Evaluating the Wesley Mission
In charge of my money
financial literacy program for vulnerable populations
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Executive Summary

In response to Wesley Mission’s 2010 third financial stress report (Wesley Mission, 2010), Wesley Mission developed and launched its financial literacy Program *In Charge of My Money*, targeted at vulnerable populations, in 2011. This report details the first evaluation of the *In Charge of My Money* program, which was conducted by Macquarie University and funded by Financial Literacy Australia. In addition to examining the effectiveness of the program, this research also explored the usefulness of text message reminders (‘nudges’) after the program.

The four main goals of the project were to:
- Ensure the program content is relevant and evidence-based;
- Identify whether the program facilitates sustained improvement in financial behaviours;
- Estimate changes to participant financial knowledge and understanding at the end of the program, and estimate their retention after several months;
- Ascertain how incorporating a practical strategy, such as text message reminders, increases the chance of sustained change.

This program evaluation employed a mixed method approach, collecting both quantitative and qualitative data. Participants were surveyed twice - Time 1 was immediately after the program and Time 2 was approximately five to seven months later. The Time 1 sample included 113 participants and the Time 2 sample included 54 participants. Study participants were drawn from 11 different not-for-profit services in Sydney and surrounding regions addressing drug, alcohol and gambling addictions, homelessness, or family dysfunction. These participants, on average, had very low incomes, with government support being the main source of income for 85%. Text messages affirming positive money behaviours were sent every 3-4 weeks to half the participants to test if reminders (a ‘nudge’ intervention) had an impact on the financial behaviours of participants.
Key Findings

Is the program content relevant and evidence-based?

This evaluation found both quantitative and qualitative evidence that the In Charge of My Money program content and delivery is relevant for some of the most socially and economically disadvantaged and vulnerable people within the Australian population. More specifically:

- Immediately after the program, participants rated the In Charge of My Money program very highly and had few complaints.
- When asked several months later if they would recommend the program to their friends, the majority (85%) said they would recommend it because it was easy to understand, relevant, and helpful. This suggests that the participants’ high opinion of the usefulness and relevance of the program immediately after the program did not decline over time.

The evaluation also found that the program is evidence-based, conforming to what has been identified as best practice in the literature to date. Tentative best practice for financial literacy programs targeted at vulnerable populations involves tailoring the content and delivery style to the particular audience, having the program delivered by trainers who are knowledgeable and non-judgemental, providing the program at an opportune time, adhering to the principles of adult learning, and empowering program attendees. The In Charge of My Money program is consistent with most of these guidelines for best practice:

- The content and delivery style of the program is tailored to the needs of Wesley Mission clients.
- Appropriate practical examples are used during the presentation, and information is often presented as easy to remember “rules of thumb”.
- There is an emphasis on teaching good money management skills and habits, rather than just imparting knowledge.
• The language of the program materials is suitable for Year 10 level of literacy, to ensure it is understandable by those with relatively low levels of literacy.

• In this study the In Charge of My Money program was delivered by well-trained, very financially literate, non-judgemental staff. Feedback from study participants shows that they found the presenters to be knowledgeable, able to answer their questions, helpful and empathic.

• The program is delivered whilst participants are engaged in a service (e.g. seeking employment or housing or other services), thus making the most of what could be considered ‘teachable moments’ in their life.

• The In Charge of My Money program incorporated the principles of adult education into its design, giving program attendees guidance rather than instruction, encouraging questions and discussion, and including worksheets to actively engage attendees.

Does the program facilitate sustained improvement in financial behaviours?

There was evidence that the In Charge of My Money program facilitated sustained improvements in financial behaviours. Statistical analyses revealed a substantial improvement in financial behaviours from before the program to several months after the program. There was sustained improvement over several months in:

• saving behaviour;
• planning behaviour;
• monitoring of expenses; and,
• other money behaviours (e.g. comparing prices to get the best deal, not buying things if unable to afford them).

To give one example, over half of study participants said that the program helped them achieve their financial goals ‘a lot’ or ‘very much’, and only 11% said it did not help at all, indicating that most participants believed that the program assisted them in practical ways several months after the program.
How much knowledge and understanding did participants retain several months after the program?

There was evidence of retention of knowledge and understanding several months after the program. In fact, a very large, statistically significant improvement was found in both general financial knowledge and personal financial knowledge (knowledge about one’s own financial circumstances) from before the program to immediately after the program. These gains were still apparent 5-7 months after the program, demonstrating that study participants retained most of the knowledge they had learnt in the program over several months.

When asked to describe what they remembered about the program 5-7 months later:

- a substantial proportion of participants remembered specific catch phrases, such as “pay yourself first”;
- just over a quarter of participants recalled information about the different types of loans and how to manage debt;
- approximately one quarter remembered specific advice about being mindful of spending habits; and,
- only six participants reported remembering little or nothing from the program.

Considering that over 50% of participants were living in residential rehabilitation centres at the time of completing the program, this high level of knowledge retention from the program is quite impressive.

Did text message reminders increase the chance of sustained change in financial behaviours?

Sending effective text message nudges in this population was challenging because some participants did not have reliable mobile phone access. During the trial only 65% of text
messages were actually received by participants in the ‘nudge’ group. Three participants opted out. This reduced the ‘dosage’ of the intervention for some participants and resulted in a slightly smaller intervention group.

Despite these issues, which would have tended to reduce the impact of the text message intervention, text message nudges still had a significant and positive impact on participants’ financial behaviours (i.e., on money behaviour, saving, monitoring of expenses and emotional spending). However, these benefits did not extend to all outcomes. Text message nudges did not have any effect on participants’ financial strain, or help participants achieve their goals or reduce their debt. Given the difficulties encountered using the nudge intervention in this population, further studies should attempt to replicate these results in a larger, similar population.

Conclusion

This program evaluation found evidence that the In Charge of My Money program is relevant and evidence-based, does facilitate sustained improvement in financial behaviours, and does produce strong retention of financial knowledge and understanding for people facing vulnerabilities including drug, alcohol and gambling addictions, homelessness, and family strain. This study also found text message nudges may increase the chance of sustained change in financial behaviours after the program, but this finding needs to be replicated with a larger sample.
Program Evaluation Background

Wesley Mission has cared for the marginalised and vulnerable for 150 years, and for the past 30 years has delivered financial counselling services. For example, in 2014-2015, Wesley Counselling Services provided financial counselling support for 1,339 people (Wesley Mission, 2015). In 2011, Wesley Mission developed a financial literacy program to complement its financial counselling program. Financial literacy is defined here as the development of knowledge, understanding and skills that assist individuals to make informed judgements and to take effective decisions regarding the use and management of money (Wesley Mission, 2010). Wesley Mission’s financial literacy program, called “In Charge of My Money”, won a Money Smart award in 2013 and has been delivered to over 4,000 people since its inception in August 2011 (Wesley Mission, 2016b).

Although program participants have reported positive outcomes in Wesley Mission’s evaluation questionnaires provided at the end of each session of the program, the program’s efficacy has not been tested empirically. The principal aim of this project was to evaluate the effectiveness of the In Charge of My Money program in vulnerable populations, in terms of sustained positive changes in financial behaviour and knowledge retention in participants.

This program evaluation was funded by Financial Literacy Australia.

Program Evaluation Description & Aims

An external evaluator from Macquarie University, Sydney, was engaged to independently evaluate the effectiveness of the In Charge of My Money program as a financial literacy educational resource. Macquarie University researchers collaborated with Wesley Mission financial literacy program advisors and an academic expert in the field from RMIT University.
in Melbourne, to develop two questionnaires. The first questionnaire was personally administered by one of the Macquarie University researchers to 128 program attendees at the end of the last session of the program at 18 program delivery centres – NGOs from Metropolitan Sydney or regional centres within a 300km radius of the Sydney CBD that assist people with drug, alcohol or gambling addictions, or provide support for the homeless or for at-risk families. Between five to seven months after the program, the same researcher attempted to contact all initial study participants, by telephone or email, asking them to complete a second questionnaire very similar to the first. Sixty-three participants completed the second questionnaire.

In addition to the primary goal of evaluating the effectiveness of the *In Charge of My Money* program in vulnerable populations, this project explored the links between various participant factors and changes in financial behaviours, knowledge and attitudes, in an attempt to identify the reasons why the program might have an impact. Furthermore, participants were asked how they thought the program could be improved, so that Wesley Mission can refine the program to better meet the needs of their target audience. Participants’ feedback on what they thought was most helpful about the program and what they remembered from it several months later also provides useful information regarding the aspects of the program that were most relevant to these vulnerable populations. Finally, the project investigated whether or not regular text message reminders, also referred to as “nudges”, would increase the chance of long-term improvements in financial behaviours.

The outcomes of this project are intended to assist the long-term sustainability of financial literacy education for vulnerable populations. It is hoped that the learnings will also be relevant to other financial literacy programs targeting a wider audience. This project may also assist the financial literacy sector through increased access to evidence-based financial literacy educational materials.

This report will cover the following:

- A literature review of best practice for financial literacy programs targeted at vulnerable populations.
• A review of how text message nudges may be able to support improvements in financial behaviour.
• The background and description of the In Charge of My Money program.
• The aims of the In Charge of My Money program evaluation, key factors and outcomes, and the participants’ demographics.
• The program evaluation research methodology.
• The results from the program evaluation, including participants’ engagement with, feedback on, and knowledge retention from, the program.
• Change in financial behaviours, knowledge, attitudes, self-efficacy and emotional spending, several months after the program.
• The effectiveness of text message nudges.
• A summary of the key findings from the project and their implications.
• The limitations of the study.
• Suggestions for future research.
• Conclusion.
Best practice for financial literacy programs targeted at vulnerable populations

Only a decade ago there was limited interest in the topic of financial literacy (Miller, Reichelstein, Salas, & Zia, 2014). Now, however, there are initiatives to increase financial literacy levels world-wide (Blue & Brimble, 2014). Financial literacy can be defined as a combination of awareness, knowledge, skills, attitudes, and behaviours necessary to effectively manage one’s money and make sound financial decisions (Atkinson & Messy, 2011; Collins & Holden, 2014). Financial literacy, therefore, is not simply about knowledge and understanding, but implies the ability to translate financial knowledge into effective financial decisions and behaviours (Collins & Holden, 2014; Consumer Financial Protection Bureau, 2015). The need for individuals to have greater financial literacy has grown for a number of reasons. First, there has been a shift in many developed countries from state to individual responsibility to provide adequate resources for old age and to provide financial security during sickness, disability or unemployment (Atkinson, McKay, Collard, & Kempson, 2007). Furthermore, financial products and markets have become increasingly complex, and there has been widespread growth of alternative and predatory financial services (Blue & Brimble, 2014). In addition, there is evidence of low levels of financial literacy globally (Brimble & Blue, 2013).

Although financial literacy focuses on individual responsibility to use resources effectively, it is important to remember that a person’s financial well-being is not solely determined by their ability to manage their money and make sound financial decisions. Financial well-being can be defined as having control over day-to-day finances, having the capacity to absorb a financial shock, tracking to meet one’s financial goals, and having the financial freedom to make choices that allow a person to enjoy life (Consumer Financial Protection Bureau, 2015). There are many factors beyond an individual’s control in achieving financial well-being, such as the global and national economic environment, family wealth and
connections, access to education, income, and geographic location. These factors create a context that either provides or limits an individual’s opportunities to put their financial literacy into practice (Consumer Financial Protection Bureau, 2015). Therefore, the goal of financial literacy education is to help people make the best of their situation given their current financial circumstances (Consumer Financial Protection Bureau, 2015). Promoting financial literacy is not intended to imply that individuals are completely responsible for their own financial situations, or that financial literacy can eliminate poverty, since so much is outside the control of individuals. In this monetised society, financial literacy education should be seen as a basic right, like the right to basic literacy and numeracy education, so that everyone has the knowledge and skills to act in their best financial interests, given their background and context (Johnson & Sherraden, 2007).

Australia reflects the world-wide phenomenon of the recognition of low levels of financial literacy in the general population and the need to improve financial literacy levels. The Australian and New Zealand Bank (ANZ) surveys from 2003 and 2010 showed that there is a substantial deficiency in the level of financial literacy amongst many Australians (Taylor & Wagland, 2013). The “Financial Resilience in Australia 2015” report, based on a representative sample of almost 1,500 Australians, found that almost half of the population (48%) reported that they only have a ‘basic understanding’ of financial products and services and more than 9% reported that they had ‘no understanding’ (Muir et al., 2016). Recent Australian social policy has prioritised financial literacy, with a focus on money management education, as a way to address financial stress and over-indebtedness (Brackertz, 2014). The Financial Literacy Taskforce and the Financial Literacy Foundation were established in 2004, and in 2011 the National Financial Literacy Strategy was released by the government regulator, Australian Securities and Investments Commission (ASIC) (Brackertz, 2014).

A key strategy to improve low levels of financial literacy in Australia and world-wide is through adult financial literacy programs. These programs usually address personal finance topics such as budgeting, saving, and credit management (Collins & O’Rourke, 2012; Fox & Bartholomae, 2008). Financial education for adults is usually delivered through community
or employer based programs that provide attendees with information, on the assumption that this knowledge will result in improvements in financial behaviours (Collins & Holden, 2014). Although there has been a proliferation of financial literacy programs, workshops, and seminars, little research has measured the impact and usefulness of these programs (Miller et al., 2014; Vyvyan, Blue, & Brimble, 2014). There are few financial literacy programs that have been evaluated with robust research designs that demonstrate if and how improved financial knowledge influences financial behaviours later in life, with a paucity of studies measuring behavioural changes over a period of time (Collins & Holden, 2014). Positive correlations have been found between financial knowledge and financial practices, but very little research has been conducted using experimental designs that prove that the altered behaviours have been caused by the program and no other factors (Collins & Holden, 2014; Schuchardt et al., 2009). In addition, the literature suggests that combining financial education with access to appropriate financial products and services is the most effective way to help people achieve financial well-being (Birkenmaier & Maynard, 2016). Without access to financial products, and without the opportunity to save due to low or unpredictable disposable income, the ability of financial literacy programs to produce greater financial security is limited (Birkenmaier & Maynard, 2016; Kempson & Finney, 2009).

Of the financial literacy program evaluations that have been conducted, not all have demonstrated program effectiveness. Even programs that are popular and appear to be helpful may be found to have no effect, or insufficient effect, to justify the expenditure of resources, when tested (Reich & Berman, 2015). A meta-analysis of the literature found that more than 140 of the 188 studies indicated that financial education can be helpful in improving financial outcomes. However, approximately 40 of the studies cited either no impact or only a modest impact from the intervention that may not be justified relative to the cost of the program (Miller et al., 2014). This meta-analysis concluded that financial education can consistently improve some outcomes, such as savings and record keeping behaviour, but does less well in preventing outcomes such as loan default (Miller et al., 2014). Another meta-analysis showed that studies tend to overstate the effects of financial
education on subsequent behaviour, with only 0.1% of the variance in financial behaviour being attributable to financial education interventions (Fernandes, Lynch, & Netemeyer, 2014). Therefore, there are major challenges to drawing conclusions about the effectiveness of financial literacy education and it remains unclear if and how increased financial knowledge translates into more positive financial behaviours (Collins & Holden, 2014; Fox, Bartholomae, & Trombitas, 2012; Schuchardt et al., 2009). The OECD concluded in 2013 that there is a possible causal link between financial education and outcomes, and that improved levels of financial literacy can lead to positive behaviour change [italics added] (Brimble & Blue, 2013).

Financial literacy education is believed to be particularly important for low-income populations. This is not to say, however, that households living on low-incomes are responsible for the financial hardship they experience. Indeed, it has been suggested that the focus of policies should be to directly address societal inequality rather than focusing on the financial incompetence of the poor (Johnson & Sherraden, 2007).

As discussed previously, many factors contributing to financial well-being are outside an individual’s control, limiting their opportunities to become financially secure, despite their level of financial literacy. Higher income and education are likely to protect individuals against severe financial problems since they provide a buffer and greater options in times of economic downturn or personal difficulties (von Stumm, Fenton O’Creevy, & Furnham, 2013).

Nevertheless, the research does show an association between low-incomes and low financial literacy. For example, general population surveys in the U.S. have found that people with low incomes are less financially knowledgeable than those with higher incomes (Anderson, Zhan, & Scott, 2005). Those with low incomes are also more susceptible to payday loans, pawning, and accessing other ‘predatory’ lenders that charge much higher
interest rates than major lenders such as banks (Anderson et al., 2005). Studies have also shown that those on low-incomes are less likely to save money (Anderson et al., 2005).

In Australia, the 2003 ANZ financial literacy study found that the lowest levels of financial literacy were associated with those having low education qualification (Year 10 or less), those categorised as ‘unskilled workers’, and those with less than $20,000 in household income (Taylor & Wagland, 2013). This finding was repeated in the 2005 and 2008 ANZ surveys (Taylor & Wagland, 2013). Similarly, the Financial Resilience in Australia 2015 report (Muir et al., 2016) found that most people with very low or low economic resources also have low or very low levels of financial knowledge and behaviour. Given that Australia’s Newstart Allowance is the lowest unemployment payment in the OECD, at just 40% of a low full-time wage after tax, being able to manage a very small income well is crucial for survival (Brackertz, 2014). In fact, some research has shown that financial literacy programs are particularly effective for low-income and very disadvantaged participants, since even small changes in financial behaviours can have large impacts on their lives (Fry, Mihajilo, Russell, & Brooks, 2008; Grinstein-Weiss, Guo, Reinertson, & Russell, 2015).

Although a number of financial education programs have been developed globally to address the financial literacy needs of low-income populations, there is little research measuring the effectiveness of these programs (Lyons, Chang, & Scherpf, 2006). One of the main reasons for the sparse amount of research is that vulnerable population groups may be more difficult to track, they typically have high program dropout rates and low survey response rates (Collins, 2010; Lyons et al., 2006). For example, a national study of the effectiveness of financial counselling in Australia only had a 5.3% response rate to the 1,200 questionnaires sent out to 48 sites in each state and territory (Brackertz, 2014). The author considered this a success due to the difficulties inherent in engaging the most disadvantaged members of society (Brackertz, 2014).
Additionally, most programs targeting low-income populations are operated by non-profit organisations with limited resources and research capability (Lyons et al., 2006). Furthermore, it has been argued that measures of ‘success’ of financial literacy programs targeted at low-income clientele need to be realistic and recognise that some financial behaviours cannot change because their extenuating financial circumstances have not changed (Lyons et al., 2006). For example, some program attendees are unable to save as their income is insufficient to meet even their basic expenses (Brackertz, 2014; Loibl, Jones, Haisley, & Loewenstein, 2016).

Of the more recent research evaluating the effectiveness of financial literacy programs targeted at low-income, disadvantaged populations, two of these studies were experimental in design and so were able to show causality. A small \((N = 33)\) experimental study of a financial literacy program delivered through a residential service for homeless families found that the program increased both financial knowledge and positive financial behaviours at the end of the four weeks, compared to those in the control group of residents who did not attend the program (Reich & Berman, 2015). However, there was a high level of attrition from the study, with 46% of the 61 initially recruited not completing the study for a variety of reasons (Reich & Berman, 2015).

Another experimental study examined the effectiveness of a financial literacy program designed for and delivered to 300 survivors of intimate partner violence (Hetling, Postmus, & Kaltz, 2015). This study found a strong program effect on self-reported financial knowledge and behaviours one month after completion of the program. This study also had quite a high attrition rate, with 34% not continuing in the study at Time 2, only one month after the end of the program. The main reason for the attrition was the inability to contact participants for the second interview (Hetling et al., 2015). Although not an experimental study, Grinstein-Weiss et al. (2015) examined the longitudinal data of approximately 2,000 low-income participants of a matched savings program with a financial education component in the U.S. They found that financial education was a strong predictor of savings outcomes for low-income program participants. The authors concluded that even short
financial education courses can provide low-income households with the knowledge and motivation to accumulate savings.

