Fall | 17

Applying Behavioral Science to Increase Retention in Financial Coaching

Emory Nelms
Kayla Speidel
Stephanie Tepper
Mariel Beasley
Lindsay Juarez
Marialejandra Guzmán

CENTER FOR ADVANCED HINDSIGHT
COMMON CENTS LAB

ABOUT THE COMMON CENTS LAB

The Center for Advanced Hindsight (CAH) is a behavioral science research lab at Duke University. The center focuses on understanding how people make decisions and then applies these insights to help people lead happier, healthier, and wealthier lives. The lab is led by famed Behavioral Economics Professor Dan Ariely. Dan has written three New York Times best-sellers, including Predictably Irrational.

Common Cents Lab (CCL) is a special initiative at the Center for Advanced Hindsight. CCL, supported by the MetLife Foundation, specifically focuses on financial decisions for low- to moderate-income households in the United States. CCL leverages research gleaned from behavioral science to create interventions that lead to positive financial behaviors like improving cash flow management, decreasing debt and expenses, and increasing short- and long-term savings.

To fulfill its mission, Common Cents partners with organizations, including credit unions, banks, non-profits, start-ups, and tech companies, that believe their work could be improved through insights gained from behavioral science. To learn more about Common Cents Lab visit www.commoncentslab.org.

ABOUT OUR FUNDERS

The projects and research described in this report was funded by Local Initiatives Support Corporation (LISC). LISC equips struggling communities with the capital, program strategy and know-how to become places where people can thrive. Working with local leaders, LISC invests in housing, health, education, public safety and employment – all basic needs that must be tackled at once so that progress in one is not undermined by neglect in another. Sharing their expertise of 30-plus years, LISC brings together key local players to take on pressing challenges and incubate new solutions. We them, LISC helps develop smarter public policy. Their tool-kit is extensive. It includes loans, grants, equity investments and on-the-ground experience in some of America's neediest neighborhoods. To learn more about LISC visit www.lisc.org.

This project was also made possible by MetLife Foundation. MetLife Foundation was created in 1976 to continue MetLife's long tradition of corporate contributions and community involvement. Since its founding through the end of 2016, MetLife Foundation has provided more than $744 million in grants and $70 million in program-related investments to organizations addressing issues that have a positive impact in their communities. Today, the Foundation is dedicated to advancing financial inclusion, committing $200 million to help build a secure future for individuals and communities around the world. To learn more about MetLife Foundation visit www.metlife.org.

Project Background

The Federal Reserve recently assessed the economic well-being of the U.S. population in a 2016 report, concluding that 31% – approximately 76 million people – were either "struggling to get by" or are "just getting by" in 2015.[1] This assessment mirrors similar research conducted by the CFPB measuring the financial well-being in U.S., which found that about a third of the population struggle to make ends meet each month or do without things they need on a regular basis.[2]

Financial coaching represents an effective strategy to help those struggling financially to find greater stability and to improve their overall financial well-being.[3] Whereas financial counseling or similar solutions solely address immediate financial challenges, financial coaching also encourages participants to set and achieve long-term goals.[4] Indeed, helping participants to prioritize future goals and to chart a path to achieve them is at the heart of financial coaching and central to its success.

However, this process takes time and effort. Participants will get more out of their coaching if they are willing to commit and regularly engage with the program. Unsuprisingly, recent research looking at financial coaching has found that as participants use coaching more, the greater the benefit they receive.[5] And yet, not all participants do fully engage with coaching. Some inevitably drop off, even in spite of the long-term benefits they would receive from sticking with the program.

In light of this, LISC partnered with CAH to explore how we might use insights from behavioral science to reduce attrition from financial coaching at Financial Opportunity Centers (FOCs). In this partnership, CAH conducted a behavioral diagnosis to better understand the challenges to retention. In 20 site visits and 33 interviews in 5 cities across the United States, CAH found coaching clients often failed to return to future coaching sessions because the benefits felt distant and intangible, the expectations for coaching were sometimes unclear and inconsistent, and the primary focus was on increasing income through employment or benefit programs rather than cash management, budgeting, or building credit. Based on our behavioral diagnosis, we recommended a series of interventions to address these identified barriers, two of which we carried forward and tested trial with 1587 clients from 24 sites in 10 different cities.

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[1] Board of Governors of the Federal Reserve System (2016). "Report on Economic Well-Being of U.S. Households in 2015." https://www.federalreserve.gov/2015-report-economic-well-being-us-households-201605.pdf

[2] CFPB (2017). "Financial Well-Being in America." https://s3.amazonaws.com/files.consumerfinance.gov/f/documents/201709_cfpb_financial-well-being-in-America.pdf

[3] Theodos, B. et al. (2015). An Evaluation of the impacts and implementation approaches of financial coaching programs. Urban Institute

[4] Collins, J. M., & O'Rourke, C. M. (2012). The Application of Coaching Techniques to Financial Issues. Journal of Financial Therapy, 3 (2) 3.

[5] In the specific case of Financial Opportunity Centers (FOCs), LISC has identified a positive relationship between engagement at the FOCs and measures of financial well-being, such as improvements in credit scores.

Intervention and Research Design

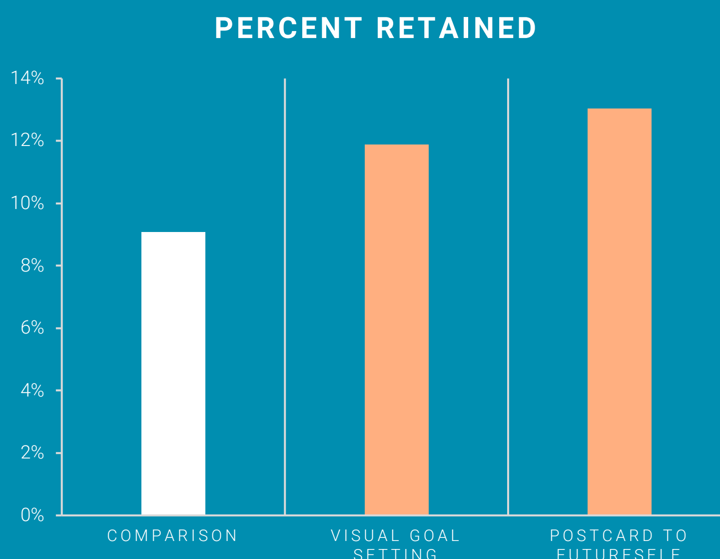
In our study, we tested a visual goal setting exercise and a postcard that clients would write to themselves in the future. These interventions aimed to increase participant engagement and commitment to coaching – which, along with several other metrics, we measured using a strict definition of retention. We hypothesized that the intervention would improve engagement by:

1. Helping participants to connect with their goals on a deeper, more emotional level, the visual goal setting exercise aimed to help participants to connect with the long-term benefits of participating in financial coaching.

2. Writing down their goal and sending it to them if they miss a session, the postcard aimed to capture the feelings of excitement participants had during the session and reminding them of that motivation in a personalized way.

Findings

We found that the visual goal setting positively affected program outcomes, boosting retention boosting by 5.7% on average. Our analysis also suggests that although the postcard to futureself did not further increase retention, it did have a significant, additive effect with regards to the number of sessions participants attended and the average number of days in between sessions. These results were importantly mediated by how well the intervention was adopted by the implementing coach.



*Note VGS & Postcard are different from Comparison at $p<0.05$, but VGS and Postcard are not statistically different from each other.

Conclusion

Helping clients to set and achieve their goals is at the heart of financial coaching. However, this research suggests that there are ways in which we could better engage participants around their long-term goals. The interventions described here represents one successful effort to re-design a goal setting activity to be more motivating. There are others, and moving forward, financial coaching programs should continue look for different ways to structure and communicate with participants about their goals so that they may better serve all of the clients that begin the coaching process.

