 'de-platformed', with the proportionate cost incurred higher relative to other debt types, this result is concerning.

Taken together with the misunderstanding of BNPL as a debt product, young adults may be currently ill-equipped to wisely use the product. In Section 6, we go further and explore whether financial education makes a difference to BNPL use.

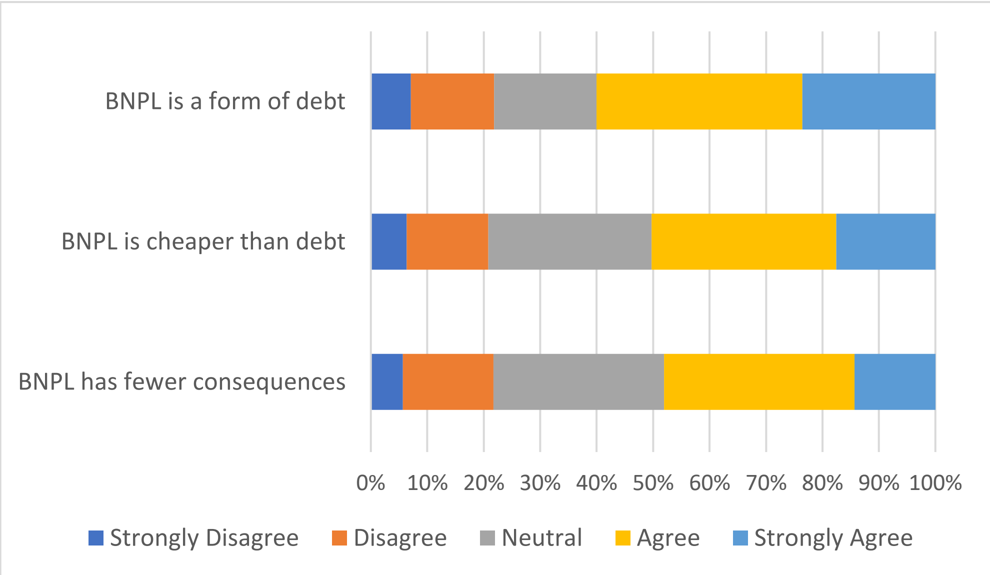


Figure 14: Young adults' understanding and attitudes of BNPL

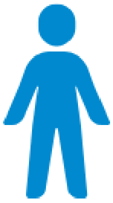
4.4. Patterns of BNPL Use

To further explore how young adults use BNPL, we use a clustering method known as latent class analysis (LCA).[7] The method allows us to find patterns in how respondents use BNPL, and group them by these characteristics. We identify five BNPL user groups in our sample, and label them *Heavy but okay* users, *Heavy and problematic* users, *Light and problematic* users, *Average users*, and *No BNPL experience/abstainers*. Tables

[7] Variables included: frequency of BNPL use (0 = none, 1 = occasional use, 2 = heavy use); items purchased with BNPL (essential, small discretionary, or large discretionary); reason for using BNPL (don't currently have funds but expect to in the future, don't currently have the funds and don't expect to, delay paying the full price even though have the funds available, or convenience); use of debt to repay BNPL debt; how often fees are incurred; reason for incurring fees (forgot to pay, couldn't repay); whether access to BNPL has been suspended; whether users have forgone essential spending due to BNPL repayments; understanding of BNPL based on the three questions about whether it is debt, it is cheaper than other debt, and whether it has fewer consequences.

9 and 10 provide the likelihood a user exhibits various BNPL behaviours. The brief summaries below highlight defining characteristics of each group, with demographic and employment details in Table 11.

We consider some behaviours as indicative of problematic BNPL use, including using other borrowing to repay BNPL, incurring fees (especially if unable to afford repayments rather than forgetfulness), suspension, forgoing essential spending, and using BNPL when having the funds (now or in the future) is uncertain.



***Average* users and *abstainers* collectively represent over 70% of respondents and appear to either use BNPL appropriately or not at all.**

One in five respondents in our sample exhibit *problematic* use patterns, falling into either of the two problem use groups

Heavy but okay users make extensive use of BNPL, however generally do not display poor use behaviours, apart from incurring fees. Even in incurring fees, this group is likely to forget rather than be unable to repay. An income shock or similar may test this group's economic resilience however, given the high percentage of respondents using BNPL on a constant basis.

Unsurprisingly, a respondent's understanding of and attitude toward BNPL is related to their frequency of use, with those who view the product as cheaper and with fewer consequences using it more heavily (i.e., *average* and *heavy* use groups).

Average users (43.7% of respondents)

- Overall display 'wise' BNPL use patterns, including being unlikely to incur late fees (and no more than twice) and therefore have never been suspended, never forgo essential spending to repay their BNPL and are less likely than *problematic* use groups to use BNPL for essentials. This group tends to view BNPL as a cheaper debt form with fewer consequences than other debt types.
- *Average BNPL users* are slightly more likely to be women, less likely to be Māori, and report the highest average monthly income.
- These users have higher average financial capability and money management scores than other respondents, while their debt literacy and tolerance are in line with the full sample.
- On average, these BNPL users are marginally less impulsive and present-orientated than the full sample.

No BNPL experience (28.5% of respondents).

- Lowest percentage of respondents who disagree that BNPL is debt. This group is also reasonably split on whether it is cheaper than other debts and whether it comes with fewer consequences than other debt types.
- Less likely to identify as European or Māori, and more likely Asian, studying and/or working part-time, with an average monthly income approximately $400 less than the full sample.
- Interestingly, non-users score have slightly lower financial capability and money management scores.
- BNPL abstainers are the least present orientated, on average, and nearly 6% less impulsive than the full sample.
- Abstainers, surprisingly, are not less debt tolerant than other groups suggesting their abstention is not driven by an aversion to debt. It appears to be driven by less need or capacity to take on debt.

Heavy and problematic users (10.8% of respondents)

- Our most concerning group of users. If extrapolated to the entire young adult population, this group represents over 100,000 young adults.
- These users have the highest probability of using BNPL for essential spending, debt to repay their BNPL, use due to not having the funds now or in the future, and having incurred fees.

- Two in three *heavy and problematic* users have forgone essential spending to repay BNPL.
- One in three of this group has incurred late repayment fees more than three times, with a greater than 50% probability of incurring fees because they could not afford repayment and being suspended.
- More likely to identify as Māori or Pasifika and less likely to identify as Asian, these users are the oldest group on average, and are more likely to be in full-time employment than studying or working part-time.
- Most tolerant of debt, with below-average debt literacy and money management scores, and highest scores for materialism, impulsivity and living for today (present orientation).

Light and problematic users (9.2% of respondents)

- Our second high-risk group. While they display problematic use patterns, their saving grace is being less likely to use BNPL on a frequent basis.
- Have the second highest probability of using BNPL for essential spending (41.4%) and are less likely to use it for discretionary spending, with a low likelihood of using BNPL for convenience and a high probability of using other debt types to repay their BNPL.
- These BNPL users do not view it as debt (about half disagree it is debt, with a further 25% neutral), but also do not see it as being cheaper nor with fewer consequences compared to other forms of debt. Given this group scores markedly lower than other users for debt literacy and money management, with below-average financial capability, their mixed views on the product are unsurprising.
- Predominantly men and/or identify as Māori, and are less likely to identify as European and/or Pasifika.
- They are the least impulsive users, the youngest cohort (average age 1.3 years lower than the full sample) and earn the least on average ($1,067 per month less than the full sample).

Heavy but okay users (7.8% of respondents)

- Display 'wise' use, typically using BNPL for either convenience or to delay payment, and rarely purchase essential items with it, preferring small discretionary rather than large items.
- *Heavy but okay* users are about half as likely to use debt to repay their BNPL than the full sample.
- They have incurred fees, but typically only once or twice and because they forgot, rather than couldn't repay, and have never been suspended from use.
- Most of these users view BNPL as a cheaper and less risky form of debt, explaining their almost constant use of the product.
- Predominantly women, this group contained more respondents 'not working' (contains stay-at-home parents) and a higher-than-average proportion of 'unemployed but looking for work' respondents, despite reporting higher than average monthly incomes.
- These users have the lowest average financial capability and money management scores but have the highest average debt literacy score and are the least tolerant of debt.
- They exhibit higher-than-average impulsivity and 'live for today' (second only to the *heavy and problematic* use group).

	Full Sample	Heavy but okay	Heavy & problematic	Average	Light & problematic	No BNPL experience
Percentage of Respondents		7.8%	10.8%	43.7%	9.2%	28.5%
Number of Respondents		55	76	308	65	201
Frequency of Use						
None	28.5%	0	0	0	0	100%
Occasional	47.2%	46.1%	48.3%	68.8%	90.5%	0
Heavy	24.3%	53.9%	51.7%	31.2%	9.5%	0
Purchase Type						
Essential items						
No	83.1%	92.4%	56.4%	82.7%	58.6%	100%
Yes	16.9%	7.6%	43.6%	17.3%	41.4%	0
Small Discretionary						
No	50.1%	0	34.0%	31.0%	45.4%	100%
Yes	49.9%	100%	66.0%	69.0%	54.6%	0
Large Discretionary						
No	63.7%	61.7%	27.7%	48.4%	69.5%	100%
Yes	36.3%	38.3%	72.3%	51.6%	30.5%	0
Reason for Use						
Funds in future						
No	70.6%	53.1%	45.2%	64.9%	52.0%	100%
Yes	29.4%	46.9%	54.8%	35.1%	48.0%	0
Delay payment						
No	62.7%	42.8%	56.2%	45.4%	52.9%	100%
Yes	37.3%	57.2%	43.8%	54.6%	47.1%	0
Don't have funds						
No	85.8%	100%	63.1%	81.9%	77.3%	100%
Yes	14.2%	0	36.9%	18.1%	22.7%	0
Convenience						
No	73.0%	45.0%	53.6%	63.1%	82.9%	100%
Yes	27.0%	55.0%	46.4%	36.9%	17.1%	0
Borrow to Repay						
No	69.5%	82.1%	17.3%	68.8%	32.7%	100%
Yes	30.5%	17.9%	82.7%	31.2%	67.3%	0
Buy Now Pay Later Attitudes						
Is a form of debt						
Disagree	21.8%	25.0%	21.0%	19.2%	52.8%	15.4%
Neutral	18.2%	11.8%	11.5%	19.5%	25.6%	17.9%
Agree	60.0%	63.3%	67.5%	61.3%	21.6%	66.7%
Is Cheaper						
Disagree	20.6%	14.2%	8.0%	15.8%	42.4%	27.4%
Neutral	29.8%	14.9%	12.5%	25.7%	45.1%	41.8%
Agree	49.6%	70.9%	79.5%	58.5%	12.5%	30.8%
Fewer Consequences						
Disagree	21.7%	18.4%	9.5%	16.9%	27.6%	32.8%
Neutral	30.2%	8.4%	9.7%	30.1%	58.8%	34.8%
Agree	48.1%	73.2%	80.8%	53.0%	13.7%	32.3%

Table 9: Use Patterns, including purchase type, reason, and attitudes (N = 705)