Due to the limited amount of research on financial literacy programs designed for and delivered to low-income populations, the literature has not yet confirmed definite best practices in financial education for this population (Consumer Financial Protection Bureau, 2015; Grinstein-Weiss et al., 2015; Tuominen & Thompson, 2015). Nevertheless, some tentative best practice guidelines for delivering financial literacy programs to low-income and vulnerable clients have emerged from the literature (Robson, 2012). These guidelines recommend that financial literacy programs for low-income and disadvantaged populations are most effective when they:

• are targeted & relevant to their audience;
• are delivered by the right people;
• are delivered at the right time;
• are consistent with principles of adult learning; and,
• empower attendees.

Is the program content relevant and evidence-based?

The most important best practice to be highlighted in the literature is the need for financial programs to be well targeted to their audience (Blue & Brimble, 2014; Hathaway & Khatiwada, 2008). In their review of the literature, Hathaway and Khatiwada (2008) conclude that the overall evidence for the effectiveness of financial education remains unclear; however, in both the short and long term, highly targeted programs, rather than general programs, tend to be more effective in changing people’s financial behaviours.

There is a particular need to tailor financial literacy programs when the audience are those who are marginalised in society and do not have access to, or opportunity with, mainstream financial services. Sometimes mainstream information and advice from financial services
can be irrelevant or unhelpful for vulnerable clients (Robson, 2012). Therefore, the program content needs to be tailored to clients’ lives and circumstances, addressing their main needs and concerns (Friedman, 2005; Robson, 2012). The information provided needs to be accurate and appropriate for the target audience (Robson, 2012). The more relevant the material, the more likely it is that program participants will remain engaged in the training (Friedman, 2005). For example, some research has found that those who are dependent on government payments are not aware of the full services and benefits available to them and therefore this is a topic relevant to the most disadvantaged in society (Anderson et al., 2005).

In addition to the content of the program needing to be relevant, the teaching style should also be targeted to the audience. For example, using practical examples to illustrate the information is recommended, as this enables participants to personalise the concepts being taught and apply them to their own situations (Friedman, 2005). The use of relevant, practical examples may also help people better understand financial concepts and retain what they have learnt (Friedman, 2005). However, any illustrations or exercises need to reflect the limited economic resources of, and constraints placed on, people living on low-incomes (Anderson et al., 2005). As well as appropriate examples, teaching simple “rules of thumb”, has been shown to be very effective in influencing financial behaviours (Consumer Financial Protection Bureau, 2015; Datta & Mullainathan, 2014). This can be a particular issue for people in substance abuse rehabilitation programs. Rules of thumb, such as “pay yourself first”, are easy to remember and so are more likely to be recalled when making decisions (Consumer Financial Protection Bureau, 2015). Furthermore, the language used to present the training material should be consistent with participants’ educational and cultural contexts (Anderson et al., 2005).

Tailoring content and delivery to the target audience should also include cultural adaptation (Brimble & Blue, 2013). For example, a financial literacy program was adapted for delivery at six indigenous sites in Queensland (Brimble & Blue, 2013). This program recognised the cultural and traditional value systems of indigenous peoples, where sharing resources with
extended family, kinship and reciprocity are central to Aboriginal identity. Furthermore, the program was adapted to the learning style of program participants, with more time given to group discussions and storytelling. Such cultural adaptations are vital to ensuring that the content and delivery style of the program are relevant and appropriate for culturally diverse groups in society.

Delivered by the right people

Not only does the content of the information need to be relevant and delivered in a culturally appropriate manner, but who delivers the material is also important. The trustworthiness of the provider of the program, particularly in their motives and the capacity to provide accurate and appropriate information, is significant (Robson, 2012; Russell et al. 2011). Financial literacy programs delivered by community-based organisations are trusted the most by vulnerable individuals since they tend not to arouse suspicions that there are hidden, self-serving motives behind the information being presented (Friedman, 2005; Robson, 2012). Furthermore, targeting the most vulnerable populations may be best achieved through the community sector, since this sector understands the needs and circumstances of low-income individuals better than others (Russell et al., 2011).

In addition to the program provider, the individuals who deliver the program and their communication style also matters to program efficacy. The literature suggests that best practice includes having well-prepared, well-trained instructors who are first financially literate themselves (Collins & Holden, 2014; Robson, 2012).

Additionally, it is key that financial literacy staff have a good understanding of the needs of vulnerable groups and are non-judgemental (Robson, 2012). There are real risks to teaching financial literacy badly by providing inaccurate content, or delivering insensitive or inappropriate guidance to clients (Robson, 2012). These risks include encouraging changes that are in fact detrimental to participants’ financial well-being, discouraging further learning about personal finance, causing clients to view learning about financial knowledge
as irrelevant, or providing a painful reminder of participants’ own disadvantage and marginalisation (Robson, 2012). Therefore, it is important to choose and train financial literacy program staff carefully.

Delivered at the right time

In addition to relevant content and appropriate delivery by the right people, the timing of financial literacy education is also important (Kiviat & Morduch, 2012). People are most likely to be attentive and engaged with a program when the content is relevant to their greatest needs at the time (Frentzel et al., 2010; Friedman, 2005). Conversely, unwanted information may be neither valued nor acted upon (Russell et al., 2011). It has been suggested that financial literacy programs are most effective when they intervene at “teachable moments” in participants’ lives (Robson, 2012). These teachable moments are when financial choice is imminent and when the content of the program has immediate practical applications (Robson, 2012).

It has also been proposed that embedding financial literacy programs into other existing programs and services may be worthwhile, as clients are presumably at a vulnerable period in their lives when they seek these other services, and therefore may be motivated to improve their money management skills (Robson, 2012). Furthermore, including financial literacy education within other programs that simultaneously address multiple needs enables organisations to support clients in a holistic manner (Robson, 2012).

Adhere to principles of adult learning

Adults learn differently to children and youth, so financial literacy programs being delivered to adults need to adhere to the principles of adult learning (Robson, 2012). The basic principles are that adults:

• respond to guidance not instruction;
• selectively attend to information they feel is relevant to them;
• bring independent ideas, previous knowledge, and life experience to their learning;
• learn when they are motivated to do so; and,
• learn best by doing (Robson, 2012)

The most important principle from adult learning that applies to financial literacy programs is that adults do not want to be instructed or lectured about what they ‘should’ do. Instead, adult learners wish to receive guidance that is relevant to their circumstances (Robson, 2012). Adults have existing knowledge and life experiences, so adapting program content to build on participants’ existing knowledge and insights is key to successful adult learning (Robson, 2012). Therefore, a more participatory and group discussion style of teaching that elicits participants’ input and feedback is likely to be more effective than a lecture style method (Robson, 2012). This also allows the presenter to more accurately adapt the program material to the current needs and interests of the group, thereby increasing program relevance (Anderson et al., 2005). It has been suggested that the style of learning in financial literacy programs with the greatest impact for disadvantaged groups is a mutual exchange between participants and program providers (Robson, 2012). Another advantage of group discussions, and eliciting participation and feedback from program attendees, is that it demonstrates an interest in the opinions and lives of attendees, and so builds their confidence and supports their empowerment (Anderson et al., 2005).

Adult learners do best when they are motivated and volunteer to be part of a financial education program (Robson, 2012). Mandatory financial literacy programs may create barriers to learning and facilitators may have to first win over reluctant participants (Robson, 2012), although this has not been demonstrated by research as yet. However, people with very low financial literacy have been found to lack motivation to seek financial counselling, so voluntary participation among this population group might result in programs not being delivered to those who need it the most (Frentzel et al., 2010).

Regarding the principle of adults learning best by doing, some research has found that ‘learning by doing’ is the single most important factor in acquiring financial capability and is considered by some to be a vital part of financial education (Russell et al., 2011). Hence, it is important that financial literacy programs provide activities for participants to engage in
during the program, and that attendees are encouraged to act on their new knowledge immediately. For adults, knowing how to do things is often more important than the knowledge of particular facts (Consumer Financial Protection Bureau, 2015). Therefore, teaching financial literacy skills, such as how to do a budget and practical ways to reduce spending, is more likely to produce changes in people’s behaviour than factual knowledge (Consumer Financial Protection Bureau, 2015).

**Empowerment & self-efficacy**

Finally, the literature suggests that it is important to empower program participants (Anderson et al., 2005). Indeed, empowering individuals has been described as bedrock to the work of financial educators (Kiviat & Morduch, 2012). By providing tools and teaching skills, the purpose of empowering participants is to build their ability and confidence to be able to better control and manage their finances (Anderson et al., 2005). Incorporating empowerment language into programs may be especially salient for people with low-incomes who feel marginalised from the rest of society (Anderson et al., 2005). For those who may be dependent on government income support and/or charities to be able to survive, financial literacy education may promote some sense of self-sufficiency and control in their lives (Tuominen & Thompson, 2015).

Related to empowerment is the concept of self-efficacy (Bandura, 1982). Self-efficacy is the belief in one’s ability to succeed at performing a specific task (Frentzel et al., 2010). Those with higher levels of self-efficacy are more likely to be proactive and take initiative because they believe their actions will be effective (Frentzel et al., 2010). Health management studies have found associations between high self-efficacy and increased likelihoods of following a diet and exercise program, higher quality of life for asthmatics and higher medication adherence (Frentzel et al., 2010). Therefore, increasing people’s financial self-efficacy could play an important role in the effectiveness of financial literacy education in changing behaviour (Frentzel et al., 2010). Regardless of whether the terms ‘empowerment’ or ‘self-efficacy’ are used, the important point is that financial programs are more likely to
produce changes in behaviour if program participants believe they have the ability to change their circumstances.

**Conclusion**

In summary, there is evidence that financial literacy programs are effective at contributing to improved financial behaviours for low-income and marginalised populations. Recent experimental studies have demonstrated causation by finding that those who participated in financial literacy programs have better financial knowledge and behaviours after the programs compared to those who did not receive the education. Although there is insufficient research as yet to confirm a set of best practices for financial literacy programs targeting severely financially vulnerable clients, it has been recommended that financial literacy programs are most effective when they offer tailored, content is relevant, and it is delivered in an appropriate manner by trusted trainers who are knowledgeable and non-judgemental (Robson, 2012).

**Using Text Messages to Support Improvements in Financial Literacy**

Humans often behave in ways that are detrimental to their own well-being. For example, despite increased education and advertising efforts, obesity, smoking, alcohol, and lack of physical activity, continue to have a deleterious impact on public health worldwide (Marteau, Ogilvie, Roland, Suhrcke, & Kelly, 2011). So, how can policymakers change human behaviour to improve well-being across a whole range of domains? One approach is through the use of “nudges”.

Behavioural economists Richard Thaler and Cass Sunstein popularised the term “nudge”, which they defined as any mechanism that alters or prejudices people’s decisions and behaviour in a predictable way without prohibiting any options (Marteau et al., 2011; Sunstein, 2014; Thaler & Sunstein, 2008). The original definition of nudging excluded
legislation, regulation and interventions that alter economic incentives (Marteau et al., 2011). However, there is no precise, operational definition of nudging and it is best thought of as a type of behavioural change intervention (Marteau et al., 2011). The key characteristic of nudges is that they steer people in a particular direction, but still allow free choice (Sunstein, 2014). Nudges prompt and actively guide choices, rather than dictate, by altering social or physical environments to make certain behaviours more likely (Marteau et al., 2011).

The concept of nudges draws on behavioural economics and social psychology that help explain why people often do not behave rationally (Marteau et al., 2011; Pathak, Holmes, & Zimmerman, 2011). Although based in behavioural economics and social psychology, Marteau et al. (2011) propose that nudging bridges the gap between two human systems, the goal-oriented system and the automatic, affective system. The goal-oriented system is driven by our cognitive capacity, our thoughts, values and intentions. The automatic system, in contrast, requires little or no cognitive engagement and is driven by immediate feelings and is triggered by our environment. According to Marteau et al., nudging mainly operates through this automatic, affective system and assumes that altering environmental cues should alter people’s choices and behaviours.

Nudging as a way of changing human behaviour has generated great interest amongst policy makers worldwide in recent years, with both the U.K. and U.S. governments embracing this tool (Marteau et al., 2011). The U.K. now has a Behavioural Insights team (sometimes referred to as the “Nudge Unit”) and the U.S. has a White House Social and Behavioural Sciences team (Sunstein, 2014). The growing interest in nudges can be attributed to the low cost of the interventions, the potentially fast delivery and results, the personal freedom they maintain, and their effectiveness (Sunstein, 2014). There are a wide range of types of nudges, with Sunstein (2014) listing the ten most important nudges as:

- default rules (e.g. automatic enrolments in programs);
- simplification (e.g. the simplification of forms to enter programs);
• use of social norms (e.g. comparing your electricity bill to that of others of the same household size);
• increases in ease and convenience (e.g. putting fruit at the checkout counter instead of lollies);
• disclosure (e.g. reminding customers of the interest rate on their credit card);
• warnings (e.g. graphic photos on cigarette packets);
• pre-commitment strategies (e.g. committing to stop smoking);
• reminders (e.g. text message appointment reminders);
• eliciting implementation intentions (e.g. asking “do you plan to immunise your child?”); and,
• informing people of the nature and consequences of their own past choices (e.g. their electricity bill for the same period the year before).

Reminder nudges are of particular relevance to the present study. Reminders are hypothesized to be effective nudges because of their effect on attention (Datta & Mullainathan, 2014; Pathak et al., 2011). Sometimes people have good intentions to change their behaviour, but following through on those intentions requires remembering to make the necessary changes or perhaps prioritising the action (Datta & Mullainathan, 2014). A timely reminder can mitigate this memory lapse (Datta & Mullainathan, 2014). Reminders also address the ‘availability bias’, which is the tendency for people to make decisions based on the frequency of information or the examples the mind imagines or retrieves (Pathak et al., 2011). Nudges can bring goals and intentions to one’s immediate attention, making it more likely that they will act on those intentions (Pathak et al., 2011). Therefore, reminders can be used in situations where people forfeit substantial benefits when they do not do something, at the right time (Datta & Mullainathan, 2014).

One of the most economical, easy, rapid and effective ways to send reminders to a targeted group is through text messaging (Milward, Day, Wadsworth, Strang, & Lynskey, 2015). Easy to use and inexpensive software is available to facilitate automated text message communication (Thirumurthy & Lester, 2012). Mobile phones are pervasive in the
developed world, with 91% of adults in the U.S. and 94% in the U.K. owning a mobile phone (Milward et al., 2015). Statistics by the Swiss Federal Statistics Office (2014) indicated that in 2012, there were more mobile phone subscriptions than inhabitants in many European countries (Billieux, Maurage, Lopez-Fernandez, Kuss, & Griffiths, 2015). In Asia, the Office of the Communication Authority of Hong Kong (2013) stated that in 2012, the average number of cellular phones owned was 2.21 per person (Billieux et al., 2015). Mobile phones have also had a considerable impact in developing countries, since communication by mobile phone is less expensive than landline telephones or standard internet (Cole-Lewis & Kershaw, 2010b). Approximately 75% of adults worldwide have access to a mobile phone, with three-quarters of the world’s seven billion mobile phone subscribers living in low- and middle-income countries (Kamis et al., 2015). Therefore, text messaging holds promise as a useful tool for behaviour change interventions worldwide (Cole-Lewis & Kershaw, 2010b).

Despite all the interest and potential advantages of using nudges instead of regulation and monetary incentives to alter behaviour, the evidence supporting the effectiveness of nudges is not straightforward. Text messaging is a relatively new method of delivery for behaviour change interventions, and therefore there is a paucity of research on text message nudges (Cole-Lewis & Kershaw, 2010b). To date, text nudges have been mostly used for disease prevention and management. In a meta-analysis of 12 randomised controlled trials using text messaging for the management of weight loss, smoking cessation and diabetes, eight of the studies found evidence of short-term effects (Cole-Lewis & Kershaw, 2010b). These effects were found for adolescents and adults, minority and non-minority groups, and across nationalities. However, of the 12 studies in the meta-analysis, three reported not being statistically powerful enough to detect differences in outcomes and therefore produced inconclusive results.

Since this meta-analysis by Cole-Lewis and Kershaw (2010), other studies using text message nudges in the health domain have advanced the literature in this area. For example, in China almost 2,000 randomly selected community residents were assigned to receive three weeks of text messages about either influenza prevention or stopping smoking (Chai et al., 2013).
Participants who received the influenza prevention messages had a higher self-reported uptake of influenza vaccination, reported reduced influenza-like illness, and showed improved knowledge and attitudes about influenza prevention and control at the end of the study compared to those who had received the smoking messages. Further, more than 95% of participants found the text message program useful and trustworthy. Similarly, two randomised controlled trials in Kenya showed that regular text messages can improve adherence to antiretroviral therapy for people with human immunodeficiency virus (HIV) (Thirumurthy & Lester, 2012). In the first study, text messages were sent once a week enquiring about patients’ health and saying they could reply and seek advice from healthcare providers. Patients receiving this nudge adhered to their treatment better than those in the control group. In the second study, a one-way text message was sent reminding patients to take their medication. Half the participants received this message weekly and the other half received it daily. Surprisingly, those who received the texts weekly adhered to the treatment better than those who received the messages daily, suggesting the frequency of the nudges is important.

A meta-analysis of nine text-messaging interventions designed to promote adherence to antiretroviral therapy demonstrated that text messaging interventions significantly improved HIV treatment adherence compared to control conditions (Finitis, Pellowski, & Johnson, 2014). The meta-analysis also found that messaging participants once or more times a day resulted in less adherence compared to sending messages a few times a week or weekly. Larger adherence effects were also found when the text messages supported bidirectional communication, included personalised messages, and were matched to participants’ dosing schedule. Implications from this meta-analysis are that text messages should be tailored to the individual, encourage the recipient to reply to the text, and be sent less frequently than daily.

In contrast to these positive findings, other studies of text message interventions have demonstrated mixed results. For example, a study on text message reminders after rapid diagnostic testing (RDT) for almost 700 people seeking treatment for malaria at drug stores
in Nigeria found that the effects of the text messages differed for children compared to adults (Liu & Modrek, 2016). In this study, participants were randomly assigned to three groups; those who received a basic text reminder repeating the RDT result and appropriate treatment action, those who received an expanded text message indicating that the government might allow chemists to do RDTs, or a control group that did not receive any text messages. The study found that the text reminders increased treatment adherence for RDT-positive adults and decreased the use of unnecessary anti-malarials for RDT-negative adults. However, the basic text reminder intervention did not have an impact on treatment adherence or the use of unnecessary anti-malarials for caregivers of sick children. In fact, the expanded text message actually led to poorer treatment adherence and increased use of unnecessary anti-malarials for sick children.

Mixed results were also found in a randomised controlled trial study where approximately 800 college freshman were sent 12 personalised text message reminders every couple of weeks prompting them to re-apply for the Free Application for Federal Student Aid (FAFSA) (Castleman & Page, 2015). The study found large and positive effects among freshman attending community colleges, with a 14% increase in those remaining enrolled in college. The impact of the intervention was particularly strong for community college freshman with lower grades in high school. In contrast, the text messages did not improve enrolment continuance among freshman at four-year institutions. In the control group, freshman from community colleges were nearly three times more likely to fail to reapply for the FAFSA compared to freshman of four-year colleges where the rate of persistence was already high (87%). There was also evidence that the text messages had different effects for male and female freshman at four-year institutions. Compared to the control group, the text messages increased the probability that male freshman would remain in four-year institutions, but actually decreased the probability that female freshman would remain in four-year institutions. Therefore, this study, as with the study in Nigeria, suggests text messages may have differential effects on different sub-groups within a population.