TABLE OF CONTENTS

INTRODUCTION 5

BEHAVIORAL DIAGNOSIS AND BARRIERS TO RETENTION 7

INTERVENTION DESIGN AND PROTOTYPING 10

VISUAL GOAL SETTING EXERCISE 11

POSTCARDS TO FUTURE-SELF 12

RESEARCH DESIGN AND METHODS 13

DEFINING OUR SAMPLE 14

FINDINGS 16

WHY DID THE INTERVENTIONS WORK? 20

LIMITATIONS 23

CONCLUSION 25

APPENDICES 27

INTRODUCTION

The Federal Reserve recently assessed the economic well-being of the U.S. population in a 2016 report, concluding that 31% – approximately 76 million people – were either “struggling to get by” or are “just getting by” in 2015.[6] This assessment mirrors similar research conducted by the CFPB measuring the financial well-being in U.S., which found that about a third of the population struggle to make ends meet each month or do without goods they need on a regular basis.[7]

In light of these trends, policymakers and practitioners have looked for strategies to improve financial well-being in communities across the U.S. Financial coaching is increasingly seen as one such approach because it has been shown to effectively change financial behaviors and habits.[8] As such, financial coaching represents a potentially promising strategy to bolster the financial well-being of low- to moderate-income households, both as a standalone intervention and through integration to amplify the benefits of other targeted programs.

Financial coaching works differently than financial counselling – whereas financial counseling and similar solutions solely address immediate financial challenges, financial coaching also pushes participants to work towards long-term goals. The process of setting, working towards, and ultimately achieving personal goals is at the heart of coaching. However, this process takes time and effort. While coaches offer expertise and support along the way, participants ultimately have the responsibility to set and achieve their own goals. In this way, participants’ self-determination is central to coaching and likely plays a role in driving its success.

At the same time, though, making the self-determination of participants such a central element of coaching also creates challenges for financial coaching programs – participants must commit time and effort in order to fully receive the benefits. While estimates of retention and engagement are fairly widespread, a recent CFPB report examining financial coaching programs that are not a part of LISC’s network, less than half of those participants attended more than 2.[9] These numbers are specific to the

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[8] Theodos, B. et al. (2015). An Evaluation of the impacts and implementation approaches of financial coaching programs. Urban Institute

[9] CFPB (2016). “Implementing Financial Coaching: Implications for Practitioners. http://files.consumerfinance.gov/f/documents/102016_cfpb_Implementing_Financial_Coaching_Implications_for_Practitioners.pdf

programs they looked at, but they reflect tensions and challenging questions faced by many financial coaching programs – how might we offer personalized, committed coaching in a way that reaches the most amount of people?

Caught up among these tensions are questions around retention – what are the factors that influence participant engagement and are there different ways of doing things that might increase the number of participants that continue engaging with the financial coaching? LISC partnered with the Common Cents Lab at the Center for Advanced Hindsight to explore new ways to tackle this question. We identified key directions to pursue through an in-depth behavioral diagnosis and developed several potential interventions that addressed these barriers. Ultimately, we tested two interventions – a visual goal-setting exercise and a postcard that participants wrote to themselves in the future – across 24 different Financial Opportunity Centers in 10 markets.

This report organizes and presents the results of our field test in four sections:

- First, we summarize the behavioral diagnosis to lay the groundwork and justification for the design of the interventions.
- Then, in the following sections, we summarize the interventions we designed and how these connect to behavioral science.
- Next, we review the research design used to test these interventions before detailing the findings from the analyses.
- Lastly, we provide broader conclusions and outline what we believe this experiment means with regards to future directions for LISC and financial coaching programs.

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BEHAVIORAL DIAGNOSIS AND BARRIERS TO RETENTION

The design of both the visual goal setting exercise and the postcard to futureself is rooted in a behavioral diagnosis we conducted at the beginning of our partnership. We know that designing effective interventions starts with truly understanding the relationships between participant behaviors and financial coaching outcomes. Our behavioral diagnosis helped us accomplish this by building a better understanding of a participant's engagement with financial coaching and the programs that offer it.

In this case, we were particularly interested in learning more about the factors that influence participant retention and attrition. Our behavioral diagnosis included

- site visits at financial coaching programs;
- interviews with financial coaches and participants;
- analysis of data around client retention; and
- a review of existing literature related to financial coaching.

Designing effective interventions begins with understanding of financial coaching from the perspective of participants.

We visited 20 Financial Opportunity Centers in Chicago, Detroit, Indianapolis, Houston and San Diego. During these visits, we sat in on financial coaching sessions and learned about each step in a participant's journey. We also conducted interviews with coaches and participants, the goals of which were twofold. First, we wanted to hear stories from the perspectives of both the coaches *and* the clients. Getting different perspectives helps us better understand participants' behaviors, attitudes, and motivations. Second, we wanted to observe in person what we were seeing in the quantitative data, as interviews provide insights into the stories behind the numbers.

During our site visits, we also led behavior mapping exercises. Coaches and staff from each of the FOCs were tasked with mapping out a participant's journey, noting each and every step a participant must take in order to remain in the program. Additionally, at each step, the coaches and staff were asked to consider barriers that might prevent participants from fully engaging in the process. Coaches brainstormed barriers that were both structural (e.g. the hours of FOC don't work well with most participants' schedules) and psychological (e.g. clients are overwhelmed by their financial situation). The map helped us create a full picture of the frictions related to retention.

After the site visits were complete, we created a "master map" that incorporated the thinking from individual sites as well as insights from the quantitative and qualitative research. Ultimately the behavior map helped to identify points in the financial coaching process where we could develop interventions to increase retention.

The behavioral diagnosis brought to light a number of potential barriers we could focus on to increase retention.

Defining Retention

The site visits quickly revealed the first challenge to increasing retention: there is no easy way to pick out what "successful" retention looks like in practice. When asked how many sessions were required to retain a participant or how often they should meet, the most unifying response was, "it depends."

Most commonly, coaches defined retention based on the experiences of individual participants, and they often found it difficult articulate a general guideline from the diverse experiences of these individual participants. In an effort to cater to their specific needs, many coaches encouraged participants to determine how many sessions they needed for themselves. However, the interviews with participants made clear that they did not have a sense of how many sessions they planned on attending or how many sessions they needed when they began the coaching process.

Ultimately, our definition of retention was guided by an analysis of a sub-sample of LISC participant data and findings from existing literature. The data show a statistically significant improvement in client outcomes if they attend 3 or more sessions. These outcomes include job placement, retention, and establishment of a credit score. The data also show a positive correlation with net income. Our definition of retention aligns with assumptions in the broader field that participants should ideally complete 3-4 sessions.[10]

For this project, we defined participant retention by the following criteria:

- *attending two (2) in-person, one-on-one sessions with a financial coach, and*
- *completing a third (3) session either in-person or over the phone, within a three (3) month timeframe.*

It's important to note here that this definition of retention is a high bar to reach because it requires both frequent and consistent engagement. We intentionally opted for such a high bar for our definition because doing so makes it easier to assess whether the interventions we designed were effective. However, this definition does not reflect the multiple of ways that a participant can interact with a program. For example, a participant could consistently meet with their coach once every other month for years, but they would not be defined as "retained" in our analysis.

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[10] Theodos, B. et al. (2015). An Evaluation of the impacts and implementation approaches of financial coaching programs. Urban Institute

Behavioral Barriers to Increased Retention

With our definition in hand, we turned to an initial analysisof participants in order to establish a baseline. In the sample of participants, the median number of coaching sessions that clients completed across all services was 5 (this included different types of coaching such as income, employment and financial coaching). When we looked only at financial coaching, the median number of sessions was only 2. Additionally, only 58% of the participants who completed a second session did it in person, with the rest completed over the phone or via email. Only a third completed two *in-person* sessions.