	Full Sample	Heavy but okay	Heavy & problematic	Average	Light & problematic	No BNPL experience
Percentage of Respondents		7.8%	10.8%	43.7%	9.2%	28.5%
Number of Respondents		55	76	308	65	201
Frequency of Fees						
None	71.5%	0	0	98.6%	0	100%
Once or Twice	21.4%	77.2%	65.7%	1.4%	83.5%	0
More	7.1%	22.8%	34.3%	0	16.5%	0
Reason for incurring fees						
No Fees	73.0%	2.6%	1.5%	100%	6.1%	100%
Forgot	14.9%	74.8%	45.5%	0	46.3%	0
Couldn't Afford	12.1%	22.6%	53.0%	0	47.6%	0
Suspended?						
No	89.5%	100%	42.6%	100%	56.9%	100%
Yes	10.5%	0	57.4%	0	43.1%	0
Forgo Essentials to Repay						
Never	88.7%	88.7%	34.4%	100%	66.6%	100%
Sometimes	8.4%	11.3%	41.0%	0	31.3%	0
Most of the time	3.0%	0	24.5%	0	2.1%	0

Table 10: Use Patterns, including late repayment fees and forgoing essentials (N = 705)

	Full Sample	Heavy but okay	Heavy & problematic	Average	Light & problematic	No BNPL experience
% Women	56.3%	76.4%	50.0%	61.4%	35.9%	52.0%
Age (years)	25.8	25.3	26.7	26.1	24.5	25.5
Ethnicity						
European	64.8%	74.5%	64.5%	68.5%	60.0%	58.2%
Māori	20.4%	36.4%	26.3%	16.2%	32.3%	16.4%
Pasifika	9.5%	12.7%	14.5%	8.4%	7.7%	9.0%
Asian	15.6%	12.7%	10.5%	14.3%	16.9%	19.9%
MELAA	3.0%	3.6%	2.6%	1.6%	3.1%	5.0%
Employment Status						
Full-time Employment	59.6%	60.0%	72.4%	61.7%	56.9%	52.2%
Part-time Employment	19.0%	18.2%	11.8%	17.9%	20.0%	23.4%
Studying	19.1%	20.0%	9.2%	17.2%	20.0%	25.4%
Not Working	9.6%	16.4%	11.8%	10.4%	9.2%	6.0%
Employment Other	5.4%	5.5%	1.3%	3.9%	7.7%	8.5%
Average Income (month)	$3,817	$4,007	$3,941	$4,245	$2,750	$3,398
Financial knowledge						
Financial Capability	10.43	9.05	10.23	11.01	9.44	10.30
Debt Literacy	1.11	1.29	1.00	1.16	0.83	1.14
Money Management	32.70	30.40	30.78	34.70	28.31	32.40
Debt Attitudes	2.73	2.62	2.92	2.72	2.69	2.70
Behavioural traits						
Impulsivity	2.78	3.25	3.51	2.69	2.43	2.62
Present Orientation	2.85	3.24	3.49	2.77	2.92	2.59
Materialism	3.23	3.24	3.64	3.20	3.14	3.14

Table 11: Summary of BNPL user groups

4.5. Joint Use Patterns: Debt and BNPL

The debt use groups[8] (*debt junkies*, *mortgagees*, *debt avoiders*, and *debt experienced*) in Section 3 describe a user's debt choice, rather than quality of use. The BNPL user groups described above are defined by the quality of their BNPL use. Here, we discuss the relationship between general debt and BNPL use patterns, shown in Table 12.

Overall, general debt use groups overlay with BNPL use patterns in line with our expectations – however, the relationship is not necessarily as strong as anticipated. We consider this confirmation that while 20% of BNPL users in our young adult sample concern us, the product itself can be used wisely.

- *Heavy but okay* BNPL users are more likely to *Debt Junkies* (nearly one in four) or *Debt Experienced* (over half).
- *Heavy and problematic* BNPL users are twice as likely to be *Debt Junkies* and are least likely to be *Debt Avoiders* (who avoid most debt types) and have lower-than-average membership to the *Debt Experienced* group.
- *Light and problematic* BNPL users are more likely to be *Debt Junkies* and less likely to be *Debt Avoiders*.
- Those with *no BNPL experience* (abstainers) are half as likely to be *Debt Junkies* than the average respondent, with one in four also being *Debt Avoiders*.

		Buy now pay later use groups				
	Full Sample	Heavy but okay	Heavy and problematic	Average	Light and problematic	No BNPL experience
General debt use groups						
Debt Junkies	16.7%	23.6%	32.9%	16.2%	21.5%	8.0%
Mortgagees	23.4%	12.7%	25.0%	24.4%	20.0%	25.4%
Debt Avoiders	15.3%	7.3%	3.9%	15.6%	6.2%	24.4%
Debt Experienced	44.5%	56.4%	38.2%	43.8%	52.3%	42.3%

Table 12: Joint patterns in debt use, general and buy now pay later (BNPL)

[8] Recall *Debt Junkies* were more likely to have all types of debt than average except for mortgages and student loans; *Mortgagees* were more likely to have a mortgage, and all had a credit card, but less likely to have other debt types; *Debt Avoiders* all had student loans, and almost no other debt; *Debt Experienced* users were average debt users, except for their complete credit cards abstinence.

5. IS BUY NOW PAY LATER (BNPL) A DRIVER OF OVER-INDEBTEDNESS FOR YOUNG ADULTS?

A key criticism of buy now pay later (BNPL) is the lack of affordability and suitability checks required for access to lending, potentially exposing users to over-indebtedness. In this section, we assess respondents' over-indebtedness scores in terms of BNPL use.

Key Takeaways

We find strong evidence over-indebtedness indicators are more prevalent for those who use BNPL poorly.

- Frequent BNPL use is associated with a higher over-indebtedness score, an increase of approximately 20% on average (OID = 1.94 for infrequent use, versus OID of 2.47 for frequent use).
- *Average users* display 'wise' BNPL use patterns, scoring a lower OID average than the full sample (1.80 versus 2.07) and respondents with *no experience* of BNPL (OID = 1.91).
- *Heavy and problematic* users have an average over-indebtedness score over 50% higher than the full sample average (3.13 versus 2.07), and 1.34 indicators higher than the *average users* group. Seven in ten respondents in this group reported their debt is a heavy burden.
- *Heavy but okay* users and *light but problematic* users have slightly higher than average over-indebtedness scores on average, 2.23 and 2.34 respectively.

Background: Potential Relationship Between BNPL and Over-Indebtedness

A key concern related to BNPL is the possibility that it may lead to users becoming over-indebted. Typically, over-indebtedness is driven by either an internal (health concerns or relationship change) or external (unemployment or cost of living increase) shock, turning an indebted individual into an over-indebted one. Consumer finance law requirements to assess debt affordability and borrower suitability are designed to limit consumers from becoming over-indebted by over-borrowing, and to limit the impact of macro-economic shocks. However, BNPL providers fall outside existing consumer protections that prevent consumers from borrowing themselves into an over-indebted state without a later shock.

Offsetting BNPL's potential to lead to over-indebtedness is that BNPL debts are usually for relatively short periods of time, and predominantly limited to small amounts. Credit limit features theoretically reduce a consumer's ability to borrow too much and therefore be unable to repay. However, it is worth noting that with several BNPL providers available and the ability to borrow from multiple BNPL providers at once, individual limits may not be a safeguard against consumer over-indebtedness. BNPL providers in NZ have recently begun to collate and share data on BNPL use, which should help prevent users switching BNPL providers while in arrears. However, this information sharing may not extend to other types of debt.

Despite claims by providers that BNPL is cheaper than other forms of debt and enables consumers to avoid 'debt traps', Australian data reports one in five BNPL users miss payments (ASIC, 2020). For the Kiwi young adults in our study, two in five have incurred late repayment fees (see Section 4.2). These fees can rapidly add up, making purchases considerably more expensive. Ongoing criticism and growing anecdotal evidence suggest BNPL debt also causes harm to low-income individuals or those unable to access safer credit (Good Shepherd New Zealand, 2021).

This is of particular concern for young adults for two reasons:

- Young adults lack financial experience, making them more susceptible to financial mistakes like taking on more debt than they can handle.
- Young adults are more likely to be on low or unstable incomes, making the ability to commit to future repayments less certain.

5.1. Over-Indebtedness and BNPL Use

We consider the average over-indebtedness score based on respondents' answers to the various BNPL use questions, shown in Table 13. Recall we measure over-indebtedness (OID) using five indicators, with respondents scoring 2.06 on average (see Section 3.3) and 71.5% of survey respondents reporting using BNPL at least once, and 35% having a current BNPL debt at the time of the survey (see Section 4).

In line with prior expectations and anecdotal evidence, there appears to be a strong relationship between OID and indications of problematic BNPL use. For example, borrowing to repay BNPL debt is associated with a 50% increase in OID score, while incurring late repayment fees, fee frequency, and incurring fees due to inability to repay have markedly higher average OID scores than the full sample.

Frequent (heavy) BNPL use is associated with a roughly 25% increase in OID score, compared to infrequent or no use at all. Using BNPL to purchase essential items is also associated with a higher OID score, although this likely indicates general over-indebtedness, rather than over-indebtedness driven by BNPL.

Interestingly, the reason for using BNPL does not appear to be a factor driving OID scores – those using the product because they cannot afford their purchase (and are uncertain about having the funds in the future) do not have a higher average OID score. Those using BNPL for convenience have marginally higher scores (2.31 compared to 2.11 for those delaying payment), perhaps indicating that accessibility and ease could be an issue for those more likely to purchase impulsively or with poorer money management skills.

Those respondents disagreeing BNPL is a form of debt tend to have higher OID scores than those who view the product as debt, while agreeing it has fewer consequences is associated with marginally higher OID scores.

	Average OID Score		Average OID Score
Full sample	2.06		
Frequency of Use		*Frequency of Fees*	
None	1.91	None	1.86
Occasional	1.94	Once or twice	2.46
Heavy	2.47	More	3.10
Purchase Type		*Reason for Fees*	
None	1.91	No Fees	1.84
Essentials	2.52	Forgot	2.49
Small discretionary	2.12	Couldn't Afford	2.91
Large discretionary	2.18	*Borrow to Repay*	
Reason for Use		No	1.73
Funds in future	2.19	Yes	2.61
Delay payment	2.11		
Don't have funds	2.23		
Convenience	2.31		

Buy Now Pay Later Attitudes	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
Is a form of debt	2.16	2.14	2.09	2.01	2.06
Is cheaper	1.93	2.14	1.94	2.09	2.22
Fewer consequences	2.00	2.02	1.96	2.13	2.21

Table 13: Average over-indebtedness scores and BNPL use

5.2. Over-Indebtedness and Patterns of BNPL Use

While individual BNPL behaviours can indicate problematic use, considering the overall pattern of use and over-indebtedness is more informative. Recall we identified five groups of BNPL users in Section 4.4: *Heavy but okay* (7.8%), *heavy and problematic* (10.8%), *average users* (43.7%), *light but problematic* (9.2%) and *no experience* (28.5%). Table 14 presents the average OID score and the proportion of respondents meeting individual OID indicators for each group.