Other studies have found that text message reminders had no statistically significant effects. For example, an experimental study of 63 university students in Europe found that daily text
message reminders encouraging participants to be physically active did not increase students’ level of physical activity (Schwerdtfeger, Schmitz, & Warken, 2012). However, this was only a small and brief pilot study, so these findings need to be replicated. A large scale randomised evaluation of a recycling program in Peru also found no effect for text messages on behaviour (Chong, Karlan, Shapiro, & Zinman, 2015). In this study the treatment group was divided into subgroups that received a range of different text message wording, but none of the messages were effective in changing recycling behaviour. In contrast, the study found that providing households with a recycling bin did impact on recycling behaviour. The authors comment that many of the text messages were similar to messages found to be effective in other countries, and so text messaging interventions may not generalise across contexts and countries (Chong et al., 2015). In addition, text message reminders may not be the best intervention to alter behaviour in some contexts, with other interventions, such as providing a recycling bin, being more effective.

A similarly disappointing result was found in a recent experimental study testing the effectiveness of nudge reminders on increasing the child support payments from noncustodial parents (Baird, Cullinan, Landers, & Reardon, 2016). Noncustodial parents not currently paying child support through income withholding were randomly split into three groups: a control group that was not sent any reminders, a text group that was sent two text message reminders each month, and a mailing group that was posted a monthly redesigned reminder notice. Although both the mailing and text message reminders increased the percentage of parents who made a payment by a statistically significant amount, this increase was small (an increase of 3.2% for the mailing group, and 2.5% for the texting group). Furthermore, the total amounts collected per parent did not increase for either reminder groups. There was no statistically significant difference in effectiveness between the monthly mailed notices and the twice a month text messages. Hence, it appears that text message nudges are not always an effective tool for behaviour change. It is important to consider that text messages are meant only as reminders to bring a desired behaviour into focus and should not be expected to change all types of behaviour. With all interventions, it is important to know what works for whom and under what circumstances.
Using text messaging should in the first instance be appropriate to the behavioural context. Therefore, testing the use of text messaging as a nudge in different contexts will help produce an understanding of when text messaging can be most effective.

In the domain of financial literacy, the evidence for the effectiveness of text message nudges in changing people’s financial behaviours is also mixed. In a field experiment with almost 900 micro entrepreneurs who had opened bank accounts in Chile, participants were randomly assigned to receive a weekly text message giving personalised transaction feedback on their account, or to receive no reminders. The study found significant effects for those receiving weekly text messages, with almost triple the number of weekly deposits compared to the control group. However, once the text messages stopped, there was no significant difference in savings behaviour between the treatment and control groups, demonstrating that the effects did not persist after treatment (Karlan, McConnell, Mullainathan, & Zinman, 2010).

Similarly, field experiments with different banks in the Philippines, Bolivia and Peru investigated the effect of reminders on savings (Karlan et al., 2010). In each experiment, after individuals opened savings accounts, the bank randomly assigned some individuals to receive monthly reminders via text message or letter, or to receive no reminders. Overall, reminders significantly increased the likelihood of reaching a savings goal by 3%, and marginally significantly increased the total amount saved in the bank by 6% (Karlan et al., 2010). In Peru, where clients stated a specific savings goal, reminders that mentioned the specific goal increased savings by an estimated 16% compared to the control group, while general reminders that did not mention the specific goal had no effect on savings amount. In addition, neither specific nor general reminders had an effect on goal attainment.

In another field experiment, this time in Uganda, a randomised control trial compared the impact of three different incentives for loan repayment (Cadena & Schoar, 2011). Borrowers were randomly assigned to either receive a lump sum cash reward upon the completion of
the loan, a 25% reduction in the interest rate for the next loan the borrower takes from the bank, or a monthly text message reminder three days before each loan payment due date. The study found that the average size of the treatment effect was similar across all treatment conditions, suggesting that text message reminders can be as effective as monetary incentives to help borrowers better manage their loan repayments. Moreover, text message reminders showed significantly stronger effects for borrowers below the age of 30 years old compared to older borrowers, suggesting that the effectiveness of text nudges might be related to age (Cadena & Schoar, 2011).

Other studies have found mixed support for the effectiveness of text message nudges on financial behaviours. In another field experiment examining the effectiveness of reminders for loan repayments in the Philippines, text message reminders were only found to be effective under one condition (Karlan, Morten, & Zinman, 2012). Two large Philippine micro lenders sent randomly assigned clients weekly text message reminders about their weekly repayment obligation. The content and timing of the messages were varied. The messages were sent either on the due date or a couple of days prior to the due date, and the content of the message was either framed in loss or gain terms, and either included the loan officer’s name or not. There was no overall treatment effect, with no evidence that the average message improved repayment performance relative to the control group. The only treatment condition that showed any effect was mentioning the loan officer’s name, which significantly improved repayment performance. Even this effect was only significant for borrowers who had been serviced by the mentioned loan officer. The authors suggest that this differential effect can be explained by the messages triggering personal relationship schemas (Karlan et al., 2012). It is possible that this effect is at least partly cultural and may not occur in other countries.

A U.S. field experiment examined the effect of text message reminders on credit scores of low-to-moderate-income individuals (Bracha & Meier, 2014). Approximately 250 individuals were randomly assigned to receive either monthly text message reminders containing individualized financial information or no messages. The text messages reminded people to
pay bills on time (and at least the minimum amount), reminded them of their top-priority financial goal for the year, and gave their credit score range. This study found no overall effect of text message reminders on change in credit scores. However, when the participants were divided into subgroups according to their initial credit rating scores, it was found that text messages had a positive and significant effect on individuals who initially had low credit scores. In contrast, the text messages had a marginally significant negative effect on individuals who initially had high credit scores. The authors of the study suggest that the reminders may have caused high-credit-score individuals to lose some financial self-discipline, leading to increased collection accounts. Therefore, these findings suggest that text reminders may help those who need it the most, that is, individuals with low credit scores, but they may have a negative effect on people who do not need reminders. The authors caution that nudge reminders are not a magic pill but rather a tool that can have both positive and negative effects (Bracha & Meier, 2014).

Rodriguez and Saavedra (2015) conducted a field experiment with low-income youths in Colombia. Approximately 10,000 youths with bank accounts were randomly allocated into one of four experimental conditions:

- Group 1 received 12, monthly text messages containing financial education as the content. Each month the message varied, and included themes such as the difference between wants and needs, reducing unnecessary expenses, developing a savings habit, and saving in secure places.
- Group 2 received 12, monthly savings reminders, all with the same wording, “Remember to save your Tuticuenta! This way you will be one step closer to your goals and make your dreams come true. Banco Caja Social”.
- Group 3 received 24 savings reminders twice a month, using the same message as for Group 2.
- Group 4 was the control group that received no messages.

After 12 months, the study measured the impact of text messages on account closings, account dormancy, deposits and withdrawals, and net account balance. None of the text messaging conditions effected account closings or account dormancy compared to the
control group. However, there were large differences over time in average net account balances between youths assigned to either of the two savings reminder groups, compared to the control group or the financial education group. There was no statistically significant difference in the net account balances between monthly and twice-monthly reminder treatment groups. Interestingly, however, the increases in net account balances in both reminder treatment groups was mainly due to a significant decrease in the amount of money withdrawn from accounts compared to the control group. None of the text message treatments had a significant effect on the number of withdrawals or on the number or amount of deposits. Furthermore, the effects of the reminders on behaviour did not last once the reminders ceased being sent, with participants returning to similar amounts of withdrawals once the study ended (Rodriguez & Saavedra, 2015).

**Conclusion**

In summary, the research evidence for the effectiveness of text message nudges across the domains of financial behaviours, education and public health, is quite variable. Indeed, instead of asking whether or not nudges ‘work’, a more appropriate set of questions are what works, for whom, in what circumstances, and for how long (Marteau et al., 2011)? The timing, content, and frequency of text messages can impact on the effectiveness of nudges. The age, gender, cultural background and socioeconomic status of the recipients of the nudges can also determine their usefulness. Importantly, the actual behaviour that the nudge is aimed at changing is perhaps the most critical element to consider. For example, some behaviours such as not paying child support is reflective of a range of other issues that cannot be changed by text messages. Finally, it is important to be cognizant of the fact that text message nudges can have unintentional, adverse effects on some subgroups within a population. Overall, then, text message nudges can be a useful tool for short term behavioural change in some situations, for some people, some of the time, and further research is required to identify a set of guidelines for their use.
The In Charge of My Money Program

Program Background

The Wesley Financial Literacy Program In Charge of My Money was developed and launched in 2011. The catalyst for developing the program was Wesley Mission’s 2010 Third Financial Stress Report (Wesley Mission, 2010). The aim of this report was to understand how financial stress had changed since the previous reports in 2006 and 2008, and to identify who was most at risk, and why. Data for the report was gathered from a number of sources, including focus groups with Wesley Mission financial counsellors to discuss experiences with their clients, a quantitative, online and telephone survey of 621 adults in NSW, and case study interviews with people who sought financial counselling from Wesley Mission (Wesley Mission, 2010). The online and telephone survey data was weighted by household income and location to more accurately reflect the NSW population.

Key findings from the 2010 report were that more than a third of respondents reported being financially stressed, more than half reported feeling anxious about their ability to meet their future financial obligations, and credit card debt was two to three times higher among households under financial stress. These results represented an increase in financial problems in NSW compared to earlier years. The report found that money management skills were not well developed, with 40% of households not having a budget, and a third of those with budgets not adhering to them and overspending. Attitudes to money were found to be unhelpful in many cases, with 80% of people not having a savings mindset, and many struggling with the concept of reducing expenses to deal with financial hardship.

In addition, the 2010 survey found that financial stress is not just about money. Almost half of those under financial stress in the survey had suffered from ill health, both physical and mental, and a third experiencing relationship issues, such as divorce and domestic violence. A quarter of respondents turned to alcohol and drugs to cope with the financial strain, and one in 10 exacerbated their financial problems by gambling. The majority of those surveyed
did not seek assistance when experiencing financial stress, or delayed obtaining help until it was too late (Wesley Mission, 2010).

The key recommendation from the 2010 “Making Ends Meet” report was the need to increase people’s ability to self-manage their finances by enhancing financial literacy in NSW. The report recommended a need for targeted strategies to assist those struggling with financial problems. Wesley Mission recognised the need for more focused financial literacy training and resources to be disseminated through community services that care for those experiencing the greatest financial stress. Since Wesley Mission was not able to find an existing financial literacy program that specifically addressed the needs of their marginalised clients, they decided to create a consistent community education program for Wesley Mission financial counsellors and financial literacy educators to deliver.

In 2011, Wesley Mission, together with St George Bank, began the process of creating a financial literacy program targeted at vulnerable communities where there were complex problems including addictions, mental and physical health issues, homelessness, unemployment, and domestic violence. The goal of this Wesley Mission and St George Bank financial literacy education project was to:

- provide education, materials and resources that would build basic knowledge, understanding and financial management skills;
- develop socially responsible behaviours in personal decision making in managing their money; and,
- assist people to make informed judgements and effective financial decisions, leading to improved self-management of finances over time.

The financial literacy education project was part of the St George sustainability agenda and was an extension of the partnership which already existed between St George Bank and Wesley Mission through donations to financial education. The In Charge of My Money program was based on a range of existing resources and government produced materials.
which were modified and extended to address the more acute needs of Wesley Mission’s clientele.

Wesley Mission’s financial counsellors working across the Sydney metropolitan and Newcastle areas were consulted to obtain an accurate picture of the needs of their clients. The financial counsellors identified the major contributor to financial stress as being poor money management through the reliance on credit cards. Furthermore, an internet survey was developed to explore what support financial counsellors needed to deliver a financial literacy education program and also to identify what area of understanding was a priority for the development of program materials. The survey highlighted that personal money management and managing debt needed to be a priority for initial program development. The program was developed using the adult learning principles of Knowles (Knowles, Holton, & Swanson, 1998) and facilitators were trained to incorporate this model in their deliveries. The program was piloted for a 12 month period in liaison with financial counsellors and community groups. Wesley Mission’s financial counsellors were trained to familiarise them with the new materials and resources for effective delivery to meet the needs of Wesley Mission’s clients (Wesley Mission, 2011).
Program Description

*In Charge of My Money* was designed by Maisie Warburton and launched in 2011. The program provides information about how to better manage money. It is designed to be practical, easy to understand, and ensure participants are equipped with the relevant skills to manage their money. The materials for presenters include facilitator guides, PowerPoint slides, and a DVD. Program participants are given worksheets, a calculator, a pen, a money box, and a small note book. The language used in the materials is at a Year 10 literacy level. In 2013 this program received the Highly Commended Award for the annual ASIC MoneySmart Awards (Wesley Mission, 2016b).

The content of Wesley’s financial literacy program is arranged into three modules and each module has corresponding worksheets to engage participants. The materials incorporate information from the MoneySmart website with permission from Australian Securities and Investment Commission (ASIC) (Wesley Mission, 2016a).
The three independent modules of the program are:

**Module 1: Know it—Your income and expenses**
This section examines sources of income and expenses, what people spend their money on and how they pay for things.
Part 1: Know your income and expenses
Part 2: Know where your money goes
Part 3: Know how you pay for things

**Module 2: Do it—Managing your money**
This section examines how to manage money by identifying personal goals, saving, planning and preparing a budget.
Part 1: Know what you want—goal setting
Part 2: Pay yourself first—savings
Part 3: Planning and budgeting—manage your money

**Module 3: Review it—Managing your debt**
This section explores how people manage their debt through examining their loans and the cost of borrowing. It provides an opportunity to review expenses and manage debt through budgeting.
Part 1: Getting into and out of debt
Part 2: Know the real cost of borrowing
Part 3: Monitor and manage your debt
Part 4: Where to go for help

The key message to program attendees is to apply what they learn to everyday life. The underlying refrain that appears consistently throughout all worksheets is: *Know it, Understand it, Do it, Review it*. This practical and simple structure is intended to reinforce the learning during the program (Wesley Mission, 2016a).
Figure 1: Know it, understand it, do it, review it model of learning

The program also provides information on “where to go for help” and highlights the availability of free financial counselling services. There is an added benefit of exposing vulnerable populations to financial counsellors through the financial literacy program as many do not know this free service exists. The face to face contact and exposure of the program encourages program attendees to access financial counselling and makes it less threatening to seek the support they need.

“The program got me thinking about money and how I used it. Before I just used it without thinking, but now I think about what I need the money for. I never took that into account before. Now I'm holding onto my money more. It used to all be gone in 2-3 days, but now my unemployment benefit lasts a week and a half...”

Program delivery

The In Charge of My Money program is delivered by qualified training professionals, usually financial counsellors, and all material, tools and resources are provided for the attendee. During the evaluation study, all program presenters were either current Wesley Mission financial counsellors or the program developer who is also a financial literacy educator. The presenters are trained to deliver the program in a non-judgemental and non-patronising manner, offering
information and suggestions without telling attendees what they ‘should’ do. The presenters are careful to respect the agency, opinions, and life situations of program attendees. Flexibility of delivery is also crucial to take into consideration the attention span of clients with mental health, disability, addiction and gambling issues. Presenters encourage participants to ask questions and discuss their life situations during the sessions. The program can be delivered in one day, but is most commonly delivered weekly in three sessions of three hours each. Each session covers one module. During this study, however, the program was delivered in four sessions rather than three to allow time at the end of the last session for the study to be described and for participants to complete the questionnaires.

Informal program evaluations have suggested that the program is well-received by attendees. However, this program has never been empirically evaluated for its efficacy. The purpose of this study was to ascertain whether this program is effective and where its strengths and weaknesses lie.

“The program showed me where I was going wrong and made me think about it, be responsible for what I was doing and thinking about how to use my money, be conscious of the bills I have, putting away extra, learning to manage my money. I don't take money with me when I walk past the shops now. I used to buy 6-7 coffees a week, now I only have 1 or 2 a week, and now I know I can afford it.”
In Charge of My Money Program Evaluation

Goals of the Study, Key Factors & Outcome Measures

The primary goal of this study was to assess the outcomes of Wesley Mission’s financial literacy program in terms of positive changes to financial behaviour in a low-income, vulnerable population.

More specifically, this study aimed to:
- Ensure the program content is relevant to the cohort and evidence-based.
- Identify whether the program facilitates sustained improvement in financial behaviours.
- Estimate whether participant knowledge and understanding are retained after several months.
- Ascertain how incorporating a practical strategy, such as text message reminders, increases the chance of sustained change.

In order to achieve these goals, a variety of participant factors were investigated, such as:

- Demographics (gender, age, country of birth, highest level of education, income bracket, main source of income being government benefits).
- Program engagement (i.e. how many workshops attended, level of motivation during the program, whether attending the program was compulsory, and participants’ program rating).
- Change in financial knowledge, attitudes, self-efficacy, and emotional spending.

The main quantitative outcomes that were measured 5-7 months after the program were:

- Changes in financial behaviours:
  - Change in money management behaviour
  - Change in level of saving behaviour
  - Change in degree of planning behaviour
- Change in level of monitoring expenses

- Change in reaching financial goals:
  - How much the program assisted in achieving goals
  - The extent of progress towards the specific goal identified during the program

- Change in financial strain:
  - The number of problems due to lack of money
  - The degree of difficulty in paying bills
  - How much money is left over by the next payday
  - Frequency of asking family for money
  - Number of financial products (i.e. financial inclusion).

- Change in level of debt

The study investigated all these participant and outcome factors, and the relationships between them.

In addition to these quantitative outcomes, participants answered several questions in their own words, thereby contributing rich qualitative data as a supplement to the quantitative data. The outcomes that were able to be deduced from participants’ qualitative responses were:

- The program elements that were most relevant to, and useful for, program attendees.
- Program components that were best remembered.
- How the program can be improved.

Obtaining the opinions of program attendees was crucial in this evaluation study because the program is targeted at a specific audience (i.e. the most vulnerable in society). As will be demonstrated in the following section, study participants were drawn from very disadvantaged and marginalised groups within the general population.
Participant Demographics

Of the 128 participants who were recruited into the study at Time 1, 63 completed questionnaires 5-7 months later. Data from nine staff participants were excluded from the analyses because those staff were so socio-demographically distinct from the other participants. Hence, the final sample size for the full evaluation was 54. There were slightly more males than females, due to some programs being run through services to homeless men. The participants were mostly born in Australia or born in English-speaking countries (78% and 92% respectively). The number of participants identifying as Aboriginal (11%) was overrepresented compared to the NSW state average of 3% (Australian Bureau of Statistics, 2013). No participants identified as being Torres Strait Islander. Participants had lower levels of education compared to the average Australian. In 2015, 26% of the Australian adult population’s highest educational attainment was Year 11 or less, compared to at least 41% of participants in this evaluation (Australian Bureau of Statistics, 2015a). Fifty nine percent of the Australian adult population completed a non-school qualification, compared to 45% of study participants (Australian Bureau of Statistics, 2015a).

Participants received far lower incomes than the average Australian. Most participants (77%) received an annual income of less than $32,000 in 2016. This is substantially lower than the average gross household income for NSW in 2013-2014, which was $111,280, and the average equivalised annual disposable household income for Australians in 2013-2014, which was $51,896 (Australian Bureau of Statistics, 2015b). Government benefits were the main source of income for 85% of participants, compared to 25% of households in Australia in 2013-14 (Australian Bureau of Statistics, 2015b). When asked about debt, 70% of participants said they were in debt when they commenced the program. Most did not have children living with them. Participants were drawn from programs delivered in centres addressing issues of drug and alcohol abuse, gambling addiction, homelessness and family dysfunction. Some of these centres were residential rehabilitation centres, as shown in Table 1. More than half the study participants (54%) were dealing with substance abuse...
and/or gambling addictions. Thirty-five percent of participants were homeless, and 11% were receiving assistance in their ability to care for their children.