Numerous factors likely lead to this attrition, and indeed, our behavioral diagnosis identified a number of barriers that may prevent more participants from fully engaging with the coaching programs (a full list of barriers can be found in Appendix 6). We primarily focused on the psychological barriers to engagement in financial coaching. Behavioral science suggests that decisions like whether or not to continue attending financial coaching sessions can be significantly shaped by biases that are rooted in human psychology. For example, immediate costs, like time and attention, overshadow even the most compelling of future benefits, especially for individuals who likely would gain the most from coaching.[11,12]

Through our behavioral diagnosis, we came to believe that two barriers particularly influenced a participant's experience and engagement with coaching programs:

1. **Financial coaching offers benefits that materialize in the future, so participants may give up if they do not feel they're making progress early on.**
2. **Participants may decide to put off working with a financial coach because they optimistically think it will be better to work with a financial coach in the future.**

In the qualitative interviews, financial coaching participants often indicated how difficult thinking about the future can be. Financial coaching participants commonly focus on solving short-term problems. Yet, coaches are often encouraging them to think about the big picture. This discrepancy potentially causes some participants to stop coming. At the heart of financial coaching is helping participants to set and achieve goals. If participants are overly focused on the present they may not find those goals particularly motivating.

> "I guess [people drop out] because they're overwhelmed by their situation. Committing is difficult if you don't have employment, and you don't know where your next meal is coming from."

Even still, most participants we interviewed were excited about coaching, and said that they wanted to engage with the program. However, returning participants described how easy it can be to put off coaching sessions once they were back home. Participants may decide to put off coaching until some point in the future, such as when they get income, especially once getting caught up in the responsibilities of their day-to-day lives.

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[11] Ariely, D. (2010). Predictably Irrational: The hidden forces that shape our decisions. New York: Harper Perennial.

[12] Mullainathan, S., & Shafir, E. (2013). Scarcity: Why having too little means so much. Macmillan.

INTERVENTION DESIGN AND PROTOTYPING

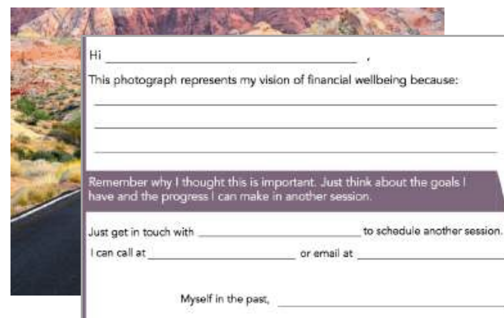
Both of the barriers we identified as especially important are connected to broader principles within the behavioral science literature. For example, research across multiple domains has found that individuals tend to be present-biased, meaning they overvalue short-term costs and benefits.[13] Individuals also tend to procrastinate[14] and exhibit an optimism-bias, assuming that next month will be better and easier to do hard things.[15] These broader behavioral principles informed our process as we began to translate what we learned during the diagnosis to intervention designs.

As such, the design phase began by returning to the literature to see what had been tried already. The literature notes that interventions that effectively help individuals think about the future often use tools that bring abstract, future benefits into the present. We began by thinking of strategies that would communicate the future benefits of coaching in slightly different ways.

The team then conducted a series of design and prototyping sessions, including a co-design session with financial coaches and participants. Ultimately, we developed two separate interventions that we combined together: a visual goal setting exercise (VGS) and a postcard on the back of the photo that participants would write to themselves in the future.

Visual Goal Setting

Visual Goal Setting + Postcard



Hi ______________________,

This photograph represents my vision of financial wellbeing because:

____

____

____

Remember why I thought this is important. Just think about the goals I have and the progress I can make in another session.

Just get in touch with ______________________ to schedule another session.

I can call at ______________ or email at ______________

Myself in the past, ______________________

[13] Hardisty, D. J., K.C. Appelt, & E.U Weber. (2013). "Good or Bad, We Want It Now: Fixed-cost Present Bias for Gains and Losses Explains Magnitude Asymmetries in Intertemporal Choice." J. Behav. Dec. Making Vol 26: 348–361

[14] Steel, P. (2007). "The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure." Psychological Bulletin Vol 133(1): 65-94.

[15] Sharot, T. (2011). "The optimism bias." Current Biology Vol 21(23): R941-R945

Visual Goal Setting Exercise

In the visual goal setting exercise, coaches initiated a conversation about a participant's future financial well-being by showing them eight pictures that represent financial goals (all eight photographs can be found in Appendix 4). Participants were then asked to pick the one photograph that best represents what they want their financial well-being to feel like in the future.

Unlike other ways that visuals have been used, we intentionally avoided picking photographs that referenced specific types of financial goals – we did not have a picture of a car or a house, for example. Instead, the photographs we ultimately selected were intended to convey emotional aspects of these goals. Some represent a journey, while others could convey stability or security. However, since the photographs we selected were not specific, participants had more room for their own interpretations. In their photograph, participants could create a meaning that was personal to them rather than having to pick from pre-selected options.

This approach fits well with a broader literature around visual communication. "A picture is worth a 1000 words" aptly communicates an understanding of the complex ways that we interact with and perceive photographs.[16] When we "see" a photograph, we do not just see static images. We conceptualize the image within a broder, dynamic context. In doing so, we intuitively recognize that photographs are really captured moments in time and we can easily connect them as part of a broader story.

These stories make it far easier for us to connect emotionally with images and photographs.[17] Photographs have been shown to be effective therapeutic tools because they evoke stronger emotional responses than words or verbal description.[18] The visual goal setting exercise aimed to leverage the emotional power of photographs to help participants to better connect with long-term goals. Similar methods have been used by researchers to increase retirement savings – visually pulling future benefits into the present can help participants to be more future-oriented.[19] By using photographs to strengthen the connection between participants and their goals, the exercise intended to increase the value that participants think they will receive by engaging with coaching.

[16] Lester, P. M. (2006). Visual communication: Images with messages. Belmont, CA: Thomson Wadsworth.

[17] Pavlova, M., A.A. Sokolov, & A. Sokolov (2005). "Perceived Dynamics of Static Images Enables Emotional Attribution." Perception Vol 34 (9): 1107-1116

[18] Halkola, U. (2009). "A photograph as a therapeutic experience." European Journal of Psychotherapy and Counselling." Vol 11 (1): 21-33

[19] Hershfield H., et al. (2011) "Increasing Saving Behavior Through Age-Progressed Renderings of The Future Self." Journal of Marketing Research Vol 48: S23-S37.

Postcards to future-self

In the postcard condition, participants would go through the exact same visual goal setting exercise. However, at the end of the exercise, they would then write one or two short sentences about why they picked the picture they did. This added step of writing down the goal was intended to have two effects.

First, the postcards were meant to provide an easy-to-use tool for coaches to capture participants' excitement and to remind them of those feelings after they leave their first session. If a participant missed a meeting and doesn't reschedule, coaches could simply drop the postcard in the mail.

In this way, the postcards served as reminders for participants of what they are working towards in a moment that they may not be feeling motivated to do so. Since we have stronger perceptions of images, we are more likely to remember them rather than words.[20] By presenting participants with a postcard of the image they selected, the intervention provides a more potent reminder. Previous research has shown that visual cue-based reminders can be more effective text-based reminders. This "reminders-through-association" has been shown to further leverage the power of photographs to help individuals overcome faults in self-control.[21]

The postcard also enhanced the saliency of the reminder because the participant could be their own messenger. Previous research suggests that the source of a message can be as important than the message itself.[22] By designing the intervention as a postcard to their futureself – as opposed to a postcard from the coach or from the center – the intervention not only increases the potency of the reminder but may also increase the commitment of the participant in the short-term.

However, the postcard had a second effect in addition to serving as a reminder. Even if participants are never shown the image again, the act of writing down the goals they discussed serves as a commitment device in the shorter-term because writing down goals can serve as a signal that they are important. By combining a more salient reminder with a short-term commitment device, the postcard aims to increase the effect of the visual goal setting exercise.