	Full Sample	Heavy but okay	Heavy and problematic	Average users	Light and problematic	No BNPL experience
OID Score	2.06	2.23	3.13	1.80	2.34	1.91
OID Score, current BNPL		2.68	3.56	2.11	2.31	-
OID Score, past/non-BNPL		1.39	2.78	1.53	2.34	-
Indicator 1 – Debt repayments >30% of income						
	38.4%	25.0%	56.0%	33.9%	49.2%	38.4%
Indicator 2 – Unsecured debt repayments >15% of income						
	37.9%	36.5%	72.0%	30.4%	49.2%	32.4%
Indicator 3 – Previous month's income below NZ median income						
	59.4%	55.8%	57.3%	54.0%	73.8%	64.9%
Indicator 4 – 3 or more credit contracts						
	31.5%	49.1%	59.2%	30.2%	32.3%	17.9%
Indicator 5 – Are your debt repayments a heavy burden? (5-pt scale)						
	37.9%	54.5%	69.7%	29.2%	32.3%	36.3%

Table 14: Over-indebtedness score and indicators, by BNPL user group

Compared to the full sample, heavy and/or problematic BNPL use – exhibited by a little over a quarter of respondents (27.8%) – is associated with higher average OID scores. Extrapolated to the NZ population, these findings suggest nearly 300,000 young adults aged 18-34 years are either already over-indebted or at increased risk, and that risk is strongly correlated to their BNPL use. For those in the *heavy and problematic* group, the risk of over-indebtedness is most acute: they score over 1 full OID point higher (3.13 versus 2.06).

Most worryingly, seven in ten *heavy and problematic* BNPL users report unsecured debt repayments greater than 15% of their income – double that of the *heavy but okay* group. Additionally, this group's debt exposure is causing them stress; seven in ten *heavy and problematic* BNPL users report their debt repayments are a heavy burden.

Average (BNPL) users represent wiser BNPL use, and thus have the lowest OID score on average. Notably, lower OID scores for this group appear driven by lower-than-average proportions for Indicators 1, 2 and 5 – related to both objective measures of debt repayments relative to income and subjective feeling of burden from one's repayments.

Not using BNPL at all results in slightly higher OID scores than those in the *average user* group, although slightly lower than the full sample average, likely driven by these users being younger and with lower incomes. These respondents tend to be less indebted overall compared to the full sample, although one in three do feel burdened by their repayments.

Heavy but okay respondents appear insulated from their frequent BNPL use by higher incomes, especially in terms of debt repayments to income Indicators 1 and 2. However, over half of this group report their debt repayments are a heavy burden, suggesting they are potentially over-stretching themselves and know it. As stated elsewhere in this report, these BNPL users are vulnerable to an income shock that adversely impacts their ability to afford their borrowing.

In unreported results, we conduct regression analysis to control for the full range of demographic, financial knowledge and behavioural factors that may influence both BNPL use and over-indebtedness. We find that those incurring late repayment fees when using BNPL, irrespective of the frequency of fees, incur fees due to a lack of funds, and those borrowing to repay BNPL are significantly associated with higher OID scores.

5.3. Is BNPL Use Linked to Over-Indebtedness?

Not all BNPL use is problematic, as the product can be at no (direct) cost to consumers if repayments are made on time. However, poor use of BNPL combined with high-frequency use is related to higher over-indebtedness for young adults in NZ.

Specifically, those in our most concerning use group, *heavy and problematic* users, have a 50% increase in the average over-indebtedness score compared to the full sample. This equates to around 100,000 young adults in NZ whose pattern of BNPL use is both problematic and greatly increases their risk of over-indebtedness.

While there are indications that income sufficiency mitigates the risk of over-indebtedness via high-frequency BNPL use, for instance, *heavy but okay* users have higher average incomes than their *heavy and problematic* counterparts, an unexpected economic shock could see resilience rapidly eroded for these users.

If we calculate OID scores for current BNPL users only (Table 14), we find strong support for active BNPL use (rather than any past use) increasing over-indebtedness for young adults using BNPL frequently and/or poorly.

Table 15 presents regression analysis[9] to further investigate the association between BNPL use and over-indebtedness while allowing us to control for demographic, economic, and behavioural factors. We report odds ratios, interpreted as increasing OID if over 1 and decreasing OID if less than 1. Statistical significance is denoted with asterisk(s). In terms of the control variables, we confirm prior results that materialism and impulsivity increase OID scores on average, while higher incomes and not being a debt junkie lower OID scores.

On average, those with a current BNPL debt were more indebted than those without BNPL at the time of the survey (Table 15, Columns 1 & 4), even after controlling for respondents' demographics, income, other debts, financial knowledge, capability, and behavioural traits. Additionally, we find that those using BNPL badly are significantly more likely to have a higher over-indebtedness score (Columns 4 & 5). Further, when we control for current BNPL debt and consider the quality of BNPL use, we find evidence that it is current BNPL debt – rather than past use – that drives over-indebtedness higher.

Finally, we consider if credit card or hire purchase use are also associated with over-indebtedness – interestingly, they do not (no significant relationship found, Columns 2 & 3). Both consumer debt products are similar to BNPL, in that they can be used as low-cost credit wisely. However, credit cards and hire purchases are subject to consumer finance law, implying the protective regulation mitigates their impact on problem debt and over-indebtedness.

[9] As the over-indebtedness score (OID) is ordered 0-5, we use ordered logistic models.

Dependent variable: **Over-indebtedness score**	(1)	(2)	(3)	(4)	(5)
Current BNPL debt	1.483**			1.609**	
	(2.214)			(2.550)	
Credit card debt		0.684			
		(-0.823)			
Hire purchase debt			1.614		
			(1.547)		
Heavy but okay BNPL use				1.006	1.177
				(0.020)	(0.520)
Heavy and problematic				2.970***	3.271***
				(3.780)	(4.160)
Average BNPL use				0.686**	0.784
				(-1.960)	(-1.320)
Light and problematic				0.984	1.030
				(-0.060)	(0.100)
Age	1.014	1.015	1.011	1.011	1.012
	(0.788)	(0.840)	(0.644)	(0.650)	(0.670)
Gender	1.025	1.068	1.080	1.067	1.107
	(0.155)	(0.416)	(0.491)	(0.410)	(0.640)
Financial Capability	1.025	1.018	1.011	1.029	1.021
	(0.838)	(0.626)	(0.384)	(0.970)	(0.730)
Debt Literacy	0.917	0.928	0.932	0.917	0.929
	(-0.855)	(-0.740)	(-0.694)	(-0.850)	(-0.720)
Money Mgmt.	0.980	0.985	0.988	0.988	0.994
	(-1.456)	(-1.111)	(-0.836)	(-0.810)	(-0.440)
Materialism	1.441***	1.417***	1.415***	1.341**	1.309**
	(3.027)	(2.899)	(2.890)	(2.410)	(2.220)
Debt Attitudes	1.128	1.137	1.140	1.103	1.103
	(0.967)	(1.031)	(1.056)	(0.780)	(0.780)
Impulsivity	1.210***	1.230***	1.236***	1.175**	1.200**
	(2.626)	(2.857)	(2.928)	(2.190)	(2.490)
Present Orientation	0.984	0.984	0.985	0.980	0.979
	(-0.217)	(-0.217)	(-0.191)	(-0.270)	(-0.280)
Mortgagee (debt use)	0.249***	0.222***	0.230***	0.271***	0.222***
	(-5.644)	(-6.147)	(-6.067)	(-5.250)	(-6.400)
Debt avoider	0.055***	0.031***	0.045***	0.058***	0.044***
	(-9.326)	(-7.251)	(-10.573)	(-9.050)	(-10.580)
Debt experienced	0.180***	0.121***	0.175***	0.187***	0.171***
	(-7.849)	(-4.793)	(-7.980)	(-7.600)	(-8.080)
Log Income	0.574***	0.580***	0.583***	0.572***	0.576***
	(-10.635)	(-10.503)	(-10.403)	(-10.450)	(-10.390)
Observations	655	655	655	655	655
Pseudo R^2	0.1464	0.1444	0.1452	0.1607	0.1577

Table 15: Regression analysis of over-indebtedness score and debt use, including BNPL

Note: Ordered logit model used, with odds ratios reported and *t*-statistics in parentheses. *No BNPL experience* is the base case against which the other BNPL user groups are compared; general debt user groups are compared to the *debt junkie* group as the base case. *Ethnicity* and *Employment Status* control variables omitted from table for brevity; none were statistically significant. Statistical significance is denoted as *** p<0.01, ** p<0.05, * p<0.1.

6. BUY NOW PAY LATER (BNPL) USE: DOES FINANCIAL EDUCATION MAKE A DIFFERENCE?

In almost any conversation about money and young adults, a comment regarding the need to teach financial literacy in schools is inevitable. In this section, we explore the impact of financial education on young adults' debt use and buy now pay later (BNPL) use, specifically.

Key Takeaways

- BNPL presents challenges to financial education programmes: (1) it is relatively new, and unlikely to have been explicitly covered, and (2) BNPL providers have marketed themselves as 'not debt' or a 'different' type of debt, raising the possibility users do not identify the product as debt and apply their debt-handling strategies.
- We find past financial education experiences do not improve young adults' BNPL use, on average.
- Financially educated respondents showed some signs of 'better' BNPL use, including incurring late fees less often, however, were also less likely to identify BNPL as debt and more likely to borrow to make their BNPL repayments.
- It is possible financial education improves confidence in using financial products, including debt, without imparting the skills required to manage its use wisely.

Background: Financial Education

The goal of financial education is to improve financial well-being, with the argument being that improving financial knowledge leads to better financial behaviours. However, prior studies suggest financial education is less effective for some groups and for changing some behaviours, like debt handling (see e.g., Kaiser and Menkoff, 2017). In Aotearoa New Zealand, considerable ongoing efforts have gone into improving the financial capability and financial decision-making of young adults, including introducing financial education in the national curriculum in 2013.

For financial education to enable financial well-being, we need to observe financial education and financial capability gains resulting in meaningful (positive) changes in financial behaviour. In this section, we explore the impact financial education has on buy now pay later (BNPL) use by asking respondents about their financial education experiences.

Why buy now pay later use?

Sound financial decision-making is even more critical in the case of BNPL. The CCCFA regulations, which require affordability and suitability evaluations of borrowers, shift some financial decision-making responsibility away from the individual and to the lender. A potential borrower who lacks the capacity to make repayments or is already in an over-indebted state would be prevented from worsening their financial position by taking on additional debt. BNPL, not currently covered by the CCCFA, does not offer users this safeguard and requires them to effectively assess their own capacity to repay.

BNPL offers several challenges for current and previous financial education programmes. Along with being relatively new, and thus unlikely to have been covered by financial education programmes explicitly, BNPL providers have either marketed themselves as 'not debt' or alternatively, a 'safer' or 'different' type of debt. There is a possibility that BNPL users won't view the product in the same way as debt, potentially negating education they may have received on effective debt behaviours.

Effective financial education is critical

Theoretically, financial education should equip consumers with the skills and behaviours to take on this expanded decision-making role. Under the current legislative framework, effective financial education is critical to prevent users from misusing BNPL.

6.1. Summary of Financial Education for Young Adults in Aotearoa New Zealand

We asked respondents to select where they had received financial education: primary school, high school, university, workplace, at home, can't remember, or that they'd never received financial education. Table 16 summarises various demographic factors collected, and the financial experiences reported by the young adults surveyed. We report four sources of financial education: school (grouping primary and high school), university, work, and home, also count how many experiences were reported.

Note: As we asked respondents to self-report their past financial education experiences, there is potential for under-reporting if they can't recall their previous financial education. We assume a forgotten financial education experience may not be effective in altering current or recent money and debt behaviours.

Over three-quarters of respondents have had some financial education, with about one in three reporting they received it at school or university. Workplace financial education was the least common (18.9%), and 1 in 4 respondents identified receiving financial education at home. Half of the full sample reported experiencing one source of financial education, and a little under one in ten reported three or more financial education experiences.