Table 1: Participant demographics

<table>
<thead>
<tr>
<th>Participant characteristic</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>32</td>
<td>59%</td>
</tr>
<tr>
<td>Female</td>
<td>22</td>
<td>41%</td>
</tr>
<tr>
<td>Born in Australia</td>
<td>39</td>
<td>78%</td>
</tr>
<tr>
<td>Born in Australia, New Zealand, UK, Ireland, US or Canada</td>
<td>46</td>
<td>92%</td>
</tr>
<tr>
<td>Aboriginal origin</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Age bracket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21-25</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>26-30</td>
<td>10</td>
<td>19%</td>
</tr>
<tr>
<td>31-35</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>36-40</td>
<td>13</td>
<td>24%</td>
</tr>
<tr>
<td>41-45</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>46-50</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>51-55</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>56-60</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>61-65</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>Highest level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 7-10</td>
<td>22</td>
<td>41%</td>
</tr>
<tr>
<td>Year 11- Year 12</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>TAFE or technical college</td>
<td>16</td>
<td>30%</td>
</tr>
<tr>
<td>University undergraduate</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>University postgraduate</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>Income bracket (annual)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No income</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>$1 – 10,399</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>$10,400 – 15,599</td>
<td>12</td>
<td>26%</td>
</tr>
<tr>
<td>$15,600 – 20,799</td>
<td>15</td>
<td>32%</td>
</tr>
<tr>
<td>$20,800 – 31,199</td>
<td>6</td>
<td>13%</td>
</tr>
<tr>
<td>$31,200 – 41,599</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>Participant characteristic</td>
<td>Number of participants</td>
<td>Percentage of participants</td>
</tr>
<tr>
<td>----------------------------</td>
<td>------------------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>$41,600 – 51,999</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>$65,000 – 77,999</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>$78,000 – 103,999</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>$104,000 +</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>Main source of income is the government</td>
<td>45</td>
<td>85%</td>
</tr>
<tr>
<td>Type of centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Addiction rehabilitation</td>
<td>29</td>
<td>54%</td>
</tr>
<tr>
<td>Homelessness</td>
<td>19</td>
<td>35%</td>
</tr>
<tr>
<td>Family support</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Number of children under 18 years old living with you</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>36</td>
<td>69%</td>
</tr>
<tr>
<td>1-2</td>
<td>11</td>
<td>21%</td>
</tr>
<tr>
<td>3-4</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>5-6</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Figure 2: Age of participants
In sum, the participants of this evaluation were amongst the most socially and economically disadvantaged and vulnerable within the Australian population.
Figure 5: Issues addressed by centre where program was delivered
Program Evaluation Research Methodology

Procedure

Study participants were surveyed at two separate times:

• At the end of the last session of the program (Time 1)
• 5-7 months after completing the program (Time 2).

At the end of the program (Time 1)

Between July and December 2015 a researcher from Macquarie University attended 18 program deliveries in metropolitan areas of Sydney and also in Cessnock and Wollongong. These programs were delivered by Wesley Mission financial literacy educators and financial counsellors at collaborating residential and drop-in rehabilitation centres for addiction, homeless centres, and family support centres. The programs were also delivered to some Mission Australia and Wesley Mission staff, so these were included in the Time 1 data collection.

At the end of the last session of the program, after the program facilitator had finished, the facilitator invited the researcher to join the group. The researcher then explained the study, answered any questions, and handed out consent forms and paper study questionnaires. Once participants had completed the consent forms and questionnaires by hand, they gave them back to the researcher. The researcher handed each participant a $20 grocery only gift voucher in appreciation of their time. The questionnaires were later entered into a computer for analysis by the researcher who attended the program sessions.
**Time 1 Participants**

A total of 128 participants completed questionnaires at Time 1, including 15 staff (12%). It was explained that participation in the study was voluntary and three people chose not to participate, giving a 97.71% study participation rate.

**Several (5-7) months after the program (Time 2)**

Between February and May 2016 the same researcher attempted to contact all Time 1 participants by email and/or telephone, at least five months from the time of the first survey. If an email address had been provided then participants were emailed, requesting that they participate in the second part of the study. In the email participants were asked when would be the best time for the researcher to call, and asking them to confirm their telephone number. A link to the online survey was also provided in the email so they could complete it online if they preferred that to completing it by telephone. Each email was individualised as participants had to be given their unique identification number for the survey. To ensure confidentiality, identification numbers were used to match participants’ responses from Time 1 to Time 2 rather than names. If a mobile phone number was given at Time 1, then the researcher sent a text message reminding the participant of their inclusion in the study and asking when would be the best time to call to do the survey over the phone. A few days later, the researcher tried calling the participant, regardless of whether or not they responded to the text.

For the telephone survey, the researcher asked participants the questions and recorded their answers directly into a computer. This took approximately 15 minutes. Participants also had the option of doing the survey online by themselves, but not many exercised this option. Each participant was sent a $30 grocery only gift voucher to thank them for their time, whether they completed the survey by telephone or online.
Difficulties contacting participants at Time 2

It proved very challenging to contact study participants a few months after they had completed the financial literacy program. Many of the email addresses ‘bounced’ and many of the phone numbers were disconnected or not receiving incoming messages. Of the email addresses that did not bounce, few people responded, and of the phone numbers where it was possible to leave a message, few returned the call. The researcher resent emails at least twice and tried calling each participant at least three times at different times of the day and over a period of a few weeks. Since participants in rehabilitation residential programs were only permitted to use their phones on weekends, the researcher made many of the phone calls after 5pm on Fridays, in the hope of increasing the chances of making contact.

Although this repeated emailing and calling seemed to irritate some of the participants who were charity staff members, it did not appear to bother the other participants, most likely because they did not receive the earlier emails, texts or voice messages. A couple of participants mentioned that they had been in rehabilitation for months and had a backlog of hundreds of emails. One participant completed the survey online two months after the last attempt to contact him. Some participants were happy to complete the survey when the researcher finally made contact by mobile phone, even though she had had no response to text messages and voice messages. Other participants asked the researcher to call back at a certain time, but then did not answer their phone at that time or in the days afterwards. Two participants were in hospital when the researcher called, one of them being unable to do the survey due to pain. Another participant was reported by his mother to be non-contactable because he was in prison. There was confusion about the identity of one participant because another study participant had given him his mobile phone after the program, and they happened to have the same first name.

Time 2 participants

Of the 128 Time 1 participants, only 63 completed the Time 2 telephone/online survey. Four people answered their telephone but declined to participate in the Time 2 survey. The
response rate for Time 2 is 49% of those who completed the Time 1 questionnaire. However, it is unknown how many people did not participate at Time 2 due to choice and how many simply did not receive any message, despite repeated and varied attempts to contact them.

It was apparent from comments made by participants that the only reason as many as 49% agreed to complete the survey at Time 2 was because they wanted the $30 gift voucher. Without that incentive, the response rate would have undoubtedly been much lower.

It was decided that the staff participants were too demographically dissimilar to the other participants in the study to be able to combine their results, so the data from the nine staff who completed the Time 2 survey was excluded from further analyses. The Time 2 sample size was therefore reduced to 54.

The Time 2 participants were not reliably different from those study participants who only completed the Time 1 questionnaire on age, income, or motivation level. However, those participants who completed Time 2 questionnaires were marginally more highly educated than those who only completed Time 1 questionnaires ($t (124) = -1.86, p = .065$).

**Consent, confidentiality, and vouchers**

The questionnaires and study procedure were reviewed by the Macquarie University Human Ethics Committee and the project was granted ethics approval (ethics approval number 5201500453). At Time 1 the Macquarie University researcher explained the study and its purpose to those attending the In Charge of My Money program, and stated that participation in the study was voluntary and that participants could withdraw at any time. Program attendees were then asked to sign and return a consent form if they wished to be involved in the study.

Names, contact numbers and email addresses were collected at Time 1 so that the researcher could contact the participants in several months’ time. To protect participants’
confidentiality, these contact details were written on a separate sheet of paper and entered into the computer independently of the survey responses. Each participant was assigned a unique ID number so that their responses at Time 1 could be compared with those at Time 2, without using names. Postal addresses were only collected at Time 2 so that the $30 gift voucher could be posted.

Vouchers were sent via registered mail, to ensure their delivery. Despite this, five vouchers were returned to sender and participants needed to be contacted again and the vouchers resent. One participant asked for his voucher to be sent to the hospital where he was currently a patient. Two participants asked to collect the vouchers from Wesley Mission, one because he needed it urgently and the other because he was homeless and had no address.

**Questionnaires**

The questionnaires at Time 1 and Time 2 were almost identical. The main difference between them was that the Time 1 demographic questions were not repeated in the Time 2 questionnaire. The content of the questionnaires drew upon validated instruments used in long-running financial literacy programs such as Saver Plus (Russell, Stewart, Cull, 2015) and the UK financial capability survey (Atkinson, 2011). Relevant adaptations were made to suit the cohort and context of the *In Charge of my Money* program.

The areas covered by the questionnaires were:

- Demographics (gender, age, place of birth, highest level of education, number of children living with you, main source of income, income bracket)
- Reasons for attending the program and motivation level
- Program rating and feedback
- Financial self-efficacy (i.e. self-confidence in the financial domain)
- Money behaviour
- General financial knowledge
- Personal financial knowledge
• Degree of emotional spending
• Financial strain
• How often participants ask family or friends for money
• Financial inclusion (i.e. the number of financial products)
• Financial resilience (i.e. could participants raise money for an unexpected expense)
• How difficult it has been to pay bills and cover expenses
• How the participant has been monitoring their spending
• How the participant has been saving their money
• How far in advance the participant plans their spending
• How often they have money left over by the next pay day
• Questions about financial goals
• Whether or not they have money put aside to cover expenses in an emergency
• Change in debt five months after the program.

The questionnaires collected information that was both quantitative (i.e. able to be measured in numbers) and qualitative (i.e. quotes from participants). By gathering quantitative data, improvements in financial behaviours, knowledge, attitudes, self-efficacy and emotional spending were able to be measured and statistically analysed to ascertain if the changes were statistically significant and thus likely to be genuine changes.

The qualitative data provided rich information regarding how the program actually impacted participants’ lives and about the aspects of the program that were most relevant and helpful. At Time 1 participants wrote their answers to the qualitative questions on the questionnaire, and at Time 2 those who completed the survey online typed in their answers. For those who did the Time 2 survey via the telephone, the Macquarie University researcher typed participants’ words into the computer as they were speaking.

These were the qualitative questions participants were asked at Time 1:

• Why did you give the program this score (rating)?
• How could the program be improved?
• What is your financial goal?

At Time 2 participants were asked:

• What do you remember from the program?
• Why would or wouldn’t you recommend this program to your friends?
• What part of the program helped you achieve your goals the most?

Data Analysis

The quantitative analyses were conducted using the SPSS 21 statistical program. Descriptive statistics were used to find the percentages of participants that had particular characteristics and the average scores for the measures. Repeated Measures ANOVAs were used to determine if changes in the factors measured over time (e.g., to financial behaviours) were statistically significant (i.e. that they had a 95% probability of not occurring by chance). Pearson’s correlations were conducted to explore associations between participant factors and improvements in financial literacy. Multiple regression was employed to ascertain which participant factors were most strongly related to the financial literacy outcomes, after accounting for other factors. The qualitative data were analysed by themes and by counting the number of times each topic was mentioned by participants. Quotes from study participants are provided as examples of their feedback. A plain language explanation of the meaning of each statistical test will be provided with the statistical analyses.

In short, there are a number of difficulties and complications conducting research with disadvantaged and vulnerable cohorts
The primary aim of this study was to evaluate the effectiveness of the *In Charge of My Money* program for vulnerable populations. However, other areas of interest were also explored.

The results will be presented in five main sections:

- Participant program engagement, feedback and knowledge retention
- Changes in financial behaviours and reaching goals
- Changes in financial knowledge, attitudes, self-efficacy and emotional spending
- Changes in financial strain
- The participant factors most related to changes in financial behaviours and strain
- The effectiveness of text message nudges in maintaining behaviour change over time

**Participant Engagement with the Program**

The reasons why participants attended the *In Charge of My Money* program were collected to investigate whether or not there were outcome differences between those who attended the program voluntarily and those whose attendance was compulsory.

**Reason for attending the program**

As seen in Table 2, the primary reason why participants attended the *In Charge of My Money* program (65%) was because it was a compulsory part of another program they were enrolled in. Some participants (18%) attended because it was suggested by their case worker.
Table 2: Reasons why participants attended the program

<table>
<thead>
<tr>
<th>Reason for attending the program</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>It was a compulsory part of another program I was attending</td>
<td>35</td>
<td>65%</td>
</tr>
<tr>
<td>It was suggested by my caseworker</td>
<td>10</td>
<td>18%</td>
</tr>
<tr>
<td>It was suggested by my employer</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>I heard about it and wanted to attend</td>
<td>8</td>
<td>15%</td>
</tr>
</tbody>
</table>

Main money issue

At the end of the program, participants were asked what the main money issue was that they had hoped the program would assist them with. As seen in Table 3 below, the main money issues relevant to the participants were related to budgeting and money management.

Figure 6: What was the main money issue you hoped this program would help?
Level of motivation

Approximately half the participants were moderately motivated, with nearly one quarter only being a little motivated, and one fifth being extremely motivated (see Table 4). Therefore, the motivation level of participants was generally quite good. It was predicted that participants with higher levels of motivation would have better outcomes than those with lower levels of motivation.

Figure 7: Participants’ level of motivation during the program

Program attendance

The number of program workshops attended was of interest because it was surmised that the more workshops a participant attended (i.e. the greater the program dosage), the better the outcomes would be, as the program would have a greater impact on participants. As shown in Table 5, the majority of participants (67%) had attended all four workshops, and only five participants had only attended one workshop. Therefore, program attendance rates were generally quite high and there was not much variation in program dosage.
Table 3: Number of workshops attended by participants (dosage)

<table>
<thead>
<tr>
<th>Number of workshops attended</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5</td>
<td>9%</td>
</tr>
<tr>
<td>2</td>
<td>7</td>
<td>13%</td>
</tr>
<tr>
<td>3</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>4</td>
<td>36</td>
<td>67%</td>
</tr>
</tbody>
</table>

Participant Feedback on the Program

Program rating at the end of the program

At the end of the last workshop of the program, participants were asked to rate the program. Participants rated the program very highly, with an average score of 8 out of 10 (see Table 6).

![Figure 8: Out of 10, how would you rate this program?](image)

When asked why they had given the program that score, 29 participants (54%) commented that the information was helpful or interesting or relevant. For example:

“All useful information”

“Bearing in mind the target audience it is well suited”

“Because it was informative and made me think before I spent”
“It was clear, concise and best of all, relevant”
“I found it to be informative, and in some cases, confronting”
“I found it very informative and useful”
“I knew a lot of the information already, but revisiting it was helpful”
“It gave me ideas about getting my finances back in order”
“It has a lot of useful information to help those who want to help themselves”
“Was very informative and covered a broad range of areas”
“Very informative about debt, interest rates and different forms of debt/credit”

Eight participants commented that the program helped them learn specific money management skills:

“It was very interesting and I learned a lot of information about how to really manage my money better than I have been”
“It helped me to learn about managing my money”
“Because I learnt a lot of skills surrounding my debts”
“Gave me incentive to save, think what I am spending on (I am an impulsive and compulsive spender) and budgeting information, which I will use”
“Because the program helped me learn how to save money”
“Help me realize how I can manage my money”
“Because they gave me the information. Learn about budgeting and managing money”

Several participants made positive comments regarding the presenters or presentation:

“[Facilitator’s name]’s knowledge”
“Facilitator was very informative and used easily understandable terms”
“Great presenter, presentation”
“It was very educational and [facilitator’s name] presented it really well. Answered all my questions”
“[Facilitator’s name] was great”
“Very informative, well presented and spoken by [facilitator’s name] :)”
“It was very well constructed and informative. Very well presented”
“Visual tools, lecturer, and information”
Seven participants gave less positive reasons for their score:

“Because I wasn’t that interested”
“Wasn’t relevant at all for me”
“I basically know all the info”
“Because it needs some games, more interactive”
“It may be explained in a little more detail”
“It only helped me a bit so far”
“Speaker could better explain things. Saving mentioned but not really how to or how much you should save”

Figure 9: Why did you give the program that rating?

Recommending the program to friends

Several months after completing the program, participants were asked if they would recommend the In Charge of My Money program to their friends. The majority (85%) said that yes, they would recommend the program to their friends. Only four participants (7.5%) said they would not recommend it to their friends. Another four participants (7.5%) said it would depend on whether or not their friends needed the program or were interested in it. The fact that 85% of participants would recommend the program to their friends is consistent with the high program rating noted earlier.
When asked why they would or would not recommend the program, participants gave the following responses, consistent with the comments on the relevance and usefulness the program made by participants several months earlier:

**Yes, I would recommend the program to my friends**

“Definitely, it just sort of hits home, makes you think about things more. I used to live one day at a time, but now I’m thinking in the next 20 years”

“For sure, because it is less sort of textbook, it’s more relevant than some of the other courses I’ve done (I’ve done business courses before) but this was more relevant to my SES level”

“Yes as it was very informative”

“Yes because it makes financial planning easier and less stressful, and also informs you of hidden interest in places”

“Yes because it may help them”

“Yes I suppose I would. I worked in the bank for 10 years but I still learnt stuff”

“Yes I would, because it’s practical like a lot of people don’t think according to what we’ve learnt, not many think like that, they just spend what they get without thinking about it. This program teaches you to think about how you spend your money”

“Yes, because I think I’m money wise but there are a lot of people that aren’t. It’s good basic information that everyone should know”

“Yes, because it does give you an insight into what you were doing wrong, spending more money than you’ve got”

“Yes, because it was beneficial to me so it might be beneficial to them”

“Yes, because it was easy to understand, helpful, simple and clear, not too complicated at all”

“Yes, I’ve told my son and daughter about it. Because it’s useful, the need to budget and stick to it”

“Yes, I thought it was wonderful, quick and simple but learnt in depth how to manage your money, and to learn about the budget website”

“Yes, I’ve told a few people about it. I understood it. It’s easier to understand than other programs”

“Yes, was talking to my niece about it the other day. At the time it was very helpful and it did make me think about things”
“Yes! As it really makes you think about the money you’re spending and how not to get into more debt”

“Yes. It was pretty basic but I needed to hear it”

“Yes. It was very informative, with useful & practical tips on money management”

No, I would not recommend this program to my friends

“I have a lot of friends who are business people so they don't need it”

“No, it hasn’t got enough strategies”

“No because most of my friends work and have their own financial planners – they don’t need it”

“Not to my friends, but beneficial for those on government benefits or those who consistently struggle financially”

“Most definitely. I found with me doing the course it’s taught me to focus on where my money is going and where I’m spending. I don’t just throw crap in the trolley, like chocolates and lollies, anymore. Now I ask myself, ‘do I need that?’ and I think, ‘no I don’t’, so I put it back. It’s also taught me to plan my meals.”
It depends

“If they needed help I would, because it gives advice about money”

“If they were interested I would”

“It depends on them - on their circumstances, if they need it”

“Possibly, if available, they should do it, most are already aware of their spending, but little things help even people who are OK with money e.g. budgeting, being more conscious of what you are spending, then it becomes a habit to think before spend your money”

In sum, most (85%) of participants said they would recommend the program to their friends because it is easy to understand, relevant, and helpful.

Suggested areas for improvement

When asked “Which parts of the In Charge of Your Money Program need to be improved”, half answered that no improvement is needed, they liked it just the way it is (see Table 4).

Table 4: Which parts of the program need to be improved?