[20] Ally, B.A. & A.E Budson,. (2007). "The worth of pictures: Using high density event related potentials to understand the memorial power of pictures and the dynamics of recognition memory." NeuroImage Vol 35: 378-395

[21] Rogers, T. & K. Milkman. (2016) "Reminders through association." Association for Psychological Science: 1-14.

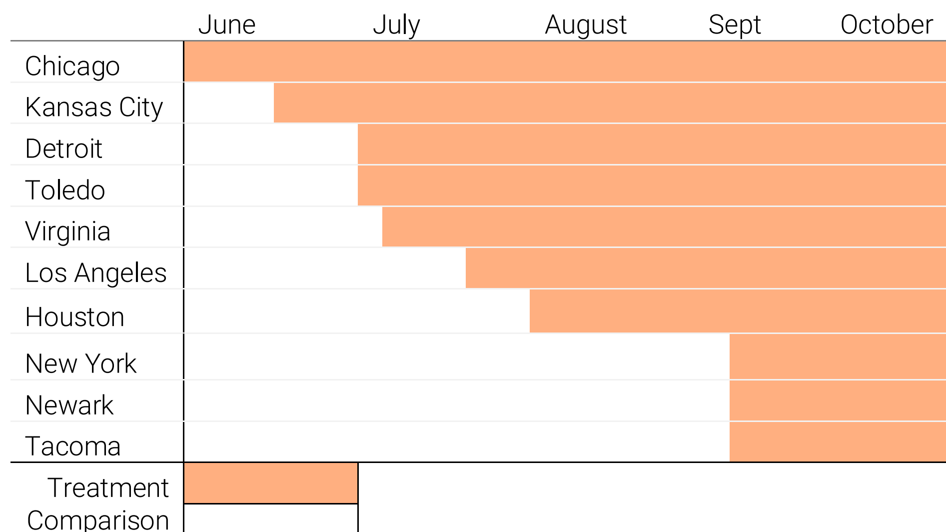
[22] Clark, J.K. et al. (2013). "Evaluating the Message or the Messenger? Implications for Self-Validation in Persuasion." Personality and Psychology Bulletin Vol 39 (12): 1571-1584.

RESEARCH DESIGN AND METHODS

In order to test the effects of the visual goal setting exercise and the postcard to futureself, we designed an experiment that allowed us to test both the efficacy of the visual goal setting exercise as well as the added benefit of using the postcard. We separated participants into a comparison group that did not receive either the visual goal setting exercise or the postcard and two treatment groups: one that went through the exercise but did not use the postcard and another that used both.

Coaching participants were randomly assigned to receive just one of the two treatment conditions. The research team created packets that contained either the goal setting photos or the photos with postcards on the back. Then, the packets were placed in a random order so that coaches could simply select a packet from the top of the stack for each new participant. For consistency, coaches used the new exercise during a participant's first one-on-one session. The contents of the packet determined if the participant saw just the visual goal setting photos or the visual goal setting photos with the postcard included.

We created a comparison group in order to assess the main effect of the visual goal setting exercise by staggering the roll-out of the intervention across different cities as shown in the chart below. Importantly, this comparison group is not a pure "control" because they were not randomly assigned.[23]



[23] We chose not to use a randomly assigned control primarily because we worried that coaches would find it confusing to shift between using the visual goal setting exercise with some clients and not doing anything with others. We also worried that coaches who really liked the exercise who choose to implement it with everyone rather than stick to a randomly assigned schedule.

Defining our sample

Coaches ran the experiment for 5 months, with enrollment starting in Chicago on June 1st and ending on October 31st, 2017. Data collection continued for another 3 months, through January 2018 so that we could measure how many sessions a participant attended in three months in the period following the intervention. The experiment included only new financial coaching participants.[24] After 5 months, we enrolled a total just over 800 participants in the treatment conditions and about 2400 participants in the comparison group. After cleaning the data, we ended with a total sample of 3,158 participants (410 in the visual goal setting only group, 347 in the postcard group, and treatment and 2,401 in the comparison group).

After enrollment, we conducted a series of analyses to compare the individuals within each of our three groups relative to a number of demographic and financial characteristics. Ideally, each of the three groups would be statistically equivalent – meaning that while there may be differences between groups, those differences would be within the bounds of sampling error and would not be not large enough to add bias into our evaluation of the intervention.

As shown below in Table 1, there were important differences between the three groups in the initial sample. On average, the comparison group was older, more likely to be male, less educated, and they were more likely to be unemployed. However, upon closer analysis, these differences were mostly driven by a specific set of comparison participants for whom there was much higher rates of incomplete or missing data. These participants did not appear to come from certain sites or markets. Instead, they likely were clients who may have began their involvement with the site through a different channel, such as through specific workforce development programs and trainings.

After excluding the group of participants that likely engaged with the program through different channels, the comparison group and the treatment groups were largely comparable with regards to racial and ethnic composition of the groups. They were no longer statistically different from the treatment groups relative to educational attainment or employment. The same was true for housing status and household size, with no reported differences between groups.

[24] There were several cases where the intervention was administered to returning clients who had previously been enrolled in the system. For consistency, these clients were dropped from the final analysis.

Table 1. Sample characteristics in the initial sample and the final, matched sample

	Unfiltered Sample			Matched Sample		
	Comparison	VGS	Postcard	Comparison	VGS	Postcard
n	2,401	410	347	870	387	330
Age	40.1	37.5	38.6 **	40.2	37.8	38.6 **
% Female	56.8%	62.7%	61.4% **	58.1%	61.9%	62.1%
Household Size	1.3	1.3	1.3	1.3	1.3	1.3
Race/Ethnicity						
Black/African-American	65.1%	67.7%	66.7%	65.8%	69.0%	68.3%
Hispanic	15.2%	16.0%	13.6%	13.3%	14.1%	12.4%
White	14.4%	13.1%	14.2%	15.8%	13.6%	14.0%
Other	5.3%	3.2%	5.5%	0.6%	1.1%	6.9%
Education						
Less than HS	23.8%	15.1%	16.9% **	19.6%	15.4%	16.6%
High School	21.4%	20.4%	21.4%	19.3%	21.1%	21.7%
Some College / 2-year Degree	42.8%	53.1%	48.2% **	46.4%	52.3%	48.1%
College graduate	11.9%	11.5%	13.6%	14.8%	11.3%	13.6%
Employment						
% unemployed	75.4%	70.3%	67.1% **	0.7114	0.6921	66.12
# of months employed	4.1	4.7	5.0 **	4.6	4.7	5.1
Housing status						
Own	24.7%	27.0%	31.2%	26.0%	26.5%	31.4%
Subsidized rental	28.1%	23.3%	22.3% *	27.9%	23.2%	21.8%
Unsubsidized rental	23.0%	29.4%	24.2% **	24.0%	29.1%	24.0%
Homeless	8.4%	8.2%	9.2%	8.0%	8.7%	9.3%
Living with friends or family	15.7%	12.2%	13.2% *	14.1%	12.6%	13.5%

We decided to use the comparison group that matched more closely along demographic and personal characteristics for two reasons. First, this group likely represented a more realistic comparison group because we were more confident that each participant was offered financial coaching. Secondly, the group we would exclude had significantly worse outcomes relative to our treatment groups. By including them in the final analysis, we risked unintentionally enlarging the difference between the comparison and the treatment. We opted for the more conservative evaluation to be more confident that any effect could be attributed to the intervention.

However, we were still interested in this group of comparison participants, and we used different subsamples to look for potential sources of biases in our analysis. Ultimately, we analyzed the data using multiple samples and sub-groups to isolate any potential sources of bias that may be present.