Male respondents reported financial education more often than women, 83.3% versus 72.0%, with higher rates across all sources except for the home, which was equal. School-based financial education was most common for our youngest cohort (18-20 year olds), likely indicative of the increasing curriculum attention in recent years, while university and work-based experiences were more common for the eldest respondents.

Pasifika respondents report having financial education more often than any other ethnicities (85.1%), followed by Māori (78.5%). The higher incidence of financial education for Pasifika and Māori respondents appears driven by school and work-based education, while they are less likely to experience financial education at university. Those respondents identifying as SE Asian or MELAA reported experiencing financial education about 6% less than the full sample average, with Asian, SE Asian and MELAA respondents more likely to report university-based financial education.

Those not working have the lowest incidence of financial education, nearly 20% lower than the full sample, while current students unsurprisingly reported a slightly higher rate of financial education (80.0% versus 76.7% for the full sample). Those in the highest and lowest income quartiles reported higher rates of financial education, with those on the lowest incomes reporting two sources of education the most.

6.2. Financial Education, Financial Knowledge, and Behavioural Traits

Table 17 compares the average values for each of the financial knowledge and behaviour variables, based on whether the respondent reported financial education or not, and where that education came from. We are pleased to see that financial education does appear to improve financial capability and this increase is irrespective of the source. Exposure to more sources of financial education is also associated with higher financial capability scores.

It is worth noting however, that this increase is not driven by an increase in objective financial knowledge, but rather by the other three components of financial capability: subjective financial knowledge (confidence), behaviours, and perceived financial capability. We do not report the individual components here for brevity.

Concerningly, but most relevant for our study, we find financial education (irrespective of the source or number of experiences) is associated with *lower* debt literacy. Given the over-indebtedness risk reported earlier in this report, the finding is worrying; poor use of debt is a critical risk for young adults. Alongside an increase in debt tolerance, financially educated respondents view debt more favourably than those without financial education. Our results therefore appear to confirm previous findings that financial education is not improving debt handling.

		Experienced Fin. Ed.		Fin. Ed. Source				Number of Fin. Ed. Experiences		
	N	*No*	*Yes*	*School*	*University*	*Work*	*Home*	*One*	*Two*	*Three +*
Full Sample	705	19.3%	76.7%	34.8%	34.9%	18.9%	25.2%	51.9%	15.3%	9.5%
Gender										
Male	305	13.4%	83.3%	37.4%	38.0%	21.6%	24.9%	57.0%	16.1%	10.2%
Female	393	23.4%	72.0%	32.6%	32.6%	16.8%	24.9%	48.6%	14.8%	8.7%
Age Group										
18-20	116	11.2%	83.6%	50.0%	31.9%	15.5%	21.6%	58.6%	16.4%	8.6%
21-23	148	18.2%	78.4%	35.1%	39.7%	15.5%	27.0%	50.7%	17.6%	10.1%
24-26	128	26.6%	68.8%	28.9%	31.3%	15.6%	20.3%	50.0%	12.5%	6.3%
27-29	104	21.2%	75.0%	26.9%	35.6%	20.2%	24.0%	53.8%	14.4%	6.7%
30-32	143	23.1%	74.1%	35.0%	32.2%	18.2%	30.8%	49.0%	12.6%	12.6%
33-34	66	10.6%	84.8%	30.3%	40.9%	37.9%	27.3%	50.0%	21.2%	13.6%
Ethnicity										
Māori	144	17.4%	78.5%	39.6%	28.4%	25.0%	23.6%	52.8%	16.0%	9.7%
Pakeha	457	20.5%	76.5%	34.2%	33.3%	16.1%	26.9%	53.1%	14.9%	8.6%
Pasifika	67	10.4%	85.1%	44.8%	28.4%	29.9%	25.3%	59.7%	10.4%	14.9%
Asian	69	15.9%	75.4%	33.3%	47.8%	26.1%	30.4%	36.2%	21.7%	17.4%
SE Asian	44	27.3%	70.5%	29.5%	50.0%	11.4%	11.4%	52.2%	9.1%	9.1%
MELAA	21	26.7%	69.33%	32.0%	30.7%	22.7%	25.3%	41.3%	20.0%	8.0%
Employment Status										
Full-time	420	18.6%	77.9%	31.2%	36.0%	22.6%	24.5%	54.2%	13.3%	10.2%
Part-time	134	19.4%	79.1%	38.1%	41.0%	12.7%	24.6%	52.2%	18.7%	8.2%
Studying	135	17.0%	80.0%	40.7%	40.7%	13.3%	30.4%	45.9%	25.9%	8.1%
Not working	68	33.8%	57.4%	47.1%	14.7%	13.2%	26.5%	32.3%	11.8%	13.2%
Other	38	18.4%	71.1%	31.6%	18.4%	25.8%	23.7%	57.9%	7.9%	5.3%
Monthly Income ($)										
1-1,000	176	15.3%	79.5%	38.6%	36.9%	16.5%	25.5%	51.7%	19.9%	8.0%
1,001-3,000	165	25.5%	73.9%	41.8%	30.3%	16.4%	32.1%	43.6%	17.6%	12.7%
3,001-5,000	160	21.3%	73.1%	29.4%	28.8%	25.0%	26.9%	48.8%	14.4%	10.0%
5,001-13,000	161	14.3%	82.6%	28.0%	46.0%	19.3%	18.6%	64.6%	9.9%	8.1%

Table 16: Financial Education (Fin. Ed.) by Demographic and Economic Factors

Financial education, in general, doesn't significantly improve money management skills, although home-based financial education does, as does repeated (3+) exposure (both show over 2-point increases). In terms of personality or behavioural traits, those with financial education are slightly more materialistic, while it is not associated with impulsivity or present orientation.

	Financial Capability	Debt Literacy	Money Mgmt.	Debt Tolerance	Materialism	Impulsivity	Present Orientation
Full Sample	10.43	1.11	32.70	2.73	3.23	2.78	2.85
Panel A: Financial Education Experience							
No	9.17	1.38	31.99	2.49	3.12	2.74	2.79
Yes	10.79	1.06	32.89	2.79	3.26	2.80	2.86
Difference	1.62***	-0.31***	0.90	0.29***	0.14**	0.06	0.07
Panel B: Source of Financial Education Experiences							
School	10.40	1.13	32.79	2.68	3.19	2.75	2.81
(Sch. – No)	1.23***	-0.24***	0.81	0.18***	0.07	0.01	0.03
University	11.20	1.02	32.77	2.90	3.29	2.81	2.90
(Uni. – No)	2.03***	-0.35***	0.78	0.41***	0.17**	0.07	0.12
Work	11.33	1.05	33.37	2.87	3.29	2.83	2.89
(Work – No)	2.16***	-0.32***	1.38	0.38***	0.17**	0.09	0.10
Home	10.76	1.22	34.07	2.61	3.23	2.62	2.66
(Home – No)	1.58***	-0.16*	2.08***	0.12*	0.11	-0.11	-0.13
Panel C: Number of Financial Education Experiences							
One Source	10.68	0.99	32.69	2.83	3.28	2.86	2.91
(One – None)	1.51***	-0.38***	0.70	0.34***	0.16**	0.12	0.13
Two	10.89	1.21	32.40	2.64	3.22	2.67	2.75
(Two – None)	1.72***	-0.16*	0.41	0.15*	0.1	-0.07	-0.04
Three +	11.23	1.21	34.79	2.77	3.23	2.67	2.72
(3+ – None)	2.06***	-0.17	2.81***	0.28***	0.11	-0.06	-0.07

Table 17: Univariate Differences of Financial Knowledge, and Behavioural Traits by Financial Education Experience

Note: Differences between a given *Source* or *Number of Experiences* are provided, using 'No' *Financial Education Experience* as the base case. Statistical significance of differences is denoted as *p < 0.1, **p < 0.05, and ***p < 0.01.

6.3. Does financial education make a difference to Buy Now Pay Later (BNPL) use?

Financial Education and BNPL: Overview

To investigate financial education's impact on BNPL use we examine differences in the survey's BNPL questions for respondents with and without financial education, between the various sources, and the number of financial education experiences, compared to those reporting no financial education at all. Table 18 contains the results, and overall, differences in BNPL use behaviours based on financial education present a mixed picture of its efficacy in improving BNPL use.

We observe no significant change in the frequency of BNPL use between those with and without financial education. However, we do see an 80% increase in incurring fees once or twice for respondents with financial education, versus those without. That said, incurring fees frequently (3+ times) is halved for those with financial education – perhaps confirming the financial knowledge, debt literacy, and debt tolerance findings discussed above. Further, while any source of financial education is responsible for the increase in infrequent fees, only university and home-based financial education reduce frequent fees.

On a positive note, the respondents incurring fees because they were unable to repay, i.e., lacked the funds to do so, is greatly reduced; the reduction is driven by any source except work-based financial education. Further, just one financial education experience is associated with the greatest improvement in respondents incurring fees due to being unable to repay.

In line with higher debt tolerance, we see that financial education appears to increase the percentage of people borrowing to repay their BNPL debts – driven by those experiencing university and work-based education. This may indicate that financial education is reinforcing the importance of meeting repayments, hence the lower occurrence of frequent fees and increased use of other debts to avoid missing repayments. However, young adults needing to use other debt types to repay their BNPL purchases suggests that, in general, financial education is not improving planning around BNPL purchases and subsequent repayments.

Turning to why young adults use BNPL (Table 19), we again find mixed evidence that financial education supports better BNPL use. For example, we observe a reduction in the percentage using BNPL as they currently lack funds but expect to have them in the future, with no effect on the number delaying repayment (when they already have the funds, a wise use) nor using BNPL because they don't have the funds (and don't expect to, the most problematic use). The source does not appear important, except for school-based education having no effect on why a young adult uses BNPL.

Interestingly, those without financial education are more likely to view BNPL as debt. This result appears to be driven by those experiencing either school and university-based financial education and having only one experience. It is possible our younger respondents are less likely to see through providers' marketing campaigns and lack the financial experience to transfer strategies for decision-making from one debt product to another.

Taken together, our results so far suggest that financial education is not resulting in smarter use of BNPL, and may, in fact, be associated with poor use patterns. The picture is not consistently bad, however, with fewer instances of frequent fees and less frequency of incurring fees due to being unable to meet a BNPL repayment.

Patterns of BNPL Use and Financial Education

We next consider how financial education changes the overall pattern of BNPL use, by considering the BNPL User Groups identified in Section 4 (see Table 20). Overall, the impact of financial education on quality of BNPL use is muted, with a reduction in membership in the Average User group – which represents reasonably wise use patterns – and a very slight increase in the light and problematic group, driven by university-based financial education and/or having three or more financial education experiences.

Disappointingly, financial education has no impact on heavy users (either the *heavy but okay* or *heavy and problematic* groups). We find some evidence to suggest having two financial education experiences helps halve frequent, problematic use (4.6% versus 11.0%) but no clear indication of what sources drive this.

In all, the counter-intuitive reduction in the average user group (the savviest use of the BNPL product) for those with financial education concerns us. Financial education fails to increase the number of respondents taking advantage of BNPL benefits (like no interest costs or fees, if repayments are on time) while helping them avoid its pitfalls, like fees, and/or poor repayment planning.