<table>
<thead>
<tr>
<th>Areas for improvement</th>
<th>Number of participants</th>
<th>Percentage of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>No improvement needed, I like it just the way it is</td>
<td>28</td>
<td>52%</td>
</tr>
<tr>
<td>The PowerPoint slides</td>
<td>8</td>
<td>15%</td>
</tr>
<tr>
<td>The information could be more relevant</td>
<td>6</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>9%</td>
</tr>
<tr>
<td>The presenters</td>
<td>4</td>
<td>7%</td>
</tr>
<tr>
<td>The worksheets</td>
<td>3</td>
<td>6%</td>
</tr>
<tr>
<td>The know it, understand it, do it, review it structure</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>
The eight people who thought the PowerPoint slides needed to be changed said the following:

- “Add pictures/videos for stimulation”
- “Could be easier to read and understand”
- “I couldn’t see them - too small”
- “Less credit card info not eligible”
- “More pictures”
- “Most I couldn’t read - too small”
- “They are quite repetitive”

Those participants who ticked “other” as needing improvement, said:

- “Session 3 was information overload”
- “Games, prizes”
- “More group participation”
- “The information could be more in depth”
- “Too much repetition”

Comments from the four who said the presenter needed improvement, were:

- “Boring and not well suited for public speaking”
- “explained more”
- “Repeats themselves too much”

Two of the three people who suggested the worksheets needed to be improved said:

- “I wasn't sure what to write”
- “There aren't enough notes in the worksheets”

No comments were made regarding how to improve the relevance of the information, except that credit card information was not relevant to most participants as they were not eligible for a credit card.

In sum, participants were very satisfied with the content, relevance and presentation of the In Charge of My Money program, rating it very highly, on average, and having few complaints.
What Participants Remembered 5-7 Months After the Program

Knowledge and understanding retention from the program several months later was a key area of interest. An effective financial literacy program is one where the benefits of new knowledge and understanding endure over time rather than being quickly forgotten. In order to examine this retention, participants were asked 5-7 months after completion of the In Charge of My Money program, “What do you remember about the program?”

Almost two thirds of participants (65%) remembered that the program was about budgeting and money management generally, with no specifics. Just over a quarter of participants recalled more detailed information about the different types of loans, how to manage debt, and the danger of payday loans. Approximately one quarter also remembered specific advice about being mindful of spending habits, including impulse buying, spending “leaks”, asking oneself “do I really need this?”, only taking the money that you need to the shops, and planning what you will spend before going to the shops. Almost a quarter recalled tips about how to save, such as “pay yourself first”, put change in the money box, save every dollar, and every little bit counts. Four participants (7%) mentioned resources and now knowing where to get financial help, such as the MoneySmart website and awareness of financial counsellors. Only six participants (11%) remembered little or nothing from the program.
Figure 10: It’s been 5 months since you did the *In Charge of My Money* program. What do you remember from the program?

N.B. These percentages do not add up to 100% because some participants remembered multiple aspects of the program.

**Budgeting and Money Management Generally**

Sixty-five percent of study participants remembered that the program was about budgeting and money management in general, as shown in these examples:

- “Budgeting and being more aware of what’s going out versus what’s coming in”
- “Budgeting really, and trying to start saving”
- “I remember it telling me how to handle my finances, things to look out for, like fees, and how to create your own budget”
- “How to budget”
- “Reinforcing the fact that managing money needs a good budget - difference between income and expenses. I’ll never get a payday loan after the course”
- “How to plan a budget and keep it simple”
- “It taught me how to focus on what was important and not, and how to budget better than I was”
- “It was like a basic on how to manage money”
- “Learning about different ways to manage your money”
- “Money management, saving, budget, save a dollar every day”
Spending Habits

Twenty-six percent of participants recalled learning about spending habits or becoming more aware of how they spent their money:

“Basically points to think about when buying, like impulse buying was the big thing I took away from that”

“I remember that I was shocked to see just how much money I wasted on things I didn’t really need”

“Basically sort of I suppose be more careful when I spend my money. Instead of buying 2 of something only buy one. So now I only buy 1 pack of smokes instead of 2, so I’m smoking less too”

“Discovering where my money leaks”

“Learning to be more mindful of spending habits”

“These days I have money left over. It taught me how to budget and how to be more careful in what I spend my money on”

“You got to plan what you’re going to spend before you go to the shops. Now I avoid going to shops that sell a variety of things. Ask yourself, like, do I really need this, question yourself first”
Loans & Managing Debt

For 28% of participants, information about how to reduce debt, the difference between the types of loans and being more aware of interest rates, were the topics they remembered:

“Ads about bad debt on TV, steer clear of them, payday loans, steer clear of them, how important it is to do a budget”

“Getting to know what our needs are, and the types of loans, good and bad loans”

“Learning about different types of loans and what not to touch”

“Some accounts that you can open up, small loans program (NILS) - I ended up getting a NILS loan”

“I remember it being more helpful than any other program and helped me get familiar with interest and credit cards. The most memorable thing was about debt, it’s never too late to sort out debt”
**How to Save**

Tips on how to save money were remembered by 24% of study participants:

“A lot of detail about savings, a lot about paying your bills, like putting money aside and working out a budget, avoiding loans (especially those on TV), budgeting mainly. I wanted to learn how to save because I’ve never been good at doing that.”

“How to save money, how to budget”

“Just about paying yourself first, making sure you have money for your bills. Because I’m on the pension, I have bills taken out first. When I go shopping, I only take what I need (cash) and use my card as little as possible. It’s going well, I’m even saving a bit”

“Just that you’re in control of your own money. Pay yourself first”

“I remember it taught us how to look at our finances and how to re-evaluate it and how to set goals”

“Just about how you save money and what not and make a plan, stuff like that”

“remember budgeting and paying myself first and stopping impulse buying, putting loose change in my money box. Every day I put aside $3 at least, so I can pay the bills. It’s working for me really well, especially because I’m on a limited budget. I’m not going into debt, I’m not borrowing anymore.””
Resources Available

Seven percent of study participants recalled information about where and how to find financial help and resources:

“Writing down your income and expenses and seeing whether you spend more than you earn. I remember the websites where you can go to see if you borrow money how long the loan will last and how much you’ll have to pay”

“Avenues for financial help and support credit ratings - how they work, how to view and update loans - short term loan pitfalls etc.”

Remembered Very Little from the Program

Only 11% of participants reported remembering nothing or very little from the program:

“Not much at all”

“Not much really, just that every little bit counts”

“I did it in rehab, I’m not there anymore. I can’t remember a lot”

“Not much”

“Not much to be honest, something about budgeting”

“I can’t remember what it was about”

In short, most participants remembered that the In Charge of My Money program was about budgeting and money management generally, and many participants also remembered specific knowledge and spending or saving tips. Only six participants said they remembered little or nothing from the program.

Considering that most of these study participants were in residential drug, alcohol or gambling addiction rehabilitation centres or homeless at the time of doing the program, this level of knowledge retention is impressive.
Improvement in Financial Behaviours

The main aim of this evaluation project was to identify the outcomes of the program on participants’ financial knowledge, attitudes and behaviours, and whether there was sustained change over time. Consistent with the conceptual model for financial capability (Kempson, Collard, & Moore, 2006), change in actual money-related behaviour was considered the most important indicator of program effectiveness and was the primary focus of this evaluation. To assess improvement in financial behaviours, the following specific financial behaviours were measured:

Money Behaviour

Participants were asked if they strongly disagreed, disagreed, neither agreed nor disagreed, agreed or strongly agreed with four statements relating to money behaviours. They were asked these questions in relation to three points in times; before they did the program, immediately after the program, and 5-7 months after completing the program. Asking participants at the end of the program to answer some questions as they believe they would have before they did the program, is referred to as ‘retrospective’ questioning and is considered suitable for low-income populations where research participation is difficult to obtain (Lyons et al., 2006). The statements measuring money behaviour were:

- Before I buy something I carefully think about whether I can afford it
- When I shop I spend time comparing prices to get the best deal
- I buy things even when I can’t really afford them
- I buy things on credit rather than waiting and saving up

Monitoring Expenses

To measure the degree to which participants monitored their expenses, both before the program and then 5-7 months after the program, they were asked this question:

- Which one of the following best describes how you monitor your expenses?
  - I don’t keep an eye on expenses at all
o I keep my eye on expenses a bit
o Without keeping written records I keep a fairly close eye on expenses
o I use written records to keep an eye on expenses

Saving Behaviour

To measure participants’ money saving behaviour, both before the program and then 5-7 months after the program, they were asked this question:

• Which of the following best describes your saving behaviour?
  o I save a set amount on a regular basis
  o I save what is left over on a regular basis
  o I save odd amounts when I can
  o I am unable to save

Planning Behaviour

To measure the way participants’ plan their spending, both before the program and then 5-7 months after the program, they were asked this question:

• How do you plan your spending?
  o Over the next week or fortnight
  o Over the next few months to 1 year
  o Over the next 2-4 years
  o Over the next 5 years or more
  o I don’t plan
Was there evidence of improved financial behaviours for program participants immediately after and 5 months after the program?

As the table below shows, there was significant, positive behaviour change 5-7 months after the program across all four behavioural domains. The effect sizes of these changes were substantial and robust.

Table 5: Evidence of improved financial behaviours 5 months post program

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size</th>
</tr>
</thead>
</table>
| Money behaviour     | Yes, there was a significant improvement between behaviour before the program and at the end of the program, and before the program and after several months. There was no significant difference between immediately after the program and several months later, indicating that the improvements were sustained over time (see Figure 11) | $F(2,94) = 15.71$  
$p < .0005$  
$n = 48$ | .250 (very large) |
| Monitoring expenses | Yes, there was a significant improvement between monitoring expenses behaviour before the program and after several months. | $F(1,53) = 24.35$  
$p < .0005$  
$n = 54$ | .315 (very large) |
| Saving behaviour    | Yes, there was a significant improvement between saving behaviour before the program and after several months. | $F(1,53) = 6.09$  
$p = .017$  
$n = 54$ | .103 (medium) |
| Planning behaviour  | Yes, there was a significant improvement between planning behaviour before the program and after several months. | $F(1,53) = 6.74$  
$p = .012$  
$n = 54$ | .113 (medium) |
What do the statistics show?

The F-Statistic is a measure of how different the average score for a measured factor (for example, financial behaviour) is at the different times it was measured. A larger F-statistic number means the difference is bigger. The p-value indicates how likely it is that this difference is due to chance, with a lower p-value indicating a lower likelihood. The effect size number reflects how ‘strong’ and robust the effect is (e.g., the difference in average scores at the 3 times). An effect size between .01 and .05 is considered a somewhat weak effect; between .06 and .13 a medium (moderately strong) effect and over .14 a strong and robust effect. The stronger an effect is the more likely it would be found again if the same study were run again (for example, with a different group of program participants).

Thus, the findings for financial behaviours (see Table 5 and Figure 11) show that:

- There was a clear improvement in financial behaviours from before the program to immediately after it;
- Five to seven months later, those gains in positive behaviours had not declined;
- The likelihood these gains were due to chance is very low (less than 1 in 1000);
The size of this effect was very large and robust;
Together these statistics suggest that there was a significant improvement in financial behaviours during the program, that this improvement was retained over time, that the improvement was substantial and robust, and that the results can be trusted;
• Monitoring expenses and Money behaviours were the most improved behaviours.

Identifying and Achieving Financial Goals

Being able to identify a financial goal and successfully work towards it is considered a key indicator of financial capability. Therefore, whether or not participants had identified a goal, how much the In Charge of My Money program helped them achieve their goals, and the extent of actual progress towards the specific goal they had chosen during the program, were investigated.

Setting goals

Of the 38 participants (70%) who did not have a financial goal before doing the program, 30 of these (79%) had a goal by the end of the program. As shown in Table 10, only eight study participants (15%) did not have a financial goal by the end of the program.

Figure 12: Participant goal setting before and after the program
What were participant’s goals?

During the *In Charge of my Money* program, participants are asked to identify a financial goal to work towards. The goals tended to fall into three categories:

- **To save money or to save for something in particular, for example:**
  - “to save”
  - “To save and have access to my own money if and when I need it”.
  - “try to save a little”
  - “Save close to 30% of money I earn. 15% emergency 15% luxuries”
  - “Save for a house”
  - “save for an overseas holiday in 2016”
  - “Save money for my new home, like furniture, bond money, etc.”
  - “Save money to go away for a weekend”
  - “Buy new electric shaver”
  - “Go back to Thailand”
  - “New car”

  50% of participants identified saving money or saving for something specific, as their goal.

- **To reduce debt, for example:**
  - “Address debts”
  - “Be debt free”
  - “Contact financial counsellor to repay and manage debts”
  - “Pay loans”
  - “pay off mortgage”
  - “Reduce all my debt”

  Ten participants (19%) said that paying off their debts was their goal.

- **To be able to budget and generally manage their money better, for example:**
  - “Budget and save”
  - “Budget better”
  - “Get more financially stable”
Seven participants (13%) reported that budgeting and improved money management was their goal.

Did the program help participants achieve their financial goals?

To answer that question, participants were asked several months after the program:

- How much did this program help you achieve your financial goals?

Only 6 participants (11%) said the program did not help them achieve their financial goals at all, and more than half (56%) said the program helped them ‘a lot’ or ‘very much’.

![Figure 13: How much did this program help you achieve your financial goals?](chart)

What helped participants achieve their goals the most?

When asked which part of the program helped them to achieve their financial goals the most, participants’ responses fell into five main categories:
• Becoming aware of their spending habits and the need to plan and prioritize their spending
• Budgeting in general
• Information about loans, debt and credit
• Goal setting and how to save
• The program did not help very much or they could not remember.

![Graph showing the percentage of participants for different parts of the program.]

Figure 14: What part of the program helped you to achieve your goal the most?
N.B. The percentages do not add up to 100% because some participants responded with more than one part of the program.

**Spending behaviour**

Thirty-five percent of participants reported that learning positive spending habits and becoming more aware of their own spending habits, was the aspect of the program that they found the most helpful. For example:

“Think before you spend – I only take the money I need to the shops now”

“Understanding my spending patterns”

“Not spending on things I don't need”

“Not using your money wastefully, having priorities”

“Prioritizing and thinking ahead (e.g. prepaying bills instead of spending the money)”
“The handouts reflecting back and how I can change my habits”
“I don’t spend as much on coffee and cigarettes now”
“I think just writing everything down that I spend, keeping receipts - I spend a lot of money on food”

“Looking at what I spend my money on
  e.g. take away coffee,
  watching what I spend my money on
  e.g. do I need this magazine?”

Budgeting
Twenty-eight percent of study participants said the information on budgeting helped them achieve their goal the most:

“Definitely the budgeting one, now I write a shopping list and make sure I work it all out”
“Creating and working to a budget”
“Budgeting basically”
“Just budgeting, weekly and fortnightly”
“The budgeting part and how to save money”

Loan and debt information
The same number of participants (i.e. 28%) reported that it was the information about how to reduce debt and understanding how different loans worked that most helped them achieve their financial goal:

“Learning about loans and how bad they are”
“Where to get interest free loans (I had to borrow $500) - I didn’t know about that before”
“Getting to know the types of loans we have, the good and bad loans”
“Not getting into trouble loaning money with high interest”
“Debt, budgeting, payday loan information in particular”
“Ways to manage my debt”

“Put it in perspective, paying off a small amount is better than becoming overwhelmed and not doing anything”

How to save
Some participants (17%) recounted that it was setting some goals and learning about how to save that most assisted them in achieving their goal. For example:

“Saving a certain amount of money each week”

“Savings”

“Knowing that I can have a savings account that I can’t touch”

“I’ve started putting money into a savings account. Before I withdrew the money before I saw it. I didn’t want to do the course because I thought I knew it all. But I started putting money aside that I’ve needed and I’ve already used it (for an unexpected expenses)”

“It helped a lot because it puts you in a better mindset, not wasting your money, heading towards your goals better. I don’t want to go into debt, so I’ll just wait and save and pay for things outright e.g. car and holiday”
No part of the program helped much

Only 13% of study participants stated that the program did not help them achieve their goal:

“Nothing”

“Not at all”

“Can't recall that much about it specifically”

“I don't remember”

To what extent did participants achieve the specific goal they identified during the program?

Several months after the program, participants were also asked to rate on a scale from 1-10 how much progress they had made towards the specific financial goal that they had identified during the program.

It can be seen in Figure 15 that actual progress towards a specific goal was more challenging for participants, with an average score of 5.7 out of 10. Some participants when asked this question explained that progress had been hampered by unexpected expenses (e.g. car repairs) or persistent unemployment, or other issues outside their control.

“I’m saving every fortnight now, and have saved $2000. I’m very happy with that. And I still have my bills paid, I’m not short, as I have direct debit coming out of the bank. I don't waste money on things I don't need any more. I’m actually becoming a bit of a miser”
In summary, the In Charge of My Money program helped the majority of those participants without financial goals to identify one, and over half said the program helped them achieve their financial goals ‘a lot’ or ‘very much’. Advice on how to change spending habits was reported to be the part of the program that most assisted participants achieve their goals. However, the extent of actual progress towards their specific goal was often hampered by unexpected and/or uncontrollable circumstances.

Figure 15: On a scale from 1-10, to what extent have you made progress towards the financial goal that you had at the end of the program?
Improvement in Financial Knowledge, Attitudes, Self-Efficacy and Emotional Spending

The need for increased financial knowledge and improved attitudes towards personal finances in order to develop positive financial behaviours has been recognised (Robson, 2012). Factual knowledge by itself is not enough to produce changes in behaviour. The link between knowledge and behaviour is mediated by personal characteristics such as attitudes and self-efficacy (Consumer Financial Protection Bureau, 2015).

In this evaluation study, financial knowledge was divided into two types of knowledge; general financial knowledge and personal financial knowledge. Both types of knowledge were measured by asking participants to respond to certain statements on a 5-point scale, where 1 = strongly disagree and 5 = strongly agree. They were asked these questions in relation to three points in times; before they did the program, immediately after the program, and 5-7 months after the program:

The general financial knowledge statements were:

- I know where to get help if I have financial problems
- I have a good understanding of the different types of financial products (such as loans, credit cards, payday loans or savings products)
- When I want to borrow money I know the most important questions to ask (such as find out the cost of borrowing)

The personal financial knowledge statements were:

- I know how much I need for my daily living expenses
- I know how much money I owe
- I know when my bills are due
- I know how to budget
Was there evidence of improved general and personal financial knowledge for program participants immediately after and five-seven months after the program?

As can be seen in the table below, there was statistically significant improvement in both general and personal financial knowledge from before the program to immediately after the program and to several months after the program. The effect sizes of these improvements were very large to extremely large.

Table 6: Was there significant improvement over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
</table>
| General financial knowledge  | ✓ Yes, there was a significant improvement between general financial knowledge before the program and at the end of the program, and before the program and after several months. There was no significant difference between immediately after the program and several months later, indicating that the improvements were sustained over time. The effect size of this difference was extremely large. | $F(2,98) = 104.27$  
$\ p < .0005$  
$n = 50$                                      | .680 (extremely large)   |
| Personal financial knowledge | ✓ Yes, there was a significant improvement between personal financial knowledge before the program and at the end of the program, and before the program and after several months. There was no significant difference between immediately after the program and several months later, indicating that the changes were sustained. The effect size of this difference was very large. | $F(2,96) = 24.09$  
$\ p < .0005$  
$n = 49$                                      | .334 (very large)       |

As Table 6 above and Figure 16 below show, participants, on average, had a considerable increase in financial knowledge, both general financial knowledge and knowledge about their own financial situation, that was retained 5-7 months after the program. The increase in general financial knowledge was both substantial and very robust, and must have been experienced by most of the participants to produce such strong statistical results. Again, the
tiny p-values show that there is an extremely low likelihood that these findings were due to chance.

![Financial Knowledge Chart](image)

**Figure 16**: Levels of total (combined general and personal) financial knowledge across the three measured time points

Was there evidence of improved financial attitudes and financial self-efficacy, and less emotional spending, for program participants immediately after and five months after the program?

**Attitudes to Money**

Attitudes to money were measured by asking participants if they strongly disagreed, disagreed, neither agreed nor disagreed, agreed or strongly agreed with the following three statements. They were asked these questions in relation to three points in time; before they did the program, immediately after the program, and 5-7 months after the program:

- I believe money is there to be spent
- I believe the way I manage my money today affects my future
- I am more of a saver than a spender
The table below shows that no significant improvement was found in the financial attitudes of participants, on average, from before the program to several months after the program.