FINDINGS

We hypothesized that the visual goal setting exercise and postcard to futureself would help participants to connect with their long-term financial goals in a more emotional way, thus increasing the perceived value of the coaching. If indeed the interventions were successful, we hypothesized that the interventions would influence four different outcome variables related to participant engagement [25]:

- **The total number of sessions that a client had throughout the experiment.** This outcome is a broad reflection of a participant's engagement with financial coaching and highly influenced by when a participant was enrolled – a participant enrolled in the first month would have an extra 3 months to attend sessions. Even still, we felt that if the intervention increased a client's connection to their long-term goals, those participants would ultimately attend more sessions.

- **The total number of sessions a participant attends within 3 months.** Just like measuring the total number of sessions, we felt that if our interventions contextualized a participant's financial goals in a way that was more motivating, then participants would attend more sessions early in their engagement. Unlike the measure of total sessions, however, this measure is time bound to three months starting from when a participant is first enrolled in the program.

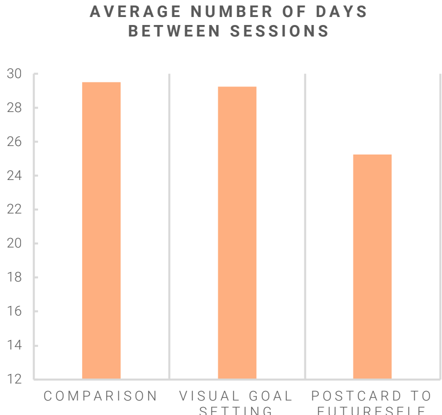
- **The average number of days between participants' sessions.** We also anticipated that participants who better connected with their long-term goals would be less likely to miss sessions. Similarly, if participants are especially motivated to work on their long-term goals, they may schedule sessions more regularly in the aggregate, if fewer participants are missing sessions, then we would expect to see a smaller number of days on average between sessions.

- **The percentage of retained clients.** Ultimately, this is our primary outcome. If the interventions facilitate a deeper, more meaningful connection to a participant's long-term goals, that connection will be reflected in a greater engagement with the FOC and financial coaching.

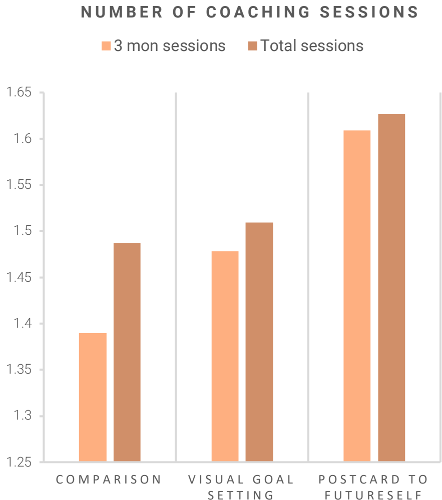
[25] A detailed summary of the analysis methods can be found in Appendix 5.

The visual goal setting exercise improved retention and the postcard to futureself likely had an additive effect.

We see encouraging trends with regards to all of our primary outcomes. With regards to the average number of days between their coaching sessions, there were no differences between the comparison group and the visual goal setting group. We do see a nominal decrease of a little more than 4 days for participants who used the postcard. In closer analysis, though, this difference was also not statistically significant after controlling for demographic and financial factors.

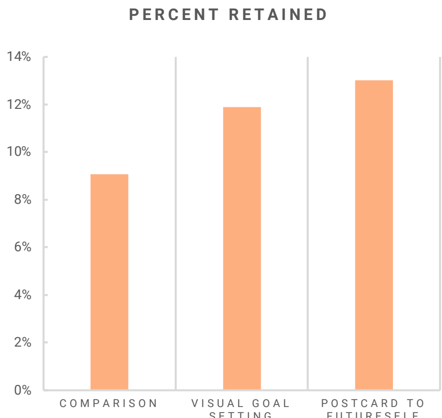


However, financial coaching participants who went through the visual goal-setting exercise did attend more sessions on average, both within their first three months and overall. Furthermore, the participants who also wrote those goals down on the postcard to themselves in the future attended even higher numbers of sessions on average.



In fact, after controlling for relevant demographic and financial factors and clustering the analysis at the site level, participants using the visual goal setting exercise with their coach attended 6% more sessions within the first three months ($p<0.10$). For participants who also used the postcard, this increase was nearly than 16% (8% more than just the visual goal setting).

Furthermore, we see that the gap between total sessions and sessions within 3 month shrinks for the experimental groups, suggesting that participants are both attending more sessions but also attending sessions more frequently.



Most importantly, though, these increases in total number of sessions translated into a higher percentage of retained participants as well. In the comparison group, just over 9% of all participants met our definition of retention. Comparatively, nearly 12% of the participants who went through the visual goal setting exercise were retained. For participants who also used the postcard, this rate was even higher, with just over 13% of all participants attending 3 or more sessions –2 of which were in-person— in 3 months.

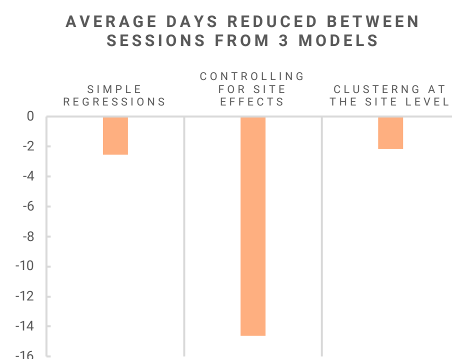
Even after accounting for other contributing factors both at the individual level and at the site level, the main effect of the visual goal setting on retention remained statistically significant. While the visual goal setting exercise on its own was effective, the largest effects resulted from the pairing of the visuals with the postcard. The analysis indicated that participants who used the postcard in addition to the visual goal setting exercise had better outcomes with regards to all of our measures – they consistently attended higher numbers of sessions and a higher percentage of them were retained after 3 months.

However, there were important variations across sites. More so than just the visual goal setting, the postcard appeared to have stronger interactions with the implementing site. In follow-up, some coaches suggested that there may have been a higher degree of hesitation with having clients write out their goals. Other coaches may have been more reticent in explaining the purpose of the postcard, since they would only send it if the participant stopped attending the session.

However, accounting for site variations is slightly more difficult when examining the additive effect of the postcard compared to the visual goal setting exercise. The effect size is likely smaller and there is less available sample compared to that in the analysis of the main effect of the visual goal setting exercise. To account for site variations, our analysis looks across three different models: a simple regression, one controlling for site effects interactions, and one clustered at the site level, which is different way of accounting for intra-site variation.

This closer analysis of the postcard suggests that including the postcard likely did have an additive effect to the visual goal setting exercise. The results indicate that the postcard would not meaningfully increase retention relative to just using a visual goal setting – the slight increase of about 1% was not statistically significant. Interestingly, though, the results do show a small but significant increase in the total number of sessions and the number of sessions a participant attends within 3 months.

Furthermore, using the postcard likely decreased the number of days between sessions. One analysis controlling for site differences estimated that using the postcard would significantly decrease the average time between sessions by as much as 2 weeks. However, this difference is not present in the clustered analysis. Clustering requires significantly more power than the analysis had, meaning it's less likely to identify differences between the groups.