In unreported results, we use regression analysis to control for demographic, financial knowledge, and behavioural factors. Again, we find financial education makes no significant difference to a respondent's overall use of BNPL and in isolated cases, may make use patterns worse.

	Frequency of Use			Frequency of Fees			BNPL Use		
	Never	*Infrequent*	*Frequent*	*Never*	*<3 Times*	*3+ Times*	*Debt to Repay*	*Unable to Repay*	*Suspended**
Full Sample	28.5%	47.2%	24.2%	71.5%	21.4%	7.1%	43.2%	42.3%	36.8%
Panel A: Financial Education Experience									
No	25.0%	49.3%	25.7%	75.7%	13.2%	11.0%	31.4%	60.6%	36.3%
Yes	28.2%	47.9%	23.8%	70.1%	23.8%	6.1%	46.7%	38.3%	37.0%
Difference	3.2%	-1.4%	-1.9%	-5.6%	10.6%***	-4.9%**	15.3%***	-22.3%**	0.7%
Panel B: Source of Financial Education Experiences									
School	28.2%	52.3%	19.2%	70.2%	21.6%	8.2%	39.2%	41.1%	30.1%
(Sch. – No)	3.2%	3.0%	-6.5%	-5.5%	8.4%***	-2.8%	7.8%	-19.5%*	-6.2%
University	27.2%	47.2%	25.6%	69.1%	26.4%	4.5%	54.8%	38.2%	44.7%
(Uni. – No)	2.2%	-2.1%	-0.1%	-6.6%	13.2%**	-6.5%**	23.4%***	-22.4%**	8.4%
Work	27.8%	46.6%	25.6%	63.2%	27.8%	9.0%	47.9%	44.9%	40.8%
(Work – No)	2.8%	-2.7%	-0.1%	-12.5%**	14.6%***	-2.0%	16.5%**	-15.7%	4.5%
Home	33.1%	48.3%	18.5%	72.5%	22.5%	5.0%	33.3%	34.7%	32.7%
(Home – No)	8.1%	-1.0%	-7.2%	-3.2%	9.3%**	-6%**	1.9%	-25.9%**	-3.6%
Panel C: Number of Financial Education Experiences									
One Source	27.0%	46.4%	26.5%	69.4%	24.6%	6.0%	50.2%	37.5%	36.6%
(One – None)	2.0%	-2.9%	0.8%	-6.3%	11.4%***	-5.0%*	18.8%***	-23.1%**	0.3%
Two	32.4%	50.9%	16.7%	75.9%	18.5%	5.6%	38.9%	38.5%	34.6%
(Two – None)	7.4%	1.6%	-9.0%*	0.2%	5.3%	-5.4%	7.5%	-22.1%*	-1.7%
Three +	28.4%	50.7%	20.9%	64.2%	28.4%	7.5%	39.1%	41.7%	41.7%
(3+ – None)	3.4%	1.4%	-4.8%	-11.5%*	15.2%***	-3.5%	7.7%	-18.9%	5.4%

Table 18: Univariate Differences of Buy Now Pay Later Use by Financial Education Experience

Note: Differences between a given *Source* or *Number of Experiences* are provided, using 'No' *Financial Education Experience* as the base case. *Suspended* only applies to those respondents who incurred late repayment fees, *N* = 186. Statistical significance of differences is denoted as *p < 0.1, **p < 0.05, and ***p < 0.01.

	Reasons for BNPL Use				Attitudes toward BNPL		
	Funds In Future	*Delay Payment*	*Don't have funds*	*Convenience*	*BNPL Is Debt*	*BNPL Is Cheaper*	*Fewer Consequences*
Full Sample	29.7%	37.7%	14.3%	27.3%	3.55	3.40	3.35
Panel A: Financial Education Experience							
No	37.8%	40.7%	12.6%	29.6%	3.76	3.58	3.30
Yes	28.2%	37.2%	14.6%	26.5%	3.49	3.37	3.36
Difference	-9.6%**	-3.5%	2.0%	-3.1%	-0.27**	-0.21**	0.06
Panel B: Source of Financial Education Experiences							
School	32.2%	35.6%	15.5%	26.8%	3.50	3.32	3.36
(Sch. – No)	-5.6%	-5.2%	2.9%	-2.9%	-0.26**	-0.26**	0.06
Uni	27.1%	36.9%	12.7%	28.3%	3.48	3.44	3.35
(Uni. – No)	-10.7%**	-3.9%	0.01%	-1.4%	-0.28**	-0.14	0.05
Work	28.0%	36.4%	12.1%	36.4%	3.59	3.46	3.46
(Work – No)	-9.7%*	-4.4%	0.5%	6.7%	-0.18	-0.12	0.16
Home	26.7%	38.6%	12.5%	23.9%	3.67	3.37	3.29
(Home – No)	-11.1%**	-2.1%	0.1%	-5.8%	-0.09	-0.21*	-0.01
Panel C: Number of Financial Education Experiences							
One Source	28.3%	37.6%	15.7%	24.7%	3.40	3.35	3.37
(One – None)	-9.5%**	3.1%	3.1%	4.9%	-0.36***	-0.23**	0.07
Two	26.7%	35.2%	15.2%	29.5%	3.64	3.30	3.26
(Two – None)	-11.1%*	5.5%	2.6%	0.1%	-0.13	-0.28**	-0.04
Three+	30.3%	37.9%	7.6%	31.8%	3.73	3.57	3.46
(3+ – None)	-7.5%	-2.9%	-5.0%	2.2%	-0.03	-0.01	0.16

Table 19: Univariate Differences of BNPL Use (Reasons and Attitudes) by Financial Education

Note: Differences between a given *Source* or *Number of Experiences* are provided, using 'No' *Financial Education Experience* as the base case. Statistical significance of differences is denoted as *p < 0.1, **p < 0.05, and ***p < 0.01.

6.4. Implications for Financial Education

Given the difficulty of changing debt behaviours (see e.g., Kaiser and Menkhoff, 2017), our findings on the impact – or lack thereof – of financial education on BNPL use are perhaps unsurprising. However, in some instances, we find that financially educated respondents exhibit *worse* debt use and behaviours. It is possible a little knowledge is a dangerous thing, and financial education may be providing young adults with an over-inflated sense of their ability to manage debt products wisely. Our results raise questions about the role of financial education in debt handling, specifically newer innovations like BNPL.

Fintech (financial technology) is rapidly changing the financial services landscape with the advent of new investment opportunities, such as cryptocurrencies and NFTs, and payment methods, such as BNPL. Recent work by Okat, Paaso and Pursiainen (2022) suggests consumers view fintech products as different from traditional financial products. In the context of financial education, new products increase the need for consumer understanding of how financial decision-making applies to all financial products – new and old.

It is reasonable to conclude that buy now pay later, along with other new financial products, is not explicitly addressed in financial education programmes. Content needs to adjust to suit fintech innovations, as products like BNPL continually arrive in the financial marketplace. Our results indicate those with financial education experience will be ill-prepared for these new products without programme revisions.

Additionally, financially educated respondents were less likely to view BNPL as debt. In this case, any improvements made for general debt handling will have little impact on BNPL use if young adults do not see the need to apply those skills.

	Heavy but okay	Heavy and problematic	Average users	Light and problematic	No BNPL experience
Full Sample	7.80%	10.80%	43.70%	9.20%	28.50%
Panel A: Financial Education Experience					
No	7.4%	11.0%	50.7%	5.9%	25.0%
Yes	7.9%	11.1%	42.5%	10.2%	28.3%
Difference	0.5%	0.1%	-8.2%*	4.3%	3.3%
Panel B: Source of Financial Education Experiences					
School	9.0%	9.0%	43.3%	10.6%	28.2%
(Sch. – No)	*1.6%*	*-2.0%*	*-7.4%*	*4.7%*	*3.2%*
University	7.7%	11.0%	42.3%	11.8%	27.2%
(Uni. – No)	*0.3%*	*0.0%*	*-8.4%*	*5.9%**	*2.2%*
Work	11.3%	15.0%	36.1%	9.8%	27.8%
(Work – No)	3.9%	4.0%	-14.6%**	3.9%	2.8%
Home	7.9%	7.3%	41.0%	10.7%	33.1%
(Home – No)	0.5%	-3.7%	-9.7%*	4.8%	8.1%
Panel C: Number of Financial Education Experiences					
One Source	7.4%	12.8%	42.9%	9.8%	27.0%
(One – None)	0.0%	1.8%	-7.8%	3.9%	2.0%
Two	9.3%	4.6%	44.4%	9.3%	32.4%
(Two – None)	1.9%	-6.4%*	-6.3%	3.4%	7.4%
Three +	9.0%	11.9%	37.3%	13.4%	28.4%
(3+ – None)	1.6%	0.9%	-13.4%*	7.5%*	3.4%

Table 20: BNPL User Group Summary by Financial Education

Note: Differences between a given *Source* or *Number of Experiences* are provided, using 'No' *Financial Education Experience* as the base case. Statistical significance of differences is denoted as *p < 0.1, **p < 0.05, and ***p < 0.01.

7. CONCLUDING THOUGHTS

Young adults are at acute risk of problem debt use and over-indebtedness, due to consistently lower financial capability than other age groups, inexperience with financial products, and low and unstable incomes. We surveyed 705 young adults aged 18-34 years in Aotearoa New Zealand (NZ) to assess their debt use, including buy now pay later, and to investigate what, how and why young adults borrow. This section contains some brief reflections on future work needed.

DEBT USE

We find that very few of our respondents had no debt at all, although about 16% of the total sample only had student loans. The average young adult has 3.25 active debt contracts and made repayments of $1,868 in the previous month, of which about 62% is unsecured consumer debt. Additionally, these average repayments are roughly 49% of the average monthly income. However, this average is driven by a minority of users who are heavily indebted – the median respondent makes repayments of just $330 in the previous month. The most common debt was student loans, followed by credit cards and buy now pay later. We see roughly equal credit card and current BNPL use, with some evidence of a substitution effect between the two: just under 50% of the sample has one or the other, and only 13% have both.

We identified four types of debt user based on the types of debt they have: 16.7% of our young adults fell into the *Debt Junkies* category – the group we are most concerned about. This group is significantly more likely to be using just about every type of 'bad' debt we measure. Additionally, on average they have 4.4 debt contracts active and are making average repayments that are over double the sample average. Over 75% of these repayments are on consumer debt.

In contrast, 44.5% of our respondents appear to be using debt wisely; our *Debt Experienced* group have less than two active credit contracts on average, and more than half their repayments are going towards secured debts. The smallest group are *Debt Avoiders,* who generally have a student loan and nothing else. There is a possible 'age and stage' effect that helps determine which debt group a user falls into; for example, *Debt Avoiders* are the youngest group. If this is the case, **further research is needed to know how young adults move between the groups – and whether this is impacted by financial capability, knowledge, and education**.

PROBLEM DEBT AND OVER-INDEBTEDNESS

We measured over-indebtedness using five indicators, finding that the average young adult in our sample had an OID score of 2.06, while one in six met at least four of the five criteria. While higher money management skills and financial capability appear to be correlated with lower OID scores, we find no link between debt literacy and over-indebtedness – confirming prior studies in the field that debt handling is difficult to shift through education.