Table 7: Was there significant improvement in participants’ financial attitudes over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial attitudes</td>
<td>![X] Although there was a significant improvement in attitudes before the program compared to at the end of the program (see statistics), there was no significant improvement from before the program to several months later. Furthermore, there was a significant decline in attitude between immediately after the program and several months later, indicating that the improved attitudes from the end of the program were not sustained over time.</td>
<td>$F(2,98) = 18.26$ [ p &lt; .0005 ] [ n = 50 ]</td>
<td>.271 (very large)</td>
</tr>
</tbody>
</table>

Although no significant improvement was found in financial attitudes of participants on average, data presented in the forthcoming section (“Participant factors most related to improvements in financial behaviours and strain”) shows that change in attitudes was significantly correlated with change in financial behaviours, suggesting that when program participants did have improvements in financial attitudes they also had more positive financial behaviours.

**Financial Self-Efficacy**

Higher levels of financial self-efficacy, defined as having confidence in one’s ability to deal with various situations in the financial domain, have been shown to be associated with better financial outcomes in past research (Lown, 2011). The Financial Self-Efficacy (FSE) scale was used to measure this factor in the present study, and has been found to have adequate reliability and validity (Lown, 2011). It is comprised of six statements and participants were asked if they strongly disagree, disagree, neither agree nor disagree, agree or strongly agree, with the following statements:
- It is hard to stick to my budget when unexpected expenses come up
- It is hard to make progress towards my financial goals
- When I have unexpected expenses, I usually have to use credit
- When I have financial problems, it is hard to work out a solution
- I lack confidence in my ability to manage my finances
- I worry about running out of money in retirement

It can be seen in Table 8 below that no significant improvement in financial self-efficacy, on average, was found. However, similar to financial attitudes, while no significant improvement was found for participants on average, this factor was significantly correlated with improved financial behaviours (see section titled “Participant factors most related to improvements in financial behaviours and strain”), suggesting that when program participants did have improvements in financial self-efficacy they also had more positive financial behaviours.

Table 8: Was there significant improvement in participants' financial self-efficacy over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
</table>
| Financial self-efficacy | X On average, there was no significant improvement in financial self-efficacy from before the program to the end of the program, nor before the program to several months later, nor from the end of the program to several months later. However, the improvement in financial self-efficacy from before the program to several months after the program did approach significance, with \( p = .066 \). It is possible that with a larger sample size a significant improvement across time may have been found. | \( F(2,86) = 2.107 \)  
\( p = .128 \)  
\( n = 44 \) | .047 |

**Emotional spending**

Some people spend money for psychological reasons, such as to relieve stress or unhappiness (e.g., Desarbo & Edwards, 1996). Therefore, we measured the extent of
emotional spending by asking participants if they strongly disagreed, disagreed, neither agreed nor disagreed, agreed or strongly agreed with the following two statements:

- When I’m feeling down I spend money to feel better
- When I’m feeling stressed I spend money to feel better

The following table shows that, on average, there was no statistically significant improvement in emotional spending.

Table 9: Was there significant improvement in participants’ emotional spending over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional spending</td>
<td>X There was no significant improvement in</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>emotional spending from before the program</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>to the end of the program, nor before the</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>program to several months later, nor from</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>the end of the program to several months</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>later.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>F(2,96) = 1.48</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>p = .233</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 49</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>.030</td>
<td></td>
</tr>
</tbody>
</table>

Although the statistics show that, on average, there was little decline in emotional spending, it is important to note that this finding is likely an artefact of the differing results of the groups who did and did not receive a text message nudge. Participants who received the text message nudge had a decrease in emotional spending during the course of the program and then a further decrease 5-7 months later (see Figure 24, in section “The effectiveness of text message nudges”). In contrast, those who did not receive the nudge had a decrease in emotional spending across the course of the program but 5-7 months later had returned to emotional spending levels similar to those at the start of the program. Thus it seems that the differing results for these two groups may have ‘cancelled each other out’ when the data were combined. Nevertheless, it seems the program did not facilitate reductions in emotional spending without being complemented with a further intervention.
In summary, there was little statistical evidence of sustained change in financial attitudes, financial self-efficacy, and emotional spending, after the program.

Participants’ Financial Strain

As well as examining participants change in financial behaviours, knowledge, attitudes, self-efficacy and emotional spending several months after the program, this study investigated if participants experienced changes to levels of financial strain by asking participants several questions regarding their current financial circumstances.

The first question asked participants if they had experienced, over the past few months, a number of indicators of financial strain.

Was there evidence of fewer problems due to a shortage of money from before the program to 5-7 months later?

It can be seen from Table 10 that there was a substantial decrease in the number of problems due to a shortage of money from before the program to several months after the program, with 26% of participants now reporting that none of these things happened to them due to a shortage of money, compared to 11% in the few months before they commenced the program. There were decreases across all indicators of financial strain from before the program to five to seven months after the participants completed the program. For this cohort, this is an important outcome. Although there are a number of factors that may have contributed to this improvement in financial circumstances (e.g. being free of addiction, now having a job), it does suggest that the program may have had a positive impact on participants’ financial circumstances.
Figure 17: In the past 5 months, did any of the following happen to you because of a shortage of money?

Table 10: Was there a significant reduction in the number of issues due to shortage of money over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of issues due to shortage of money</td>
<td>✔ Yes, participants reported significantly fewer issues due to a shortage of money from before the program compared to several months after the program. The effect size of this improvement was moderate.</td>
<td>$F(1,53) = 4.55$</td>
<td>.079 (medium)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$p = .038$</td>
<td>$n = 54$</td>
</tr>
</tbody>
</table>
Was there evidence of reduced debt 5-7 months after the program?

Reducing debt is a primary focus of the In Charge of My Money program and important in reducing financial stress.

After 5-7 months, participants were asked:

- Over the past few months, has your level of debt:
  - Increased
  - Stayed the same
  - Decreased?

As can be seen in Figure 18, of the 70% of participants who commenced the program with debt, almost half (47%) had reduced their debt several months after the program.

![Figure 18: Over the past few months, has your level of debt increased, decreased or stayed the same?](image)

Did participants feel less stressed about their future since doing this program?

As reported in Wesley Mission’s 2010 third financial stress report (Wesley Mission, 2010), financial stress impacts on psychological stress about the future. Therefore, participants were asked if they felt less stressed about the future after doing the In Charge of My Money program. It can be seen from Figure 19 below that almost two thirds (63%) of participants...
said they felt less stressed about the future since doing the program, suggesting that the program may have had some effect on general stress about the future.

![Bar chart showing percentage of participants feeling less stressed](chart)

**Figure 19: Do you feel less stressed about the future since doing this program?**

**Was there greater financial inclusion for participants several months after the program?**

Financial inclusion refers to having access to a range of financial products and services, and is an indicator of available financial resources (Muir et al., 2016). In this study, financial inclusion was measured by asking participants if they had any of a list of financial products, then summing the number of products to create a financial inclusion score.
Figure 20: Do you have any of the following types of finance products?

Table 11: Was there significant improvement in financial inclusion over time?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial inclusion</td>
<td>Yes, participants reported significantly more financial products several months after the program compared to at the end of the program. The effect size of this increase however was small.</td>
<td>$F(1, 53) = 12.23$</td>
<td>.019 (small)</td>
</tr>
</tbody>
</table>

As can be seen in Figure 20, one participant (2%) did not know what financial products they had. Only 8 participants (15%) had a credit card, and this did not change over time. Five people (9%) had a mortgage, and this did not change over several months. Only three participants (6%) had a personal or car loan 5-7 months after the program, compared to six people (11%) before the program. For all other financial products there was significantly greater inclusion several months after the program. As shown in the above table, there was
significant improvement in financial inclusion for study participants 5-7 months after the program.

Did more participants have money set aside for emergencies?

Having money available in case of emergencies is an indicator of participants’ financial resilience. Participants were asked, “Do you have money put aside for emergencies and/or savings to cover your expenses if you got sick or lost your job?”

At the end of the program, 35% of participants said they had money set aside for emergencies, but 5-7 months after the program, 52% of participants said they had money reserved for emergencies, showing substantial improvement. Having a financial buffer is a key component of financial well-being and serves to reduce stress. Individuals living financially precarious lives are at most risk of poor health and long-term financial hardship.

Was there a change in participants’ financial resilience?

Participants were asked the following question in order to gauge an understanding of their financial resilience (ability to cope with financial shock): “If you had 1 week to raise $1,000 for an unexpected expense, how would you raise the money?”

As seen in Figure 21, no participants said they would use a credit card, at either time point. No one said they would use an online payday lender several months after the program, which was a slight decrease from two who said they would use this method at the end of the program. The number who said they would borrow from a shopfront payday lender decreased marginally from three to two participants. There was an increase in ‘use my savings’ and ‘borrow money elsewhere’ from the end of the program to several months after the program. Of the five (9%) who said they would borrow money elsewhere several months after the program, three participants said they would do overtime at work or obtain the money from work in other ways, suggesting some participants had found employment between the end of the In Charge of My Money program and the survey 5-7 months later.
The “Financial Resilience in Australia 2015” report (Muir et al., 2016), based on a representative sample of 1,496 Australians, found that 17% of Australians would not be able to raise $2,000 within a week in case of an emergency, compared to 37% of participants in the present study at Time 1. However, at Time 2, only 20% of study participants would not be able to pay an unexpected expense, which is similar to the Australian average, although the amount in this study was only $1,000 not $2,000. In the present study 50-54% of participants would use their savings to pay for an unexpected expense, compared to 83% of Australians (Muir et al., 2016). Furthermore, 31% of Australians would use a bank loan or credit card to pay for an unexpected expense, compared to no study participants who would use a credit card. These findings reflect the very limited resources of savings and credit cards available to these study participants, compared to the average Australian.

\[\text{\footnotesize 1} \] The lower amount of $1,000 was chosen for this study given the difficult financial circumstances of the cohort. If $2,000 was used as in the ABS measure, there would be little to no change in participants’ abilities to raise the amount.
Was there improvement in other indicators of financial strain?

Other indicators of financial strain and hardship were the frequency that participants asked family members for money, the level of difficulty in paying bills and covering expenses, and how often they had money left over by the next payday.

**Asking family members for money**

Participants were asked:

- How often do you ask other family members for money (not including your partner or children)?
Participants could answer with one of the following:

- Never
- Occasionally (about once per month)
- Regularly (about every 2 weeks)
- Frequently (every week)

**Difficulty paying bills**

Participants were asked:

- In a typical month, how difficult is it for you to cover your expenses and pay all your bills?

Participants could answer with one of the following:

- Not at all difficult
- A little difficult
- Moderately difficult
- Very difficult
- Extremely difficult

**Money left over**

Participants were asked:

- In a typical month, how difficult is it for you to cover your expenses and pay all your bills?

Participants could answer with one of the following:

- Always
- Most of the time
- Sometimes
- Rarely
- Never

As seen in the table below, although participants, on average, asked family for money less frequently, found it less difficult to pay all their bills, and had more money left over 5-7 months after the program than before the program, these improvements did not reach statistical significance. These results show that improving financial literacy cannot be a stand-alone strategy for improving the financial well-being of individuals, especially those who are experiencing poverty. Sufficient income is critical to be able to put into practice the behaviours necessary for financial well-being.
Table 12: Was there significant improvements seem in indicators of financial strain?

<table>
<thead>
<tr>
<th>Measure</th>
<th>Was there significant improvement over time?</th>
<th>F statistic</th>
<th>Effect Size (partial eta²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asking family for money</td>
<td>Participants asked family members for money less frequently several months after the program compared to at the end of the program, but this difference was not statistically significant. This improvement approached significance and may have been significant if the sample size was larger.</td>
<td>$F(1,52) = 3.07$</td>
<td>0.056</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$p = 0.086$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$n = 53$</td>
<td></td>
</tr>
<tr>
<td>Difficulty paying bills</td>
<td>Participants found it less difficult to pay their bills and meet their expenses several months after the program compared to at the end of the program, but this difference was not statistically significant.</td>
<td>$F(1,53) = 2.52$</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$p = 0.118$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$n = 54$</td>
<td></td>
</tr>
<tr>
<td>Money left over</td>
<td>Participants had more money left over by the next pay day several months after the program compared to at the end of the program, but this difference was not statistically significant.</td>
<td>$F(1,53) = 1.86$</td>
<td>0.034</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$p = 0.179$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$n = 54$</td>
<td></td>
</tr>
</tbody>
</table>

In summary, the results for improvements in financial strain and hardship several months after the program were mixed. There was evidence that participants experienced fewer problems due to a shortage of money, had reduced debt, felt less stressed about the future, had more financial products, and were more likely to have money set aside for emergencies, 5-7 months after the program compared to before the program. However, there was no statistically significant improvement in asking family for money, difficulty paying bills, or having more money left over.
Participant Factors Most Related to Improvements in Financial Behaviours and Strain

In addition to examining whether or not there were significant and sustained changes in participants’ financial behaviours and financial strain several months after the *In Charge of My Money* program, we were interested in which participant factors were most closely associated with these changes. This is done by measuring the correlation between two measured factors – the degree to which one factor changes systematically with changes in another.

Identifying significant associations between participant factors and outcomes suggests which factors were most influential on participants’ subsequent changes in behaviour. Using correlational analyses, the factors most closely associated with the following outcomes as measured at Time 2 (5-7 months after the program) were investigated:

- Improved money behaviours
  (i.e. thinking carefully about whether I can afford something before buying it, spending time comparing prices to get the best deal, not buying things if I can’t really afford them, and waiting and saving up rather than buying things on credit)
- Improved level of saving behaviour
- Improved level of planning behaviour
- Improved level of monitoring of expenses
- How much the program helped achieve financial goals

2 Correlations can range from -1.0 to +1.0, with numbers closer to zero showing a low correlation and numbers closer to +/- 1 a higher correlation. For example, the correlation of height with age might be very high in childhood (say .70 or greater) because as children grow they generally also get taller. Once people are adults however, height would change very little with age, and so the correlation would be very small (maybe <.03) and reflect only tiny decreases in height with old age. Correlations are thought of as weak if they are less than .30, moderate between .30 and .60, and strong above .60. It is important to be aware that correlational analyses do not show causation (i.e. if two factors are correlated, it does not mean that one causes the other, as factor A could cause factor B, factor B could cause factor A, or there could be another factor that causes the association between factors A and B).
• The extent of progress made towards the specific financial goal chosen during the program
• Fewer problems due to a shortage of money
• Less difficulty paying bills
• More money left over by the next pay day
• Less frequently asking family for money
• Reduced debt, for those who had debt at the commencement of the program.

Improvement in attitude
As shown in Appendix 1, of all the participant factors investigated in this study, improvement in attitudes to spending (i.e. degree of agreement to the statements, ‘I believe money is there to be spent’, ‘I believe the way I manage my money today affects my future’, and ‘I am more of a saver than a spender’) was the most reliably statistically significantly factor related to improvements in financial behaviours.

Specifically, improved attitudes were significantly and moderately related to improvements in money behaviour, saving behaviour, monitoring expenses, achieving goals, and reducing debt. Attitudes to spending were also marginally associated with improved planning behaviour. It is interesting that improved attitudes were consistently associated with a range of improved financial behaviours considering that, on average, the improvement in attitudes at the end of the program was not sustained over time (see p.91). These correlations suggest that even though there was no sustained improvement in attitudes over several months for study participants on average, there was a relationship between improved attitudes to spending and improved financial behaviours over time for those participants who did experience change.

Improvement in financial self-efficacy
Improvement in financial self-efficacy, which is confidence in the ability to manage finances, was significantly and moderately related to improvements in money behaviour and monitoring expenses, how much the program helped them achieve their goals, progress
towards a specific financial goal, and fewer problems due to a shortage of money. Similar to improvement in attitudes, finding that improved financial self-efficacy was associated with a number of improved financial behaviours was somewhat surprising given that, on average, no statistically significant improvement in financial self-efficacy was found after the program (see p.92). These correlations suggest that even though there was no sustained improvement in financial self-efficacy over several months for study participants on average, there was a statistically significant relationship between improved financial self-efficacy and improved financial behaviours over time for those participants who did experience change.

Program engagement
How highly a participant rated the program at the end of the last session of the program was consistently and moderately associated with improved financial behaviours, but it was not related to reduced financial strain. Specifically, higher ratings of the program were linked to improved money behaviours, improved planning and monitoring behaviours, and the perception that the program had helped them achieve their financial goals, several months later. The level of motivation during the program was significantly and moderately related to only one outcome; improved money behaviours. These findings demonstrate that the extent that program attendees believed the program was beneficial at the end of the program was associated with how much their financial behaviours improved months later, and that motivation during the program appeared to have little influence on most subsequent behaviours.

General & personal financial knowledge
Very large statistically significant and sustained improvements in both general and personal financial knowledge from before the program to several months later were found. The subsequent question, however, was whether or not these robust improvements in knowledge were associated with improvements in financial behaviours, since increased knowledge does not reduce financial strain except through changed behaviours. As shown in Appendix 1, improved financial knowledge, combining general and personal financial
knowledge, were moderately significantly correlated with improved monitoring of expenses and how much the program helped participants achieve their financial goals. Financial knowledge was also marginally related to improved money behaviour and having more money left over by the next payday. These significant associations between knowledge and financial outcomes suggest (but do not prove) that increased financial knowledge may play a necessary role in changing financial behaviours.

Emotional spending

Somewhat surprisingly, given that there was no decrease in emotional spending five to seven months after the program, reduced emotional spending (i.e. less spending money to feel better when feeling down or stressed) was moderately significantly associated with improved money behaviour, how much the program helped the participant achieve their financial goals, and fewer problems due to a shortage of money. These findings suggest that addressing emotional spending may be important in financial literacy programs, but that the benefits may be most significant for those for whom emotional spending is an issue.

Participant factors not associated with improvement in financial behaviours or financial strain

It is important to note those participant factors that were not significantly associated with improvements in financial behaviours after the program as these may also provide useful information for financial literacy programs. No demographic factors, including gender, country of birth, age, highest level of education, and income, were statistically significantly associated with any improvements in financial behaviours or reduced financial strain. These findings suggest that the influence of the program on improved financial behaviours was not related to gender, age, nationality, education level or income, and therefore the In Charge of My Money program may be relevant to a broad range of people within vulnerable populations. However, it should be remembered that there was little variation in cultural and linguistic background in this cohort, with most being born in Australia or other English speaking countries. The study participants were also quite homogenous on indicators of
socioeconomic status, with government benefits being the main source of income for 85% of participants. Therefore, this evaluation cannot comment on the effectiveness of the program for culturally and linguistically diverse populations, or for those from higher socioeconomic populations.

In addition to demographic factors, two program engagement factors were not statistically significantly associated with any improvements in financial behaviours or reduced financial strain. The number of workshops attended, also referred to as the program ‘dosage’, was not related to program outcomes. However, the majority of participants (78%) attended all or three of the four workshops, so there was little variation in this factor.

The other program engagement factor that was not related to improvements in financial knowledge or behaviours, or to reduced financial strain, was whether or not participants attended the program because it was a compulsory part of another program they were involved in, such as a drug and alcohol rehabilitation program. This knowledge is relevant because it suggests that those people who do not voluntarily choose to do the In Charge of My Money program, may benefit from it to a similar extent as those who choose to attend voluntarily. This is consistent with the finding that motivation level during the program was only related to one outcome variable, as noted previously. Taken together, these findings suggest that including the program as a component of other programs and services may be an effective way to improve the financial literacy of a large number of marginalised and vulnerable people.