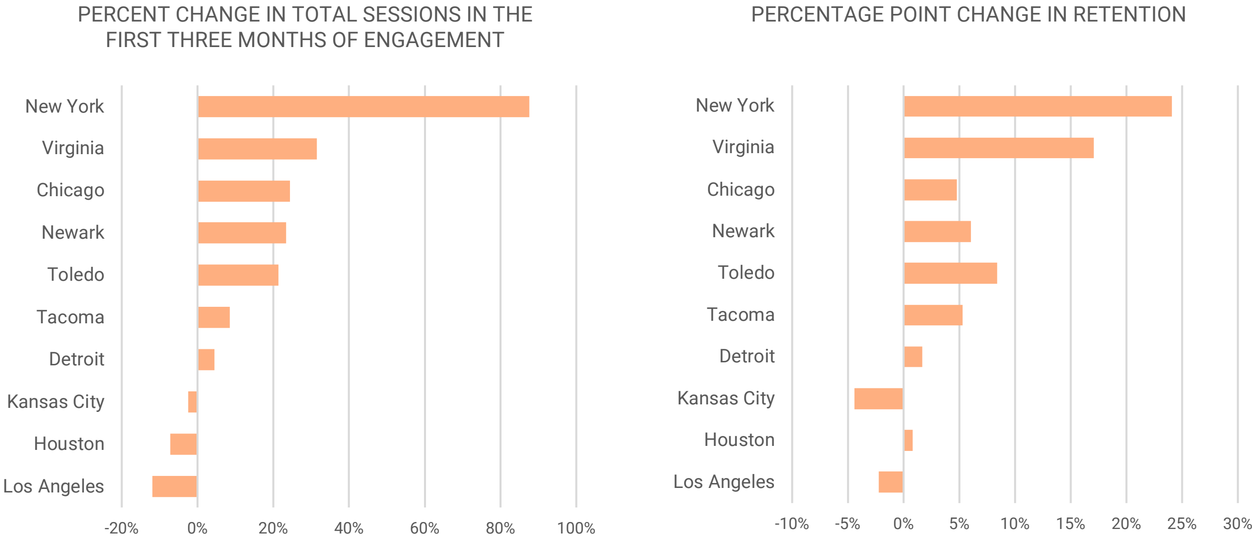
Despite the differences across each model, the co-efficients across the multiple analyses and across different sub-groups were consistently negative, which, combined with the significant difference after controlling for site effects, suggests the intervention likely did have an effect. These results suggest that postcard clients were more likely to attend sessions and likely fewer postcard participants postponed or rescheduled sessions.

The visual goal setting exercise and the postcard to futureself had differential impacts across sites.

Our analysis estimates that implementing a visual goal setting exercise within the "average financial coaching program" would increase retention by 5-7% on its own. Of course, given the diversity in organizational histories, different focuses, and the many services offered at different sites, the "average" coaching program does not look especially similar to any real-world coaching programs.

Just like the average days between sessions, the effect of our interventions varied significantly between sites. The charts below demonstrate the differences in effect with regards to the total number of sessions within three months and retention for different sites, which we have grouped together by market.

We see that in some sites, such as those in Detroit or Newark, the intervention had positive effect for both outcomes. Participants at these sites in these markets were consistently more likely to engage with financial coaching and to attend sessions. However, even among sites with positive outcomes, we see a tremendous amount of variation. For example, sites like those in Chicago saw larger increases in the number of sessions but relatively smaller increases in retention. Sites in New York were the outlier, experiencing nearly a 25% increase in retention and more than an 80% increase in the number of sessions participants attended within 3 months.



However, this was not the case for all sites. Sites in Kansas City and Los Angeles actually experienced a drop in both percentage of participants who would be classified as retained and in the total number of sessions that they attended, although neither of these decreases are statistically different from 0. In Houston, it's likely the intervention had no effect, which is why we see a nominal increase in retention and a decrease in total sessions. Even still, it's plausible that coaches in these sites simply did not endorse the intervention as much as other participating sites.

More likely, though, differences in organization priorities and arrangement of their services led to differences between sites. In the table below, we see striking differences in the services that participants expressed as their primary interest for engaging the site. We see that many participants in Kansas City already come to these sites for financial counseling. Furthermore, Kansas City had the second highest retention rate beforehand – second only to Tacoma. In these cases, it's probably that the intervention supplemented other efforts to increase retention and therefore had less room for impact.

	Chicago	Detroit	Kansas City	Houston	Los Angeles	New York	Newark	Tacoma	Toledo	Virginia
Digital Literacy	0.21		0.45	0.54			1.49			
Education and Training	2.71	28.9	4.93	47.28	26.88	0.88	27.72	27.08	0.4	2.78
Financial Counseling	3.97	38.02	40.36	5.43	19.35		5.94	12.5	75.89	27.78
Public Benefits	2.51	11.79	13.9	2.72			9.9	2.08	7.11	11.11
Career Development	90.61	21.29	39.46	40.49	51.61	99.12	47.52	58.33	3.56	58.33
Other			0.9	3.53	2.15		7.43		13.04	

Taken together, the results suggest that using the visual goal setting exercise would improve retention in financial coaching programs. The analysis also provides evidence to suggest that the postcard had a significant additive effect – the strongest results across all of our measures were driven by the combination of the postcard and the visual goal setting exercise. Importantly, our analysis re-emphasizes the important role that sites and, by extension, individual coaches have on a participant's experience with the programs. The effect of the intervention with regards to all of the results is mediated by characteristics and the approach to coaching adopted at the site level.

Why did the interventions work?

We designed the visual goal setting exercise to make it easier for participants to think about their long-term goals and to connect with them on a deeper, more emotional level. To assess whether or not the intervention worked, we tracked changes in four measures relevant to retention and engagement with the theory that if participants better connected with their goals, then they would be more likely to see financial coaching as valuable.

While the analysis finds that participants who used the visual goal setting exercise attended more sessions on average and a higher percentage of them were retained, there are many factors that could confound this relationship. For example, some of the sites who participated may have been already interested in implementing an intervention related to retention. These sites could have engaged in other kinds activities, like increasing outreach, which might have increased retention. Alternatively, it could be that simply participating in a study in which coaches knew we were measuring retention caused them to change how the interact with participants.

The messages that participants wrote using the postcard suggest that the visual goal setting activity did encourage them to think about their long-term financial well-being in a more emotional and meaningful way.

To dig a little deeper into how the visual goal setting exercise worked, we looked at the messages that participants wrote during the postcard condition. We found there was tremendous variation in the ways in which participants interacted with and interpreted the photographs. We intentionally selected abstract photographs to allow participants to give them their own, personal meaning. The wide variation in meanings that participants expressed in their messages suggest that this worked as we anticipated.

For example, each of the quotes below are messages for the same photograph, but each participant reacted in meanngfully different ways. In the first, the participant brings out the importance of family and providing a good upbringing to their children. The second participant saw the beach as a symbol of their own success, about being able to relax when all the financial stress is gone. The third represents a completely different interpretation of the beach, one reflecting backwards and symbolizing a fresh start.

“I have a vision of one day sitting at the beach and feeling very relieved, while watching my two kids play on the sand.”

“Having financial freedom means more time for pleasure and relaxation. To me, the beach represents that.”

“This is a new beginning... washing away of old habits for a better future!!!”

While the variation in messages is encouraging, there were also several important themes that spanned across the postcards. There were still several references to concrete and specific goals that were common across the messages, such as improving credit score, buy a car, and pay off student debt. However, these messages were in the minority. More commonly, the messages reference broader themes that go beyond concrete financial goals. The most common themes that connected messages together were related to:

- Stability, or reaching a point in life where you have a greater sense of control.
- Family, or being able to provide more than just the basics to your loved ones.
- Freedom, or having achieved a level of financial well-being where you are able to make financial choices for yourself.
- The journey, or conveying the importance of taking it one step at time and recognizing the importance of sustained effort.
- Travel, but on a deeper level these messages had less to do with travel and more to do with having the ability to experience new things or take advantage of what life has to offer.
- Limitless possibilities, or somehow conveying that this was meant to be a fresh start and that they were not emotionally bound by the stresses of the past.

The frequency of messages that conveyed these deeper, more emotional themes suggests that the photographs did help participants to conceptualize their goals in a different, more meaningful way.

The postcard forced participants to focus their attention and to take a moment to summarize their feelings about the card they selected.

The postcard that participants wrote to themselves was intended to serve as a reminder for participants but also as a short-term commitment device. Unfortunately, we do not have sufficient data to assess if the postcard would have been an effective reminder because only about 8% –or 32 postcards – were mailed to the participants. Such a small sample makes looking at the treatment effect on the treated participants difficult.