We also confirmed prior findings that behavioural traits like materialism, impulsivity, and "living for today" are linked to over-indebtedness. **To create useful interventions for young adults in NZ, to support positive use of debt and lessen poor use, exploring how behavioural traits and money personalities impact debt use is necessary.**

BUY NOW PAY LATER USE

New financial innovations like BNPL are inevitable. These products can be convenient and beneficial for savvy users but can be fraught for those prone to unwise or excessive use. Consumers become more exposed to changes in financial circumstances, over-indebtedness, and financial hardship, without the initial protections afforded by consumer finance laws when they take on new debt.

As some (minor) regulations come into force, more work will be needed to explore their impact on those most vulnerable to problem BNPL use, those using it heavily and/or badly, estimated to be over a quarter of NZ young adults (27.8%). For these users, their BNPL use is correlated to higher over-indebtedness scores, and for those using BNPL constantly, has a marked impact on their well-being compared to other respondents.

RELEVANCE OF FINANCIAL EDUCATION

We found mixed results for BNPL use when considering financial education experience, with some behaviours (incurring late fees) improving, and others not. Financial education did not increase a respondent's likelihood of using BNPL wisely, and evidence seemed to point to an increase in confidence but not skill in handling the debt product.

Additional research is needed to isolate whether financial education is resulting in poor debt handling on all types of debts, or whether financial education programs are struggling to give respondents transferrable skills to apply in new contexts. We need to better understand why financial education appears to be having negative consequences. This suggests that financial education is having an impact, but not the impact desired. Understanding the pathway from the classroom to practical application could allow us to adjust financial education programs to be more effective.

8. References

Australian Securities & Investments Commission (ASIC). (2020). *Buy now pay later: An industry update* [Report 672]. ASIC. https://download.asic.gov.au/media/5852803/rep672-published-16-november-2020-2.pdf

Białowolski, P., Cwynar, A., Cwynar, W., & Węziak-Białowolska, D. (2020). Consumer debt attitudes: The role of gender, debt knowledge and skills. *International Journal of Consumer Studies*, 44(3), 191-205.

D'Alessio, G. & Lezzi, S. (2013). Household Over-Indebtedness: Definition and Measurement with Italian Data. *Bank of Italy Occasional Papers*, Number 149.

Davydoff, D., Dessart, E., Naacke, G., Jentzsch, N., Figueira, F., Rothemund, M., Mueller, W., Kempson, H.E., Atkinson, A., Finney, A.D. & Anderloni, L. (2008). *Towards a Common Operational European Definition of Over-indebtedness*. CEPSOEE-PFRC, Brussels.

deHaan, E., Kim, J., Lourie, B., & Zhu, C. (2022). Buy Now Pay (Pain?) Later. *Available at SSRN 4230633.*

Di Maggio, M., Katz, J., & Williams, E. (2022). *Buy Now, Pay Later Credit: User Characteristics and Effects on Spending Patterns* (August 23, 2022). Available at SSRN: https://ssrn.com/abstract=4198320 or http://dx.doi.org/10.2139/ssrn.4198320.

Disney, R., Bridges, S., & Gathergood, J. (2008). *Drivers of Over-indebtedness*. Report to the UK Department for Business. Accessed from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.514.9586&rep=rep1&type=pdf.

Fook, L., & McNeill, L. (2020). Click to buy: The impact of retail credit on over-consumption in the online environment. *Sustainability*, 12(18), 7322.

Galicki, C. (2021). *New Zealand Financial Capability Survey 2021*. Te Ara Ahunga Ora | Retirement Commission: Auckland. Accessed from https://assets.retirement.govt.nz/public/Uploads/Research/TAAO-RC-NZ-FinCap-Survey-Report.pdf.

Garðarsdóttir, R. B., & Dittmar, H. (2012). The relationship of materialism to debt and financial well-being: The case of Iceland's perceived prosperity. *Journal of Economic Psychology*, 33(3), 471-481.

Gathergood, J. (2012). Self-control, financial literacy and consumer over-indebtedness. *Journal of Economic Psychology*, 33(3), 590-602.

Gerrans, P., Baur, D. G., & Lavagna-Slater, S. (2021). Fintech and responsibility: Buy-now-pay-later arrangements. *Australian Journal of Management*, 03128962211032448.

Good Shepherd New Zealand. (23 June 2021). *Why we're concerned about 'buy now, pay later' services*. Good Shepherd. https://goodshepherd.org.nz/news-and-media/why-were-concerned-about-buy-now-pay-later-services/.

Goode, J. (2012). Feeding the family when the wolf's at the door: The impact of over-indebtedness on contemporary foodways in low-income families in the UK. *Explorations in the History and Culture of Human Nourishment* 20(1), 8-30.

Guttman-Kenney, B., Firth, C., & Gathergood, J. (2023). Buy now, pay later (BNPL)... on your credit card. *Journal of Behavioral and Experimental Finance*, 37, 100788.

Hunt, C. (2015). Economic implications of high and rising household indebtedness. *Reserve Bank of New Zealand Bulletin*, 78(1), 1-11.

Johnson, D., Rodwell, J., & Hendry, T. (2021). Analyzing the Impacts of Financial Services Regulation to Make the Case That Buy-Now-Pay-Later Regulation Is Failing. *Sustainability*, 13(4), 1992. https://doi.org/10.3390/su13041992.

Jones, R. (6 Jan 2022). Buy now, pay later customers unaware of debt risks, warns Which? *The Guardian* https://www.theguardian.com/money/2022/jan/06/buy-now-pay-later-customers-unaware-of-debt-risks-warns-which

Kaiser, T., & Menkhoff, L. (2017). Does financial education impact financial literacy and financial behavior, and if so, when?. *The World Bank Economic Review*, 31(3), 611-630.

Legge, J., & Heynes, A. (2009). Beyond reasonable debt: A background report on the indebtedness of New Zealand families. *Social Policy Journal of New Zealand* 35: 27-42.

Lux, M., & Epps, B. (2022). *Grow Now, Regulate Later? Regulation urgently needed to support transparency and sustainable growth for Buy-Now, Pay-Later*. M-RCBG Associate Working Paper Series 2022.182 Harvard University, Cambridge, MA.

Ministry of Business, Innovation & Employment (MBIE). (2021). *Buy-Now, Pay-Later: Understanding the triggers of financial hardship and possible options to address them* [Discussion Document]. Ministry of Business, Innovation & Employment: Wellington.

OECD. (2020). *OECD/INFE 2020 International Survey of Adult Financial Literacy.* Accessed from www.oecd.org/financial/education/launchoftheoecdinfeglobalfinancialliteracysurveyreport.htm.

Okat, D., Paaso, M., & Pursiainen, V. (2022). *Trust in Finance and Consumer Fintech Adoption*. Working Paper. Accessed from https://acfr.aut.ac.nz/__data/assets/pdf_file/0005/691160/M-PAASO-691160-Fintech-trust-v32.pdf.

Powell, R., Do, A., Gengatharen, D., Yong, J., & Gengatharen, R. (2023). The relationship between responsible financial behaviours and financial wellbeing: The case of buy-now-pay-later. *Accounting & Finance.*

Raj, V. A., Jasrotia, S. S., & Rai, S. S. (2023). Intensifying materialism through buy-now pay-later (BNPL): examining the dark sides. *International Journal of Bank Marketing*.

Richins, M. L. (2004). The material values scale: measurement properties and development of a short form. *Journal of Consumer Research*, 31(1), 209 – 219.

Richins, M.L. & Dawson, S. (1992). A Consumer Values Orientation for Materialism and Its Measurement: Scale Development and Validation. *Journal of Consumer Research*, 19 (December), 303–16.

Russell, H., Maître, B., & Donnelly, N. (2011). *Financial exclusion and over-indebtedness in Irish households*. Department of Community, Equality & Gaeltacht Affairs and Economic and Social Research Institute.

Schicks, J. (2014). Over-indebtedness in microfinance – an empirical analysis of related factors on the borrower level. *World development*, 54, 301-324.

Schomburgk, L., & Hoffmann, A. (2023). How mindfulness reduces BNPL usage and how that relates to overall well-being. *European Journal of Marketing*, 57(2), 325-359.

Shevlin, R. (7 Sept 2021). Buy now, pay later: The "new" payments trend generating $100 Billion in sales. *Forbes.com*. https://www.forbes.com/sites/ronshevlin/2021/09/07/buy-now-pay-later-the-new-payments-trend-generating-100-billion-in-sales/?sh=17e80b202ffe.

Turunen, E., & Hiilamo, H. (2014). Health effects of indebtedness: a systematic review. *BMC Public Health* 14, 489. https://doi.org/10.1186/1471-2458-14-489.

Vohs, K. D., & Faber, R. J. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. *Journal of Consumer Research*, 33(4), 537-547.

Worldpay. (2022). *The Global Payments Report For Financial Institutions and Merchants*. FIS: Jacksonville, Florida.

Xiao, J. J., & O'Neill, B. (2018). Propensity to plan, financial capability, and financial satisfaction. *International Journal of Consumer Studies*, 42(5), 501-512.

APPENDIX: Data Details

We collected a non-probabilistic[10] sample of 705 young adults (aged 18 to 34 years) in New Zealand, which is broadly representative of New Zealand's population, using an online Qualtrics panel. The survey asked a range of questions covering demographic information, economic and family circumstances, debt use, questions related to over-indebtedness, along with measuring financial capability, debt literacy and behavioural attributes identified in prior literature as influencing over-indebtedness, such as impulsivity and materialism.

This appendix presents the sample demographics, including gender, age, ethnicity, employment status, housing situation, and income. Table A1 below contains full sample information. A comprehensive overview of the financial knowledge and behavioural characteristics included in the survey is available on request from the authors. A summary of the measures we used is in Appendix A2 below.

	N	*%*
Full sample	705	
Gender		
Male	305	43.26
Female	393	55.74
Other/not disclosed	7	0.99
Age group		
18-20	116	16.45
21-23	148	20.99
24-26	128	18.16
27-29	104	14.75
30-32	143	20.28
33-34	66	9.36
Ethnicity		
Māori	144	20.43
Pakeha	457	64.82
Pasifika	67	9.50
Asian	110	15.60
MELAA	21	2.98
Employment status		
Working, full-time	420	59.57
Working, part-time	134	19.01
Studying	135	19.15
Not working	68	9.65
Other	38	5.39
Housing situation		
Renting	356	50.5
Living rent-free	110	15.6
Own home, mortgage	148	21.0
Own home, no mortgage	60	8.5
Other	31	4.4
Monthly income ($)		
1-1,000	176	26.59
1,001-3,000	165	24.92
3,001-5,000	160	24.17
5,001-13,000	161	24.32

Table A1 – Sample demographics

Note: Respondents could select more than one *Ethnicity* (*N* = 799) and *Employment status* (*N* = 795), and *Monthly income ($)* quartiles only include those who reported their income (*N* = 662).

[10] A non-probabilistic sample means we used quotas to select potential participants from the Qualtrics panel.

A1.1 Gender

The sample is slightly over-represented by female respondents, a known issue when dealing with online survey panels. However, women have previously been reported as more likely than men to use buy now pay later (BNPL) platforms (39% vs. 23% in a Finder NZ study, cited in MBIE, 2021). We address BNPL use for our sample in Section 4.