The most predictive participant factors

In addition to discussing the significant associations between participant factors and a range of program outcomes, it is also useful to identify which participant factors remain significantly associated with the outcomes after taking the other factors into account. Appendix 2 shows that some participant factors are significantly and moderately correlated. The two program factors, motivation level and program rating, were strongly correlated \((r = .66, p < .0005)\), as were the two knowledge factors, general and personal knowledge \((r = .61, p < .0005)\). Multiple regressions were conducted as a way of working out which factors most
strongly predicted better outcomes when all the factors were considered together. Improved general financial knowledge, improved personal financial knowledge, improved attitudes to spending money, improved financial self-efficacy, less emotional spending, program rating at completion, and level of motivation at the beginning of the program, were all initially entered into a stepwise, backward multiple regression for each of the key outcome measures. The results of these multiple regressions are given in Appendix 1. Consistent with the correlational results, financial self-efficacy and attitudes towards spending were the most frequently independently predictive participant factors in the final models. The other factors that were important predictors of good outcomes in some analyses were program rating, personal financial knowledge, and emotional spending.
The Effectiveness of Text Message Nudges

With the ubiquitous use of mobile phones and text messaging has come an increased interest in how text messages can be used to prompt, or ‘nudge’, people towards positive behaviours. For example, text messaging has been used to increase the uptake of influenza vaccinations (Chai et al., 2013), help people stop smoking, encourage more physical activity, remind diabetes patients to take their medications, assist in weight loss (Cole-Lewis & Kershaw, 2010a; Fjeldsoe, Marshall, & Miller, 2009), encourage adherence to a daily medication regimen for those living with HIV (Finitsis et al., 2014), remind school leavers of the required tasks needed to enter college (Castleman & Page, 2015), promote sexual health in young people (Gold, Lim, Hellard et al., 2010), improve credit score ratings (Bracha & Meier, 2014), and improve loan repayment (Karlan et al., 2012).

Since there has been evidence of success in using text message nudges to encourage a wide range of desirable behaviours, it was decided to trial the use of text message reminders after the In Charge of My Money program in this study to investigate if those who received text nudges had better financial outcomes than those who did not, several months after the program.

Methodology

Participants

The 128 initial participants in the project were randomly assigned to either receive text message reminders in the following five months or to receive no texts. Of the 54 participants who completed the second questionnaire at Time 2 and were included in the data analyses (i.e. excluding staff data), 24 participants (44%) received at least one text message. Three of the 54 participants (6%) opted out (i.e. asked not to receive any more text messages) during the study, including one who opted out before the first text message was sent.
Procedure

Participants were sent seven different text messages in the five months after completion of the In Charge of My Money program. One text message was accidentally sent twice to one group of participants, hence the number of text messages received by participants ranged from 0 to 8. Participants were given the option of opting out at any time.

An online SMS system was purchased for the study so that the text messages could be sent out automatically. Participants’ names and phone numbers, and text message wording, were entered into the SMS system and the text messages were scheduled to be sent out every 3-4 weeks. The literature recommended sending text messages 3-4 weeks after an intervention (Schwerdtfeger et al., 2012), and it was thought that sending texts every 3-4 weeks for five months would be sufficient and not considered intrusive or irritating.

Text message delivery

Only 65% of the text messages that were sent out were actually received by participants. Twenty percent of the messages ‘bounced’ and another 15% were ‘pending’ and never delivered. Study participants received 5.5 text messages on average, and 68% received 6 or more text messages over the duration of the study. The low message delivery rate was partly due to the fact that approximately 50% of participants were living in residential addiction rehabilitation centres where the use of mobile phones and the internet was strictly limited. Furthermore, in marginalised populations such as the participants in this study, mobile phone numbers tend to be unreliable.

Text message wording

Much deliberation was given to the wording of the text message nudges. According to the literature, effective text messages need to be:

- personalised,
- brief and focused,
- easy to understand, avoiding slang and abbreviations,
- conversational in tone,
• positive not negative,
• have an intrinsic locus of control (e.g. "You are responsible for achieving your goals"),
• directive (e.g. "Plan ahead so you can reach your goals"),
• statements not questions (e.g. "Committing to your goals today will help you in the long-run", rather than, "How will committing to your goals today help you in the long run?")
• polite,
• nonaggressive,
• supporting self-efficacy, and
• grammatically correct (Gold, Lim, Hellard et al. 2010; Latimer-Cheung et al., 2013; Marketo, 2015; Muench, van Stolk-Cooke, Morgenstern, Kuerbis, & Markle, 2014; Ranney et al., 2014; Scharl, Dickinger, & Murphy, 2005; Schwerdtfeger et al., 2012).

Additionally, the sender of the messages should identify themselves as it gives credibility to the message because it is from a trustworthy source (Judy Gold et al., 2010; Marketo, 2015).

Below is the wording of the seven text messages that were sent out:

1. Hi (First Name) remember you are in charge of your money and reaching your goals. All the best, Wesley Mission (Opt-out-info).
2. Hi (First Name) when you keep track of where your money is going, you are in control. All the best, Wesley Mission (Opt-out-info).
3. Hi (First Name) identify your goal and put it on the fridge to remind you. All the best, Wesley Mission (Opt-out-info)
4. Hi (First Name) track your spending leakage and be in charge of your money today! All the best, Wesley Mission (Opt-out-info)
5. Hi (First Name) reduce your debt and stress by paying back a little more each month. It will make a difference. All the best, Wesley Mission (Opt-out-info)
6. Hi (First Name) pay yourself first and save 10% of your income. Do it today and watch your money grow! All the best, Wesley Mission (Opt-out-info)
7. Hi (First Name) you are more likely to achieve your goal if you tell a friend - so tell a friend today! All the best, Wesley Mission (Opt-out-info)

Message numbers 1, 2 and 4 reminded participants that they were in control of their money and encouraged them to monitor their expenses (“..keep track of where your money is going..”, “..track your spending leakage..”). Messages 1, 3 and 7 reminded participants of their goals and provided tips to help achieve those goals (“...put it on the fridge to remind you...”, “…tell a friend today!…”). Message 5 was about managing debt, and message 6 was a reminder to save. Therefore, the main topics of the program were covered by the texts, with an emphasis on being in control of your money and achieving goals.

Message number 4 was not received by six participants but two participants received it twice.

Measures

The impact of the text message nudges was measured in three ways:

- The number of text messages each participant received (as a numeric variable ranging from 0 to 8)
- A dichotomous variable of whether or not each participant received four or more text messages
- Participant rating of how useful the text messages were, for those who received text messages.

It can be seen in Figure 22 that almost half the 25 participants (12) who received text messages reported that the messages were only a little bit useful. Only five participants (20%) said that the texts were very or extremely useful.
Examining the effects of text messages on change in behaviours

Although the participant rating of the usefulness of the text messages was not very promising, it was possible that there were implicit, unconscious effects of the nudges on participants’ behaviour. To investigate this possibility, two-way mixed ANOVAs were conducted, with time as one repeated measures factor and receiving at least 4 text messages versus receiving no messages (control group) as a between-groups measure. Using ANOVAs allowed for an examination of interaction effects between time and text nudges. That is, we tested whether the pattern of changes from before the program to after the program and then to 5-7 months after the program, was different for those who received the text message nudges compared to those who didn’t.

A further manner of investigating the influence of text nudges was to perform Pearson’s correlations to see if the number of text messages received, or participants’ rating of the usefulness of the text messages, were significantly associated with any improvement in financial behaviours or any reduction in financial strain.
## Text Messaging Results

Table 13: The effects of text messages on change in behaviour

<table>
<thead>
<tr>
<th>Measure</th>
<th>n</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Money behaviour</td>
<td>48</td>
<td>✓ There was a significant curvilinear (quadratic curve) interaction, $F(1,46) = 4.80, p = .034$, whereby those with a nudge showed an improvement in money behaviour immediately after the program and a further increase 5 months later, whereas those without the nudge peaked after the program and had a decline in good money behaviours 5 months later (see Figure 23). The effect size of this interaction was moderate (Partial eta squared = .094).</td>
</tr>
<tr>
<td>Saving behaviour</td>
<td>54</td>
<td>✓ There was an almost significant interaction between time and nudge, $F(1,52) = 3.28, p = .076$, whereby those with a nudge had a greater increase in saving behaviour 5 months after the program compared to those who did not receive the nudge. The effect size of this interaction was moderate (Partial eta squared = .059)</td>
</tr>
<tr>
<td>Planning behaviour</td>
<td>54</td>
<td>✗ There was no significant interaction between time and nudge, $F(1,52) = .005, p = .942$, meaning that the text message nudge had no impact on planning behaviour.</td>
</tr>
<tr>
<td>Monitoring expenses</td>
<td>54</td>
<td>✓ There was a significant interaction between time and nudge, $F(1,52) = 4.33, p = .042$, whereby those with a nudge had a more marked increase in monitoring behaviour 5 months later. The effect size of this interaction was moderate (Partial eta squared = .077).</td>
</tr>
<tr>
<td>Emotional spending</td>
<td>49</td>
<td>✓ There was a significant interaction between time and nudge, $F(2,94) = 3.962, p = .022$, whereby those with a nudge had a decrease in emotional spending behaviour 5 months after the program but those without a nudge had an increase (see Figure 24). The effect size of this interaction was moderate (Partial eta squared = .078).</td>
</tr>
<tr>
<td>Number of problems due to shortage of money</td>
<td>54</td>
<td>✗ There was no significant interaction between time and nudge, $F(1,52) = .09, p = .768$, showing that the text message nudge had no impact on reducing the number of problems due to a shortage of money.</td>
</tr>
<tr>
<td>Difficulty paying bills</td>
<td>54</td>
<td>✗ There was no significant interaction between time and nudge, $F(1,52) = .58, p = .449$, indicating that the text message nudge had no impact on reducing the difficulty in paying bills.</td>
</tr>
<tr>
<td>How often do you have money left over</td>
<td>54</td>
<td>✗ There was no significant interaction between time and nudge, $F(1,52) = .05, p = .830$, meaning that the text message nudge had no impact on having money left over by next payday.</td>
</tr>
<tr>
<td>Frequency of asking family for money</td>
<td>53</td>
<td>✗ There was no significant interaction between time and nudge, $F(1,51) = .14, p = .709$, indicating that the text message nudge had no impact on reducing the frequency in asking family for money.</td>
</tr>
</tbody>
</table>
Figure 23: Changes to money behaviours over time by text message 'nudge' group

Figure 24: Changes to emotional spending over time by text message 'nudge' group
What the statistics show

The four significant interactions shown in Table 13 above indicate that the pattern of money behaviours and attitudes across time was different for the two groups – those who received a text message ‘nudge’ and those who didn’t. Those who received the text messages went on to further improvements in financial behaviours at 5-7 months, whereas those who did not receive the text messages tended to have a decrease in desired financial behaviours across the same period. For example, as can be seen in Figure 23, those who received a text message nudge had an improvement in money behaviours immediately after the program, and a further improvement after 5-7 months. This can be seen as a linear increase in Figure 23. For those who didn’t receive the text message nudge, money behaviours improved immediately after the program, but after this ‘peak’ declined again after 5-7 months. This can be seen as a more curved, \( \wedge \)-shaped (curvilinear) pattern in Figure 23.

The same pattern can be seen in reverse for emotional spending. Those who received a text message nudge had a reduction in emotional spending immediately after the program, and a further reduction after 5-7 months (see Figure 24). For those who didn’t receive the text message nudge, emotional spending reduced immediately after the program, but then increased again after 5-7 months, returning to the same levels as before the program.

It can be seen from Table 13 that text message nudges also had a significant and positive impact on saving behaviour and the monitoring of expenses. The size of these effects, whereby the groups were shown to have different outcomes over time depending on whether or not they received a text message nudge, was ‘moderate’. This suggests that the impact of text messages on these outcomes was fairly robust and that the ‘nudge’ intervention has a reasonable likelihood of having the same positive impact on the same behaviours if it were done again in a new group of program participants.
Planning behaviour, the number of problems due to a shortage of money, the degree of difficulty paying bills, how often participants had money left over, and how often they asked family for money, were not impacted by receiving text message nudges.

It was not possible to test the interaction effect of nudges on how much the program helped participants achieve their financial goals, the extent of progress towards financial goals, or change in debt, because these outcomes were only measured at one point in time and at least two time points are required for ANOVA statistical analyses. Instead, independent samples t-tests were used to compare the average scores of those who had received at least 3 text messages were different to those who had not (that is, to see if those who received the nudges had made better progress after 5-7 months). The results indicated that there was no statistically significant difference between the two groups (and thus no comparative improvement for the nudge group) in terms of change in debt ($t(36) = 1.15, p = .256$), extent of progress towards a specific financial goal ($t(52) = -1.57, p = .122$), or how much the program helped participants achieve their financial goals ($t(52) = .89, p = .380$).

The fact that there was a significant impact of nudges after several months on participants’ money, saving, and monitoring behaviours, and on their emotional spending, could possibly be explained by the wording of the text messages. Three of the messages reminded participants that they were in control of their money, with two of these reminding them to monitor their spending. This could explain why there was an impact of text nudges on both monitoring behaviour and money behaviour, since ‘money behaviour’ was measured by the extent of agreement regarding thinking carefully before buying something, comparing prices to get the best deal, not buying things if one cannot afford them, and waiting to buy something rather than using credit. Three of the text messages reminded participants of their goals, with an additional message reminding participants to save 10% of their income. Since the goals of 50% of study participants were to save money or save for something in particular, it is not surprising that an almost significant effect of text messages on saving behaviour was found. Inconsistent with this explanation, however, was finding no significant
difference between nudge recipients and non-recipients in how much the program helped participants achieve their goals and the extent of their progress towards their specific goal, considering three messages were reminders to work towards their goals.

There was a significant interaction between receiving text message nudges and a reduction in emotional spending over time. Emotional spending was measured by participants’ level of agreement with whether or not they spend money to feel better when they are feeling down or stressed, therefore it is conceivable that being reminded that they are in control of their money, and that they need to monitor their spending and save for their goals, helped reduce impulsive emotional spending. However, further research is needed to test these tentative explanations.

If there is insufficient income then no amount of texting or nudges can help reduce financial strain or reduce debt. Again, the point to be remembered is that financial education needs to be accompanied by an adequate income for financial well-being to be achieved.

In summary, text message nudges appeared to have a positive impact on participants’ money, saving, and monitoring behaviours, and on emotional spending, but they did not have an effect on participants’ financial strain, or help them achieve their goals or reduce their debt. A tentative explanation for the findings is that the wording of the messages reminded participants to control and monitor their spending, and reminded them of their goal to save.
Pearson’s correlations

Pearson’s correlations were conducted to investigate associations between the number of text messages received, participants’ ratings of how useful the text messages were, and a range of outcomes:

- Improved money behaviour
- Improved saving behaviour
- Improved planning behaviour
- Improved monitoring behaviour
- Less emotional spending
- How much the program helped achieve goals
- Extent of progress towards a specific goal
- Fewer problems due to a shortage of money
- Less difficulty paying bills
- More money left over
- Less often asking family for money
- Reduced debt

The only significant relationship found was between the number of texts received and emotional spending, whereby receiving an increased number of text messages was moderately correlated with reduced emotional spending ($r = .45, p = .027$). As mentioned above, it is hypothesised that being reminded that they were in control of their money, need to monitor their spending and aim for their goals, ameliorates spending for emotional reasons to some extent. The fact that no other financial behaviours, or progress towards financial goals, or reduction in debt, were associated with the number of text messages received suggests that there was little difference in effectiveness between receiving 4 texts and receiving 8 texts over 5 months. Finding no associations between participants’ rating of the usefulness of the text messages and any outcomes after 5-7 months suggests that the effect of the nudges on behaviour was implicit and outside participants’ awareness.
Summary of Results and Implications

The principal aim of this project was to evaluate the effectiveness of the *In Change of My Money* program in vulnerable populations. The evaluation aimed to identify participant outcomes related to financial behaviour and knowledge retention in participants.

The findings of this study will be summarised according to the four key goals of the project, which were to:

- ensure the program content is relevant and evidence-based;
- identify whether the program facilitates sustained improvement in financial behaviours;
- estimate changes to participant financial knowledge and understanding at the end of the program, and estimate retention after several months; and,
- ascertain how incorporating a practical strategy, such as text message reminders, increases the chance of sustained change.

**Is the program content relevant and evidence-based?**

According to feedback from study participants both immediately after they completed the program and several months later, the *In Charge of My Money* program did provide information that was relevant and useful. The content appeared to be particularly relevant for some of the most socially and economically disadvantaged and vulnerable people within the Australian population. Immediately after the program, participants reported being very satisfied with the content, relevance and presentation of the *In Charge of My Money* program, rating it very highly, on average, and having few complaints. When asked several months later if they would recommend the program to their friends, the majority (85%) said they would recommend it because it was easy to understand, relevant, and helpful. Only four people said they would not recommend it to their friends, mainly because they thought their friends did not need it. Finding that most participants would recommend the program to their friends several months after they had completed the program suggests that participants’ high opinion of the usefulness and relevance of the program immediately after the program did not decline over time.
In addition to overall relevance and usefulness, this study investigated which aspects of the program were most relevant and beneficial to participants. When asked what part of the program was most helpful in achieving their financial goals several months after completing the program, participants most frequently reported that advice on how to change spending habits was most helpful. Learning how to budget was also a beneficial component of the program, as was understanding the different types of loans, being aware of interest rates, and strategies for reducing debt. Addressing financial goals and how to save money was reported to be the most helpful part of the program by only a few participants. Furthermore, when asked at the beginning of the program what they most hoped the program would assist them with, the most frequent answers were help in managing money and budgeting. Help with saving money and setting money goals were much less common responses. A possible explanation for these findings is that participants in this study found it difficult to actually pay their daily bills, so working towards a goal and saving money was a lower priority than learning ways to pay for their daily living expenses and reduce their debt, as has been found in other studies (Brackertz, 2014; Loibl et al., 2016). A possible implication of these findings is that the In Charge of My Money program, and other financial literacy programs targeting the very marginalised in society, may need to focus on information regarding budgeting, money management, spending habits and reducing debt, more than on goal setting and how to save money. However, for some, the habit of saving even a few dollars was an achievement.

When asked how the program could be improved, only six participants (11%) said that it could be more relevant. The one comment given relating to relevance was that most program attendees do not qualify for a credit card, therefore less time could be spent discussing credit card usage. The financial inclusion measure verified that only eight participants (15%) had a credit card. However, Wesley Mission’s 2010 Third Financial Stress Report (Wesley Mission, 2010) highlighted that credit card debt was two to three times higher among households under financial stress compared to those not under financial stress, suggesting that the credit card material may only be of limited relevance when the program is delivered to the most extremely disadvantaged in society, such as the
participants of this study. An implication of this finding is that the presentation of the material on credit cards could be dependent on how many participants in each group actually have a credit card. This practice is now being implemented.

From a review of the literature, tentative best practice for financial literacy programs targeted at vulnerable populations involves tailoring the content and delivery style to the particular audience, having the program delivered by trainers who are knowledgeable and non-judgemental, providing the program at an opportune time, adhering to the principles of adult learning, and empowering program attendees. The In Charge of My Money program is consistent with most of these guidelines for best practice. The content of the program was tailored to the needs of Wesley Mission clients, who are amongst the most marginalised and vulnerable in society. Addressing the topics of payday loans, reducing debt, how to save just a dollar or two a day, are examples of content that is relevant to those whose main source of income is government benefits. Paying off a mortgage, increasing superannuation, and investing in the stock market are not included in the program since most attendees do not own their own home, are not working, and do not have large amounts of money to invest. Appropriate practical examples are used during the presentation. There is an emphasis on teaching good money management skills and habits, such as how to create and maintain a budget, using ASIC’s MoneySmart budgeting tool, how to use a money box to save coins, and how only taking the amount of money required to buy what you need prevents impulse spending. The language of the program materials is suitable for Year 10 level of literacy, not higher, to ensure it is understandable by those with relatively low levels of literacy.