However, this is important to know in and of itself. Having coaches hold on to the postcard and then mail at some uncertain point in the future is likely not the correct channel in which to connect with participants. Furthermore, many of the coaches noted in their feedback that participants wanted to take the photographs home with them. Clearly, this is not something that is feasible or desireable to consistently implement if it only functioned as a reminder.

Interestingly, though, the analysis suggests that the postcard likely had an added benefit regardless of whether it was sent to the participant or not. These findings support the theory that writing down a short, 1-2 sentence summary of why they picked the photograph they did seemed to make it more meaningful for the participants.

This aligns nicely with existing literature from cognitive psychology that supports writing as an effective memory strategy. Writing is effective for two reasons. First, our ability to commit things to memory is influenced by modality, or the manner in which information is presented.[26] Writing on the postcard switches from an auditory mode to a written mode. The written mode often feels more formal, but also simply a change in modality signals to us that the information is important.

Secondly, using the postcard creates opportunity for the participants to engage in an elaborative rehearsal. Past research has found that an elaborative rehearsal – or taking time to reflect and make connections between knew information and old information – can significantly increase recall of information.[27] The postcard forces participants to give more direct attention to their thoughts as they take longer to write them. In doing so, partcipants must think back on their conversation and think critically about how to summarize their thoughts in just 1-2 sentences. Simply going through the steps of doing this likely helped participants to more fully endorse how they described their future goals.

[26] Battacchi, M. W., Pelamatti, G. M., & Umilta, C. (1990). Is there a modality effect? Evidence for visual recency and suffix effects. Memory & Cognition18, 651-658.
[27] Craik and Lockhart (1972). "Levels of processing: A framework for memory research." Journal of Verbal Learning and Verbal Behavior Vol 11(6): 671-684

LIMITATIONS

Any applied research will have limitations when interpreting the results. In our study, these limitations generally fall into one of two categories: a non-random comparison group, or implementation error.

Non-random comparison group

When designing the study, we elected to use a quasi-experimental design to test the main effect of the visual goal setting. We structured the test this way primarily to simplify the implementation for coaches. We felt that it would be more consistent if coaches always used visual goal setting exercise and randomly changed if they added the postcard rather to decide if they were going use the visual goal setting exercise at all. While this structure probably did reduce implementation problems, it does open the analysis to potential sources of bias.

Specifically, because the comparison group was not randomly-assigned, we cannot be sure that they are perfectly comparable. As noted previously, the initial comparison group was different from the treatment groups in several important ways:

- In the comparison group, females accounted for a smaller percentage of the comparison group's overall composition (56.8% in the comparison group vs. 62.7% and 61.4% in the treatment groups).

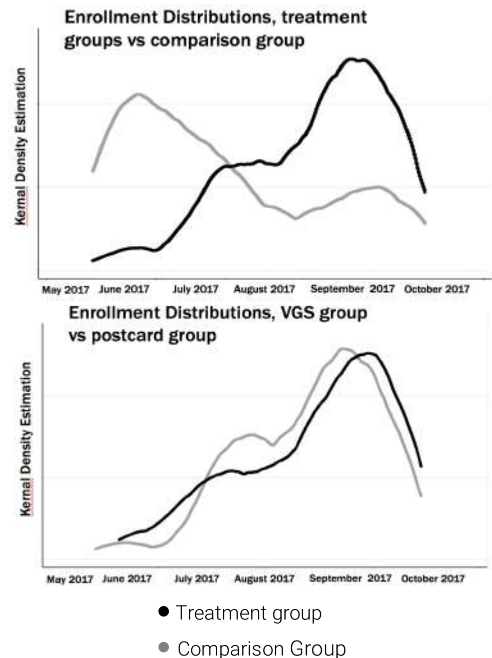
- The comparison group was less educated than the treatment group. A higher percentage of the comparison group did not graduate high school (23.8% compared to 15.1% and 16.9%). Relatedly, even among those who did graduate high school, participants in the treatment group were more likely to get a 2-year degree or attend some college.

- The comparison group was more likely to be unemployed at the time of their enrollment (75.4% compared to 70.3% and 67.1%). Similarly, participants in the treatment conditiosn worked more months over the past year on average than the comparison group.

In the sample, these differences cannot be disconnected from one another and intersect significantly at the inidvidual level. Within the data, it seems that there is one type of participant who is more likely to be male, undereducated, and unemployed than other groups with the data.

There are a number of reasons that potentially could be underlying why the comparisn group enrolled more of this type of participant. One possibility is that the differences are driven by differences in enrollment patterns, with a fundamentally different cohort of clients choosing to enroll earlier in the year versus later.

The charts show the enrollment patterns for the comparison group and the treatment groups. As they show, a bulk of the comparison group was enrolled early in the study and tapered off over time. Conversely, the largest number of the treatment participants were enrolled later in the study.



The discrepancy in enrollment patterns potentially opens our analysis to time biases if, for example, the participants who enrolled earlier in the study are different than those who enrolled at the end of the summer and fall. These differences are plausible, especially if programs are graduating large cohorts or training programs that do not run on a constant basis.

The enrollment patterns also open the analysis to other kinds of biases as well. For one, coaches could gain experience over that time period, making them more effective at engaging with participants by the time the treatment group was enrolling. Alternatively, the coaches knew they were participating in a research study about retention, and perhaps this recognition changed their behavior in other ways for treatment groups that would not affect the comparison group because they were not enrolled at the same time.

As noted above in the sample description, there are important differences in the full sample related to educational attainment and employment, among other demographic characteristics. These differences suggest that the two groups are different in some way. However, that difference is contained within a type of participant and the other comparison participants serve as an adequate comparison group. However, we cannot definitively rule out that other factors are driving differences between the groups.

Implementation error

In addition to concerns about the comparison group, our analysis is subject to a range of biases related to implementation error. When using the term “error”, we are not ascribing fault to the coaches. Rather, “error” is a board term to reflect differences in the way the intervention was administered. For example, some coaches used the visual goal setting exercise at the beginning of the session rather than at the end. While we encouraged coaches implement the interventions consistently, we also wanted coaches to adopt these tools into their personal approach to coaching. We wanted them to feel natural from the perspective of the client.

However, doing so opens the door to bias from the many variations in the ways the intervention was explained to and experienced by clients. These differences were best captured in the post-experiment survey we sent to coaches. These results are pending analysis and will be included in the final report.

However, some implementation error is present in the data. For example, the initial sample included 845 recorded participants that enrolled within the intervention timeframe but had no recorded interactions with coaches. We addressed these clients by including them in the primary model but also looking to see how the model changes after exlcuding them. We see that exclusion strengthens the overall effect but does not change the signifcance level.

Taken together, implementation error likely does introduce bias to the analysis. Given the diversity of coaching programs, the length for which the interventions were in the field, some amount of variation is unavoidable. However, that bias likely does not change the overall trend, but rather reduces the effect size we could expect from the visual goal setting exercise and the postcards. This reduction in effect size is important because it shows to some extent the ways the intervention might be affected by differing sites.

CONCLUSION

For the past 18 months, we have explored ways in which we can use behavioral science to overcome barriers that might prevent financial coaching participants from fully engaging with the program. This process began with a deep behavioral diagnosis and finished by rolling out an intervention at financial opportunity centers across 10 cities.

The analysis of that intervention supports the visual goal setting exercise as an effective way to help participants to more meaningfully connect with their long-term goals. Participants who went through the visual goal setting exercise with their coach, on average, attended more sessions and were more likely to be retained after three months.

Furthermore, the analysis suggests that the postcards that participants wrote to themselves in the future significantly improved the visual goal setting exercise, regardless of whether or not they were ever sent to the client. Instead, something about writing down goals likely made them feel more formal. Participants who used the postcard saw significantly better results across all of the outcome measures.