	N	*%*
Men	305	43.26%
Women	393	55.74%
Other/Not Disclosed	7	0.99%

Table A2: Sample gender demographics

A1.2 Age

Age was collected as years old as at their last birthday and grouped into three-year bands, except for 33-34 years (only two years) which was also the smallest group as a result (9.4% of the sample). The 21-23 and 30-32 year groups were the largest, 21% and 20.3% respectively, while there were fewer respondents aged 27-29 years (14.8%). The average age of the full sample is 25.8 years.

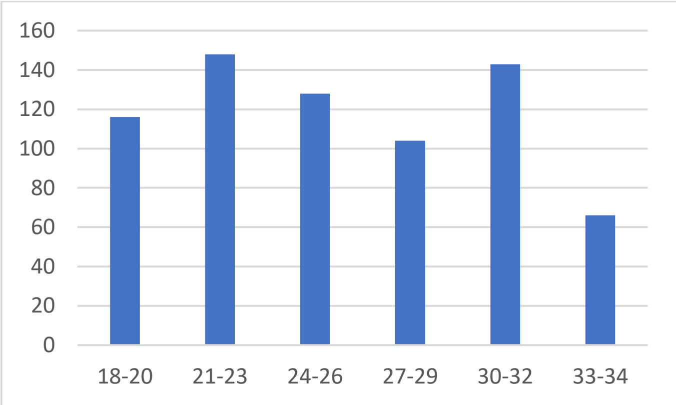


Figure A1: Sample age distribution, age in years

A1.3 Ethnicity

The sample broadly represents the ethnic make-up of Aotearoa New Zealand, albeit with fewer NZ European (Pakeha) respondents (64.8% vs. 70.2% reported by NZ Stats for the 2018 Census) and slight over-representation of Māori (+3.9%), Pasifika (+1.4%), Asian (+0.5%), and MELAA (+1.5%) respondents.

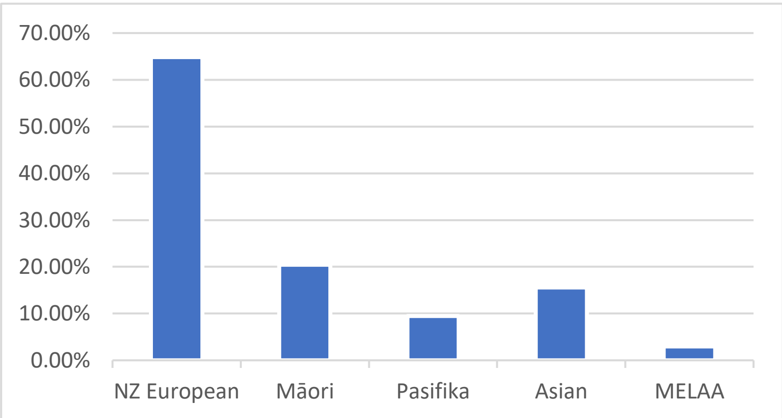


Figure A2: Sample ethnicity, respondents selected as many as applicable (N = 799)

A1.4 Employment Status

Most respondents are in paid employment (78.5%), either part-time or full-time, or studying (19.2%). Of those studying full-time, 38.7% reported being in paid employment and 74.4% of those studying part-time also had paid employment.

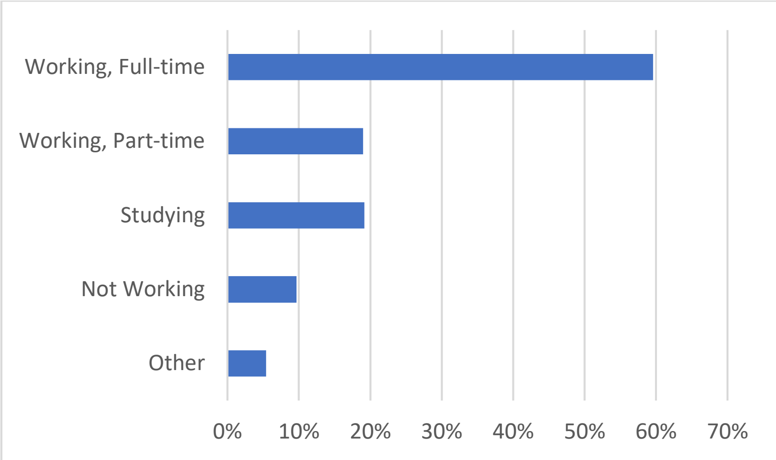


Figure A3: Sample employment status, respondents selected as many as applicable (N = 795)

A1.5 Housing and Living Arrangements

Half of the survey respondents rent, a little under 30% own their own home, and 15.6% live rent-free (the majority with either their parents or other relatives). Nearly 10% describe their situation as owning their own home without a mortgage, a surprisingly high number, suggesting at least some respondents may be conflating their personal arrangements with that of their household (as has been found in other studies).

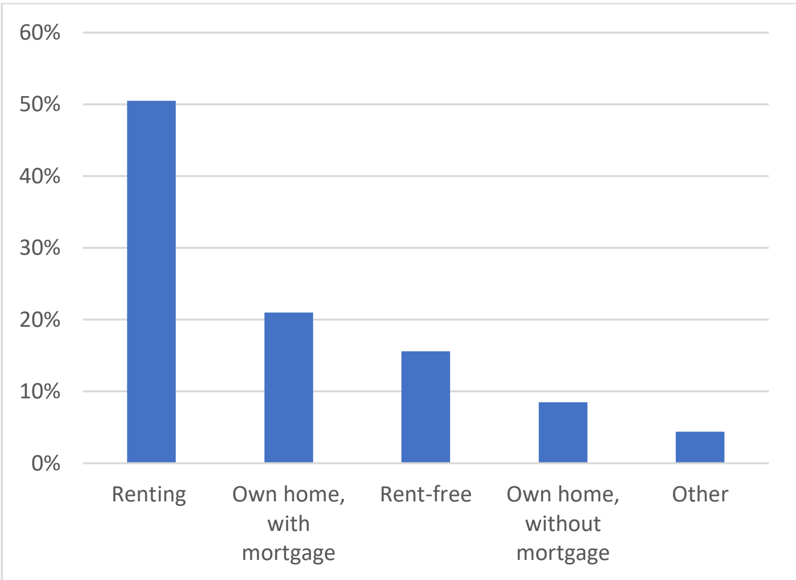


Figure A4: Sample housing arrangements (N = 705)

Almost half of young adults surveyed live with their partner, split evenly between those also with children and those without. A further 3.8% live with their children, but no partner. Unsurprisingly, a little over one in five respondents live with either their parents or other relatives (23.7%), while about half that number are flatting (12.5%). One in ten respondents live alone. Fourteen young adults surveyed did not answer.

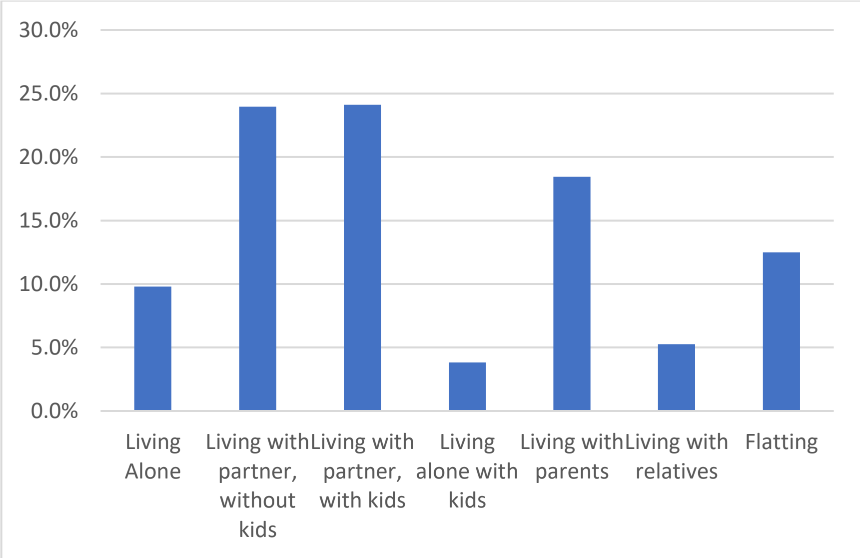


Figure A5: Sample living arrangements (N = 690)

A1.6 Income (monthly, after-tax)

Respondents reported earning $3,817 ($3,000) on average (median) per month after tax, with men reporting a higher average income ($4,104 versus $3,608 for female respondents). The average monthly after-tax income is reported as just over $5,000. This indicates that on average young adults have about 75% of the income, and therefore capability to support debt, of the average Kiwi.

Respondents were asked to include their partner's income where they were living with a significant other:

- Those living without a partner report an average income of $2,888.44 ($2,000 median)
- Those living with a partner report an average income of $4,763.23 ($4,075 median)

A2. Summary of Financial Knowledge and Behavioural Characteristics

Financial literacy, that is, the knowledge of what one is supposed to do with their money, is undoubtedly important and financial education programmes or initiatives often start with the aim of building knowledge. Young adults tend to score lower on financial knowledge tests (OECD 2020; Galicki 2021). However, researchers now understand knowledge is not the only driver of sound financial decision-making. In this appendix, we briefly describe the measures we use throughout the study; a detailed report of the financial knowledge, capability, debt literacy, money management, and behavioural traits of the sample is available on request from the authors.

A2.1 Financial Capability

We use Xiao and O'Neill's (2018) four-component financial capability framework, made up of objective financial literacy (i.e., financial knowledge), subjective financial literacy (i.e., self-perception), self-efficacy (i.e., confidence), and financial behaviours.

Assessing financial knowledge (objective financial literacy)

We ask six questions testing financial concepts, including compound interest, diversification, inflation, interest rates (specifically bonds), mortgages, and time value of money. The average number of correct responses was 2.38 (median of 2), with the distribution of correct answers displayed in Figure A6. Two percent of respondents achieved a perfect score, with one in ten answering all six questions incorrectly.

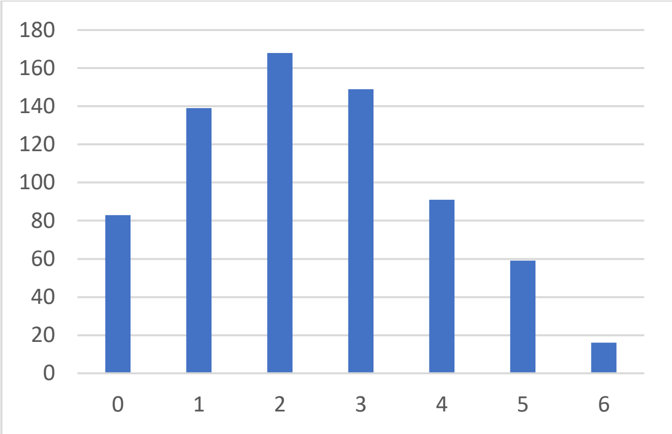


Figure A6: Distribution of correct financial literacy questions

Subjective Financial Literacy

We measure self-assessed financial knowledge based on a seven-point scale, with the average subjective literacy score for the sample (3.6) slightly lower than the median (4), indicating respondents' perception of their own knowledge skews toward below-average literacy. One in three respondents view themselves as having average financial knowledge – given the low scores for objective financial literacy, it is possible respondents over-assess their own and others' financial knowledge.