Furthermore, the program is designed to be delivered to people with reduced cognitive capacity, such as those from drug and alcohol rehabilitation centres. Information is often presented as “rules of thumb”, such as “pay yourself first”, “every little bit counts”, “ask myself, do I really need this?” These simple and practical messages are easy for program attendees to remember, and indeed there was evidence from the qualitative data that many participants did remember them.
In this study the *In Charge of My Money* program was delivered by well-trained, very financially literate, non-judgemental and trusted personnel, with a profound understanding of the needs of their audience, namely, Wesley Mission financial literacy educators and some financial counsellors. Feedback from study participants reinforce that participants found the presenters to be knowledgeable, able to answer their questions, helpful and empathic. It is not known if the program would be anywhere near as effective if it was delivered by personnel with less financial knowledge, less understanding of the audience, and less experience in dealing with the financial issues of the most marginalised in society.

In this study the program was delivered through existing services to vulnerable populations. The literature has recommended embedding financial literacy programs within other programs, provided the staff who deliver the financial literacy program have the knowledge and understanding to be able to do so. These services were mostly addiction rehabilitation or homelessness assistance services. The literature highlights the importance of delivering the program at ‘teachable moments’ in a person’s life, and it could be argued that trying to overcome addiction, moving on and seeking employment and housing, are such moments. Furthermore, providing financial literacy education as part of other services has the benefit of assisting clients more holistically, as has been recommended in the literature.

The *In Charge of My Money* program was delivered by financial literacy educators and some financial counsellors who have been trained to guide clients and give them choice in their decisions, rather than telling clients what they “should” do. This approach is consistent with the principles of adult learning, which posits that adults want guidance not instruction. In addition, the content of the program is relevant to attendees’ lives, and the delivery style is participatory, with attendees being encouraged to ask questions and talk about their situations. Completing the program worksheets promotes active, learning by doing, as is recommended by the principles of adult learning.

The one principle of adult learning that this program has not followed is that of voluntary participation. For the rehabilitation residential participants of this study, attending the program was compulsory. However, vulnerable populations have been shown in the
literature to be less likely to seek out and attend financial literacy programs, and have higher dropout rates, compared to less vulnerable populations. Therefore, making the program a compulsory part of another program is likely to increase the number of people on low-incomes who receive appropriate financial education. However, importantly, this study found that participants who attended the In Charge of My Money program because it was compulsory did not benefit from the program less than other participants. This suggests that the program, and/or the presenters, were able to effectively engage the attention of participants despite their reason for attending. Additionally, because approximately half of the study participants did not voluntarily attend the program, it reduced the probability of selection bias. Selection bias can occur when only those already motivated and predisposed to improve their financial literacy enrol in a program. Selection bias can inflate the effectiveness of a program because only the most motivated attend (Collins & Holden, 2014).

Finally, it is not established whether the In Charge of My Money program engenders a sense of empowerment and financial self-efficacy in attendees. This study found that, when looking at averages all participants, there was no statistically significant increase in financial self-efficacy, although increased financial self-efficacy was associated with improved financial behaviours. This suggests that some participants experienced an increase in financial self-efficacy, and that these participants benefited from this increase in terms of positive financial behaviours. Further research is needed to understand why some program attendees do not experience increased financial self-efficacy and how to improve financial self-efficacy for this group.

In summary, this evaluation has found both quantitative and qualitative evidence that the In Charge of My Money program content and delivery is relevant and evidence-based, conforming with what has been identified as best practice to date.
Is there evidence that the program facilitates sustained improvements in financial behaviours?

There was evidence that the In Charge of My Money program facilitated sustained improvements in financial behaviours. Statistically significant improvement was found in financial behaviours from before the program to several months after the program, measuring financial behaviours in four different ways. There was sustained improvement in money behaviours, saving behaviour, planning behaviour and monitoring of expenses over several months. The effect sizes of these improvements were large. Furthermore, 47% of participants who had debt when they commenced the program reported a reduction in debt 5-7 months later, suggesting that the program may have assisted participants to better manage their debt. Additionally, over half (56%) of study participants said that the program helped them achieve their financial goals ‘a lot’ or ‘very much’, and only 11% said it did not help at all, indicating that most participants believed that the program assisted them in practical ways several months after the program. Finally, these improvements in financial behaviours were not related to gender, age, nationality, education level or income, implying that the In Charge of My Money program may be relevant to a broad range of people within vulnerable populations.

Is there evidence of knowledge and understanding retention after several months?

There was strong evidence of knowledge and understanding retention several months after the program. A very large and highly significant improvement was found in both general and personal financial knowledge from before the program to immediately after the program and to several months after the program, demonstrating that study participants retained most of the knowledge they had learnt in the In Charge of My Money program over several months.
When asked to describe what they remembered about the program 5-7 months later, almost two thirds remembered that the program was about budgeting and money management generally. A large number of participants remembered specific catch phrases, such as “pay yourself first” and specific saving tips, such as putting a dollar or two in a money box each day. Just over a quarter of participants recalled information about the different types of loans and how to manage debt, and approximately one quarter remembered specific advice about being mindful of spending habits, including impulse buying, spending “leaks”, asking oneself “do I really need this?”, only taking the money that you need to the shops, and planning what you will spend before going to the shops. Only six participants remembered little or nothing from the program. Considering that over 50% of participants were living in residential rehabilitation centres at the time of completing the program, this high level of knowledge retention from the program is quite impressive.

Indeed, the In Charge of My Money program was designed to be delivered with flexibility, in order to take into consideration the reduced attention span of clients with mental health, disability and addiction issues.

The study also explored the connection between improved knowledge and change in financial behaviours over time. It was found that general and personal financial knowledge together were moderately significantly correlated with improved monitoring of expenses and how much the program helped participants achieve their financial goals, and marginally related to improved money behaviour and having more money left over by the next payday. These significant associations between knowledge and financial outcomes suggest (but do not prove) that increased knowledge may translate into improved financial behaviours over time, supporting the value of financial literacy programs.

**Did text message nudges increase the chance of sustained change in financial behaviours?**

Text message nudges did appear to increase the chance of sustained change in financial behaviours over time. In this study the text message nudges had a significant impact on
participants’ money, saving, and monitoring behaviours, and on emotional spending. These effects appeared to be unconscious, since the majority of those receiving text messages reported that the text messages were only ‘a little bit’ helpful, supporting the hypothesis that nudges operate by triggering people’s automatic, rather than cognitive, system (Marteau et al., 2011). The nudges, however, did not have an effect on participants’ progress towards their goals, or level of debt, or reduction in financial strain. A tentative explanation for the mixed findings is that the wording of the messages reminded participants to control and monitor their spending, and reminded them of their goal to save. Furthermore, the fact that no other financial behaviours, or progress towards financial goals, or reduction in debt, were associated with the number of text messages received suggests that there was little difference in effectiveness between receiving 4 texts and receiving 8 texts over 5 months.

Although these results are promising, it is not possible to draw strong conclusions and implications from these findings. Only 24 participants received at least one text message and only 65% of the text messages sent out were actually received by study participants, reflecting the practical difficulties experienced in communicating with this vulnerable population over time. These findings need to be replicated with a larger sample in order to confirm the effectiveness of text message nudges. A detailed cost benefit analysis is also recommended, to ascertain whether the degree of positive influence of the text message nudges is justified by the cost of the resources needed to create and deliver them.

Additional Findings: Improvements in Attitudes, Self-Efficacy, Emotional Spending, and financial Strain

Although there was little statistical evidence of sustained change in financial attitudes, financial self-efficacy, and emotional spending, for participants on average after the program, there were significant relationships between improvements in these participant factors and the key outcomes 5-7 months later. In particular, improvement in financial self-efficacy and improved attitudes to spending were the two participant factors most
frequently significantly associated with program outcomes, even after controlling for other closely related factors. These findings suggest that encouraging program attendees to adopt a different attitude to spending money, and building attendees’ financial self-efficacy by helping them feel more confident in their ability to manage their money, may both be crucial components in the success of this and other financial literacy programs. These findings are consistent with the stages of change in financial literacy model (Robson, 2012). In this model, some attitudinal change is required in order to learn new knowledge and behaviour, and then increased competence and confidence supports further behavioural change (Robson, 2012).

However, it is important to remember that even if attitudes and financial self-efficacy are significantly associated with improvements in financial behaviours, it does not show that they caused these improvements. It is equally valid to say that improved financial behaviours may have caused participants to feel more self-efficacious and to have better attitudes to money. The direction of the relationship between the participant factors and outcomes is unknown. It is also possible that another unknown factor caused both participant factors and outcomes to improve. Hence correlational results suggest possible causal associations but cannot prove them. In practical terms, however, it may make little difference which way causality lies, and it seems likely that it is bidirectional. For example, better financial behaviours could increase self-efficacy, and better financial self-efficacy may support improvements in financial behaviours, creating an upward cycle of positive financial behaviours.

In addition to improved financial attitudes and financial self-efficacy, higher ratings of the program were also linked to improved financial behaviours and the perception that the program had helped them achieve their financial goals, several months later. However, the level of motivation during the program was significantly and moderately related to only one outcome. These findings suggests that how interesting, relevant and helpful program attendees find the program is far more important than their motivation level during the program, in terms of subsequent improvements in financial behaviours.
Reduced emotional spending was found to be moderately significantly associated with improved money behaviour, how much the program helped the participant achieve their financial goals, and fewer problems due to a shortage of money. These findings suggest that addressing emotional spending may be important in financial literacy programs.

The results for improvements in participants’ financial strain were mixed. There was evidence that participants, on average, experienced fewer problems due to a shortage of money, had reduced debt, felt less stressed about the future, were more financially included and had higher levels of financial resilience 5-7 months after the program compared to before the program. However, although participants, on average, asked family for money less frequently, found it less difficult to pay all their bills, and had more money left over before the following payday 5-7 months after the program than before the program, these improvements did not reach statistical significance. There was also anecdotal evidence that some participants who had been unemployed during the program were working several months later, and some participants who had been addicted to substances or gambling had completed rehabilitation programs and were capable of better money management. Therefore, there were too many additional influences outside the realm of the program and external to participants’ own financial behaviours that impacted on participants’ financial circumstances to be able to draw any conclusions about the ability of the In Charge of My Money program to reduce financial strain.

Additional Findings: Participant Factors That Were Not Associated with Outcomes

It is worth noting those participant factors that were not significantly associated with improvements in financial behaviours. No demographic factors were statistically significantly associated with any improvements in financial behaviours or reduction in financial strain. This finding suggests that the impact of the program on improved financial behaviours was not related to gender, age, nationality, education level or income, and therefore the In Charge of My Money program may be relevant to a broad range of people.
within vulnerable populations. However, there was little variation in country of birth or socioeconomic status in this cohort, which could explain the lack of associations. In addition to demographic factors, the number of workshops attended (i.e. dosage) was not related to financial behaviours or financial strain, although this could be due to the limited variation in dosage since the majority of participants attended all or three of the four workshops. Surprisingly, whether or not participants attended the *In Charge of My Money* program because it was a compulsory part of another program was not associated with improvements in financial behaviours, improvements in knowledge or reduced financial strain. This implies that those people who do not voluntarily choose to do the *In Charge of My Money* program, may benefit from it to a similar extent as those who choose to attend the program voluntarily. This is consistent with the finding that motivation level during the program was only related to one outcome variable. Taken together these findings suggest that including the program as a component of other programs and services may be an effective way to improve the financial literacy and outcomes of a large number of marginalised and vulnerable people.
Discussion

This program evaluation found evidence that the *In Charge of My Money* program is relevant and evidence-based, does facilitate sustained improvement in financial behaviours, and does produce high levels of knowledge and understanding retention after several months, for people facing the vulnerabilities of drug, alcohol and gambling addiction, homelessness, and family strain. This study also found that incorporating a practical strategy, such as text message nudges, may increase the chance of sustained change in financial behaviours after the program. However, there are some limitations to this study.

**Limitations of the Study**

The main limitations of the study relate to its non-experimental design, its generalisability, and the information collected at Time 2. Firstly, this study was not an experiment as there was no matched control group for comparison. Therefore, we are unable to show that the program *causes* improvements in financial behaviours and reduced financial strain because it is possible that participants’ financial behaviours and financial circumstances would have improved regardless of whether or not they attended the *In Charge of My Money* program. Only studies with an experimental design can claim to demonstrate causation.

Furthermore, this program evaluation cannot be generalised to apply to those from culturally and linguistically diverse, or higher socioeconomic populations, since the participants in this study were quite homogenous in demographic factors. Therefore, this evaluation cannot comment on the effectiveness of the program for culturally and linguistically diverse populations, or for those from higher socioeconomic populations. An additional limitation of this study is that we did not collect information about changes in participants’ non-financial circumstances several months after they completed the program. This was a limitation because we were not able to isolate the effects of the program from the effects of changed life circumstances, such as having recovered from addiction, now having stable housing, or now being employed. The high rate of attrition in sample size from Time 1 to Time 2 was also a limitation, as it reduced the statistical power of the study to detect significant effects, particularly for the experiment with the text message nudges.
High rates of study participation attrition are common when conducting research with low-income populations, however (Collins, 2010; Lyons et al., 2006). It is hoped that future research will address the limitations in this program evaluation.

**Future research**

We would like to make suggestions for future research for financial literacy program evaluations targeting vulnerable populations. Firstly, future research should include a matched control group who are similar in every way to the study participants except that they do not attend the financial literacy program. They should be given the same questionnaires at the same times as those doing the program so that changes in financial knowledge, behaviours, attitudes, and strain can be compared between the experimental and control groups. This is the only way to demonstrate that the program *causes* the changes. Secondly, this program evaluation needs to be replicated with participants who are more demographically diverse to be able to show that the *In Charge of My Money* program is effective for culturally and linguistically diverse, and less socioeconomically disadvantaged, Australians. Thirdly, future financial literacy program evaluations should collect information about participants changed life circumstances when they are surveyed months after the program, so that these changes can be taken into account in the analyses. It is possible that recovery from addiction or finding stable housing are the main reasons for the improvements in financial behaviours, rather than the program. In addition, some participants benefitted from the program more than others, so future research should try to identify those who benefit the least from the program, why this is the case, and how the program could better engage those participants. Finally, those conducting research with the marginalised of society should be aware of the difficulties in contacting participants for longitudinal studies and the need for additional resources.
Conclusion

This program evaluation found evidence that Wesley Mission’s financial literacy program, *In Charge of My Money*, is relevant and beneficial to its target audience of the most vulnerable in society. For those with very limited incomes and resources, the small tips on how to change spending habits and save even just a dollar a day, can make a significant difference in people’s lives. For example, one participant said on the phone that he had been placing his coins in the money box he was given at the *In Charge of My Money* program. After several months he opened the money box and found that he had over $100, and that was enough for him to be able to visit his daughter. Such a small change in financial behaviour had made a significant difference in his life. Wesley Mission and the creators and presenters of the program should be commended for their work.


Hathaway, I., & Khatiwada, S. (2008). Do financial education programs work?


Robson, J. (2012). The case for financial literacy: Assessing the effects of financial literacy interventions for low income and vulnerable groups in Canada. Carleton University, Canada: Carleton University


### Table A1: Pearson’s correlations between participant factors and outcomes at Time 2

<table>
<thead>
<tr>
<th>Participant Factors</th>
<th>Improvements from before program to 5-7 months after program</th>
<th>Program engagement at Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcomes at Time 2</td>
<td>General Financial knowledge</td>
<td>Personal financial knowledge</td>
</tr>
<tr>
<td>Improved money behaviour</td>
<td>r = .27 p = .064 n = 48 ns</td>
<td></td>
</tr>
<tr>
<td>Improved saving behaviour</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Improved planning behaviour</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Improved monitoring behaviour</td>
<td>ns</td>
<td>r = .35 p = .013 n = 51</td>
</tr>
<tr>
<td>How much did the program help achieve goals</td>
<td>r = .33 p = .019 n = 51 ns</td>
<td>r = .36 p = .009 n = 51</td>
</tr>
<tr>
<td>Extent of progress towards specific goal</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Fewer problems due shortage of money</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Less difficulty paying bills</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>More money left over</td>
<td>ns</td>
<td>r = .27 p = .059 n = 51</td>
</tr>
<tr>
<td>Less often ask family for money</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Change in debt</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>
### Table A2: Pearson’s correlations between participant factors (ns=non-significant)

<table>
<thead>
<tr>
<th>Participant Factors</th>
<th>Improvements from before program to 5-7 months after program</th>
<th>Program engagement at Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>General financial knowledge</td>
<td>Personal financial knowledge</td>
</tr>
<tr>
<td>General financial knowledge</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
| Personal financial knowledge | $r = .61$  
$p < .005$  
n = 50 | - | - | - | - | - | - |
| Attitudes to spending | $r = .43$  
$p = .002$  
n = 50 | $r = .40$  
$p = .004$  
n = 50 | - | - | - | - | - |
| Financial self-efficacy | $ns$ | $ns$ | $r = .34$  
$p = .022$  
n = 46 | - | - | - | - |
| Emotional spending | $ns$ | $ns$ | $ns$ | $r = .47$  
$p = .001$  
n = 46 | - | - | - |
| Motivation during program | $ns$ | $ns$ | $r = .28$  
$p = .044$  
n = 51 | $ns$ | $ns$ | - | - |
| Program rating | $r = .44$  
$p = .001$  
n = 51 | $r = .29$  
$p = .042$  
n = 51 | $ns$ | $ns$ | $r = .66$  
$p < .005$  
n = 54 | - | - | - | - |
<table>
<thead>
<tr>
<th>Outcome measure</th>
<th>$F$</th>
<th>$p$</th>
<th>$R^2$</th>
<th>Variables remaining in the final model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved money behaviour</td>
<td>(2,41) = 12.33</td>
<td>&lt; .005</td>
<td>.38</td>
<td>Less emotional spending Program rating</td>
</tr>
<tr>
<td>Improved saving behaviour</td>
<td>(1,42) = 3.57</td>
<td>.066</td>
<td>.08</td>
<td>Improved attitude to spending</td>
</tr>
<tr>
<td>Improved planning behaviour</td>
<td>(1,42) = 3.72</td>
<td>.061</td>
<td>.08</td>
<td>Improved personal financial knowledge</td>
</tr>
<tr>
<td>Improved monitoring behaviour</td>
<td>(2,41) = 6.24</td>
<td>.004</td>
<td>.23</td>
<td>Improved attitude to spending Improved financial self-efficacy</td>
</tr>
<tr>
<td>How much did the program help achieve goals</td>
<td>(2,41) = 11.86</td>
<td>&lt; .005</td>
<td>.37</td>
<td>Improved financial self-efficacy Program rating</td>
</tr>
<tr>
<td>Extent of progress towards specific goal</td>
<td>(1,42) = 9.70</td>
<td>.003</td>
<td>.19</td>
<td>Improved financial self-efficacy</td>
</tr>
<tr>
<td>Fewer problems due to shortage of money</td>
<td>(1,42) = 8.45</td>
<td>.006</td>
<td>.17</td>
<td>Improved financial self-efficacy</td>
</tr>
<tr>
<td>Less difficulty paying bills</td>
<td>No model was significant</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>More money left over</td>
<td>No model was significant</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Less often ask family for money</td>
<td>(3,39) = 2.95</td>
<td>.044</td>
<td>.19</td>
<td>Improved personal financial knowledge Improved attitude to spending Improved financial self-efficacy</td>
</tr>
<tr>
<td>Change in debt</td>
<td>$F(1,30) = 3.63$</td>
<td>.067</td>
<td>.11</td>
<td>Improved attitude to spending</td>
</tr>
</tbody>
</table>
Appendix 4

Figure F1: The interaction between time and receiving three or more text messages on Money Behaviour
Appendix 5

Figure F2: The interaction between time and receiving three or more text messages on Saving Behaviour
Estimated Marginal Means of Nudge

Figure F3: The interaction between time and receiving three or more text messages on Monitoring Expenses