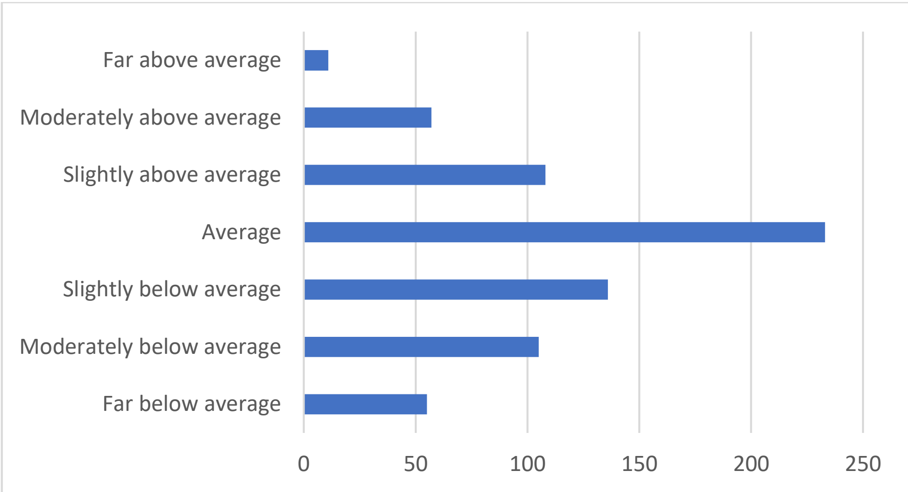


Figure A7: Distribution of subjective financial literacy

Financial Behaviours

Measured as the sum of whether a respondent engages in four advantageous financial behaviours: spending within income, saving, budgeting, and retirement planning. On average, respondents indicated they engaged in 1.9 behaviours (median of 2).

Over half reported they have a budget and spend less than they earn, three in five advise they do have savings, and a third claim they have calculated what they'll need for retirement. The latter is surprisingly high, although may be a consequence of KiwiSaver membership and/or using KiwiSaver to save for a house deposit. The roughly 40% who lack savings is a significant concern.

One in six respondents did not report engaging in any of the four advantageous financial behaviours, while one in eight reported they engage in all four behaviours.

Perceived Financial Capability

Respondents were asked how much they agreed with the statement that "I am good at handling money" on a five-point scale (Strongly disagree to Strongly agree). The average score was 3.5, with a median of 4, and is the highest component of the total financial capability score. Half of the respondents agreed they are good at money handling, with a further 28.7% neutral on the statement.

Overall Financial Capability Score

Each component was scaled to give a maximum component score of 5 (objective knowledge had a maximum of six while financial behaviours had a maximum of 4, then sum across the four items to give a financial capability score between zero and 20. Theoretically, this bounds the total financial capability score between 1.7 and 20 (the minimum scores for subjective financial knowledge and perceived financial capability are 0.7 and 1 respectively, while the minimums for objective knowledge and financial behaviours are 0).

The young adults surveyed scored on average 10.4, with a maximum observed score of 18.75.

A2.2 Debt Literacy

We use Schicks' (2014) method to assess debt literacy, summing the number of correct answers to three questions on debt: interest compounding, time to repay credit cards and evaluating repayment options. Half of the respondents answered one out of three questions correctly, while one in five respondents answered none correctly. On average, respondents answered 1.1 questions correctly (median of 1).

The repayment options question, which implicitly tests time value of money knowledge, was correctly answered by less than 1 in 4 respondents.

A2.3 Money Management

We follow Garðarsdóttir and Dittmar (2012) and ask respondents to assess the degree to which they agreed with a series of statements relating to money management behaviours on a five-point scale. The nine behaviours are:

- Financial awareness
- Debt awareness
- Monitoring financial statements
- Saving for bills
- Repaying bills on time
- Detailed budgeting
- Staying within a budget
- Disorganised finances (reversed to match other behaviours)
- Ability to handle money

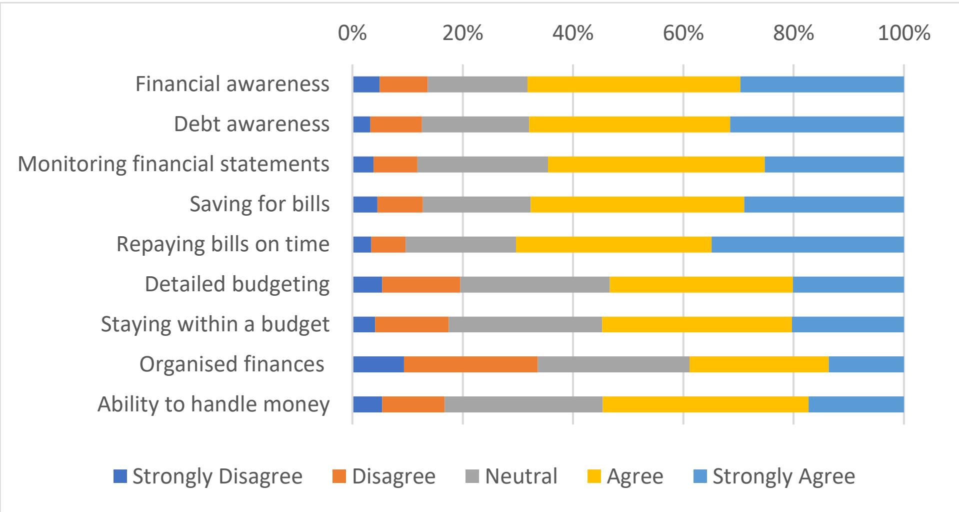


Figure A8: Distribution of Money Management Responses

Most respondents agreed with basic money management statements like repaying bills on time and being aware of what they owe, although were less likely to agree they stayed within their budget or were organised when it came to their finances. The average money management score was 32.7, with a median of 33. Less than 3% of respondents scored a total of 45, the maximum, strongly agreeing with all statements.

A2.4 Debt Attitudes

The debt attitudes measure is based on Białowolski et al. (2020) and uses seven items to assess debt tolerance and aversion to debt. Each item is measured on a five-point Likert scale from strongly disagree to strongly agree, and scores for the final two items, which relate to debt aversion, are reversed for consistency with the debt tolerance statements. We average the respondents' scores across the seven items, with higher scores having a more favourable attitude to debt (i.e., higher tolerance of debt).

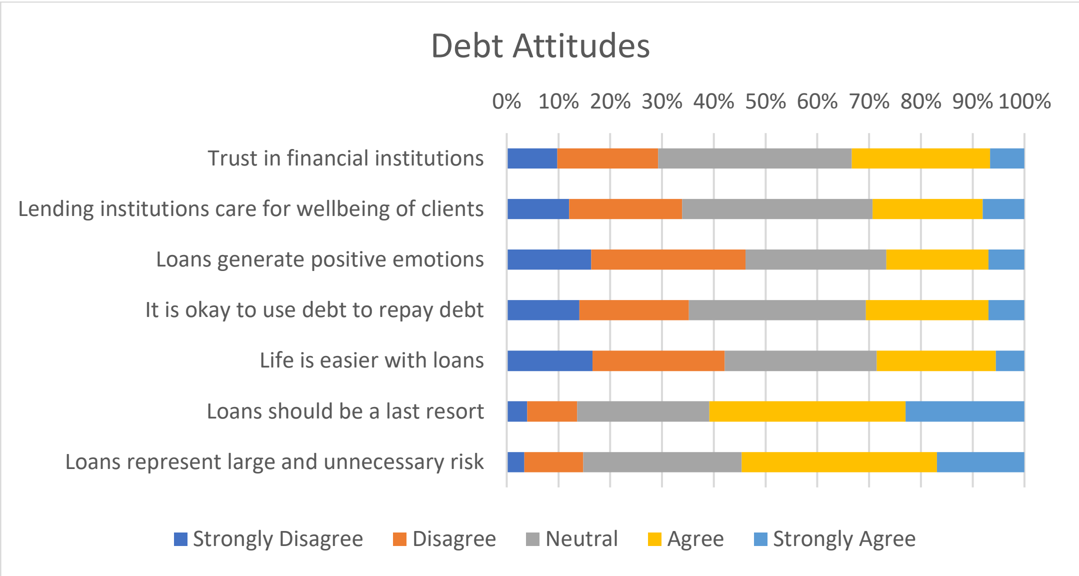


Figure A9: Distribution of Debt Attitude Responses

Respondents tended to display some tolerance of debt (especially using debt to repay other debt), while having somewhat stronger feelings on the risk debt poses (i.e., debt aversion). All items had a relatively large proportion of neutral respondents.

A2.5 Behavioural Traits

Material Values Scale

Materialism is defined as the importance placed on the ownership and acquisition of goods (Richins and Dawson, 1992). More materialistic consumers are thought to consume more and therefore be more prone to debt use. We estimate a short form of the Material Values Scale developed by Richins and Dawson (1992) and presented in Richins (2004) as a short-form scale of six items. Each item is scored on a five-point scale, where a higher score indicates higher materialism. We average the score across the six items.

Respondents were more likely to agree that buying things gives pleasure, and least likely to agree possessions indicate success, luxury appeals to them, and they'd be happier with nicer things.

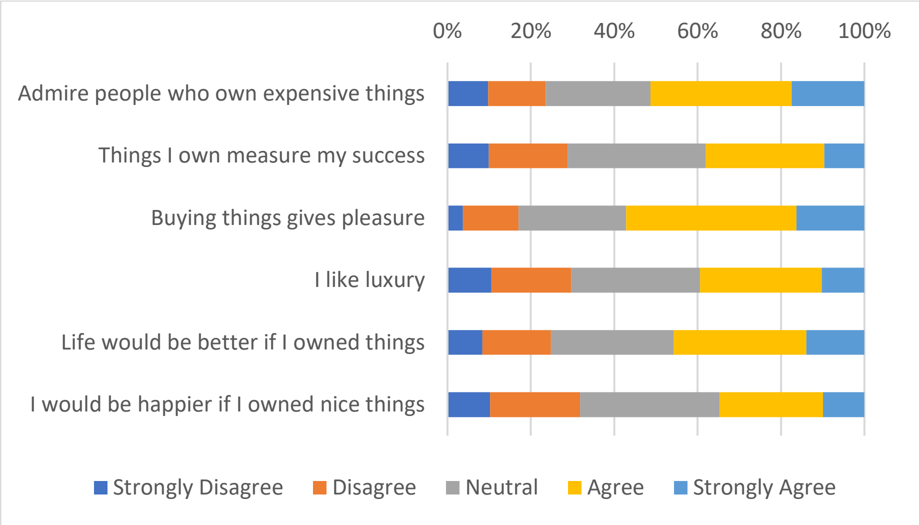


Figure A10: Distribution of Material Value Responses

Impulsivity

Our second behavioural factor is a measure of impulsiveness or lack of self-control. Impulsiveness, i.e., a lack of self-control, has been linked to excess levels of debt and a lower tolerance for delayed gratification (Vohs and Faber, 2007; Gathergood, 2012). We use Gathergood's (2012) impulsiveness measure, a single question asking respondents their agreement with the statement "I am impulsive and tend to buy things even when I can't really afford them" on a five-point scale.

While one in five respondents were neutral, almost 45% disagreed and a third agreed they engaged in impulsive spending.

Present Orientation

The final behavioural factor we assess is present orientation, which measures a respondent's preference for present consumption. Those with a greater present orientation are more likely to use debt. We again use Gathergood's (2012) measure, a single question asking respondents their agreement with the statement "I am prepared to spend now and let the future take care of itself" on a five-point scale.

A third of respondents agreed they let the future take care of itself, one in four were neutral (about 5% higher than the impulsivity measure), and two in five disagreed.