While we have specifically focused on reporting increases in total sessions and retention, it is important to remember that at the heart of these metrics is participant experience. These tools increased retention because they improved the experience that participants had with financial coaching. These tools increased how valuable participants thought that

coaching would be for them and, in getting more of them to come back, these tools increased the value that the participants got from coaching.

Even more broadly, this research also suggests that a participant's willingness to engage with financial coaching is not simply a function of a participant's financial circumstance and their individual motivation. Rather, their willingness to continue to work with their coach is shaped by a larger set of influencing factors than we tend to believe. In the qualitative, when we asked coaches about participants who do not stick with the program, we commonly heard responses to the effect of "this just isn't the right time for them." This may be partially true in some cases, but this perspective ignores the ways that financial coaching is not meeting their needs or effectively communicating the value of coaching to them.

At the heart of financial coaching is helping clients to set and reach goals. However, this research suggests that the ways in which we engage participants around their long-term goals may not be as motivating as it could be. The intervention described here represents one successful effort to re-design a goal setting activity to be more motivating. There may be others, and moving forward, financial coaching programs should look for different ways to structure and communicate with participants about their goals so that they may better serve all of the clients that begin the coaching process.

Appendix 1. Defining Retention

We defined retention as clients who:

> *attend two (2) in-person, one-on-one sessions with a financial coach; and complete a third (3) session either in-person or on the phone within a six (6) month timeframe.*

This definition was drawn from our own analysis of a subset of financial coaching clients and from analyses performed by the Theodos et al. (2016) for the Financial Clinic. The data from our own analyses informing our definition is presented below.

Table 1. Distribution of Participants in the Sample by Year of Enrollment and Last Year of Coaching.

Last Year of Coaching		2011	2012	2013	2014	2015	TOTAL
	2011	25					**25**
	2012	15	19				**34**
	2013	3	8	38			**49**
	2014	3	6	12	41		**62**
	2015	1	7	6	15	1	**30**
	TOTAL	**47**	**40**	**56**	**56**	**1**	

Table 2. Associations Between Attending Financial Coaching Sessions and Financial Well-being Outcomes

	1 session	3+ sessions (2 in-person)
Placed in a Job	34.6%	66.7% ***
Retained job for 180 days	47.0%	79.0% **
Became Scored	9.5%	45.0% **

**Statistically significant at $p<0.05$
***Statistically significant at $p<0.001$

Appendix 2. Regression results, the main effect of the visual goal setting exercise and the additive effect of the postcard

Models testing the main effect of the visual goal setting exercise•

	Simple Regression Model				Controlling for Demographics				Clustered at site level			
	Session total	3-mon session total	Avg. days between sessions	Retained	Session total	3-mon session total	Avg. days between sessions	Retained	Session total	3 month session total	Avg. Days between sessions	Retained
	1547	**1493**	**510**	**1547**	**908**	**877**	**304**	**908**	**908**	**877**	**304**	**908**
Experiment	0.083 * (0.049)	0.153 ** (0.049)	-4.11 (2.274)	0.033 ** (0.016)	0.16752 ** (0.068)	0.19828 ** (0.072)	-1.4132 (3.652)	0.05678 ** (0.021)	0.16752 * (0.097)	0.09384 ** (2.110)	-1.41317 (4.171)	0.05678 ** (0.026)
Date enrolled	-	-	-	-	-0.003 ** (0.001)	-0.002 ** (0.001)	-0.126 ** (0.044)	-0.001 (0.000)	-0.003 ** (0.002)	-0.002 (0.001)	-0.126 ** (0.046)	-0.001 ** (0.000)
Age	-	-	-	-	0.001 (0.002)	0.000 (0.002)	-0.069 (0.111)	0.001 (0.001)	0.001 (0.002)	0.000 (0.002)	-0.069 (0.126)	0.001 (0.001)
Gender	-	-	-	-	0.006 (0.064)	-0.010 (0.063)	-4.912 (3.945)	-0.020 (0.020)	0.006 (0.104)	-0.010 (0.112)	-4.912 (4.177)	-0.020 (0.023)
Education												
High School	-	-	-	-	0.168 * (0.090)	0.098 (0.088)	6.391 (5.453)	0.011 (0.023)	0.168 * (0.094)	0.098 (0.082)	6.391 (6.253)	0.011 (0.014)
Some college	-	-	-	-	0.222 ** (0.087)	0.102 * (0.081)	5.080 (3.956)	0.068 (0.023)	0.222 ** (0.084)	0.102 * (0.068)	5.080 (5.161)	0.068 ** (0.017)
College graduate	-	-	-	-	0.195 * (0.108)	0.129 (0.106)	5.545 (4.989)	0.084 (0.035)	0.195 (0.127)	0.129 (0.118)	5.545 (5.527)	0.084 ** (0.037)
Employment	-	-	-	-	0.082 (0.072)	0.096 (0.073)	-2.690 (3.969)	-0.001 (0.021)	0.082 (0.082)	0.096 (0.074)	-2.690 (3.928)	-0.001 (0.022)
Race /Ethnicity												
Hispanic	-	-	-	-	-0.157 * (0.091)	-0.095 * (0.092)	2.574 (8.155)	-0.033 (0.033)	-0.157 ** (0.067)	-0.095 ** (0.045)	2.574 (6.546)	-0.033 * (0.020)
White	-	-	-	-	-0.227 ** (0.107)	-0.338 ** (0.103)	3.945 (4.901)	-0.056 (0.020)	-0.227 ** (0.102)	-0.338 ** (0.087)	3.945 (3.433)	-0.056 ** (0.014)
Other	-	-	-	-	-0.103 (0.163)	-0.080 (0.148)	1.196 (7.021)	-0.068 (0.032)	-0.103 (0.168)	-0.080 (0.134)	1.196 (6.320)	-0.068 ** (0.020)
_constant	1.483 (0.033)	1.43757 (0.030)	29.4873 (2.176)	0.0908 (0.010)	70.6936 (18.900)	48.2468 (17.464)	2677.89 (933.809)		70.6936 (31.703)	48.2468 (25.518)	2677.893 (963.470)	

• Each column represents a separate regression model. Co-efficients are reported above and robust standard errors reported below in parentheses. With the exception of "Retained", each co-efficient should be interpretted as the change in average at mean given the presence of the VGS. In addition to the listed variables, each model also accounts for market differences.

•• The co-efficient for the retained model is the change in marginal probability derived from a non-linear probit model. The reported co-efficient should be interpreted as the change in marginal probability of retention from the mean given the presence of the postcard.

••• Clustering refers to a technique that treats participants from the same site as a single group. This technique helps to account for variation that stems from some unifying factor, such as a working with the same coach. In this case we have 24 clusters.

* Denotes statistical signifance (p-values = 0.05-0.1)

** Denotes statistical signifance (p-values <0.05)

Table 2. Models testing the additive effect of the postcard to futureself•

	Simple				Controlling for Site Interactions				Clustered at site level•••			
	Session total	3-mon session total	Avg. days between sessions	Retained••	Session total	3 month session total	Avg. Days between sessions	Retained••	Session total	3 month session total	Avg. Days between sessions	Retained••
n	677	652	249	677	677	652	249	712	677	652	249	677
Postcard	0.136 * (0.072)	0.150 * (0.079)	-2.557 (3.331)	0.019 (0.025)	0.249 * (0.131)	0.333 ** (0.151)	-14.628 * (7.881)	0.042 (0.052)	0.096 (0.072)	0.121 (0.081)	-2.148 (2.551)	0.012 (0.031)
Date enrolled	-	-	-	-	-0.004 ** (0.001)	-0.003 ** (0.001)	-0.100 * (0.054)	-0.001 ** (0.000)	-0.004 ** (0.001)	-0.004 ** (0.002)	-0.106 * (0.058)	-0.001 ** (0.000)
Site Effects	-	-	-	-	0.014 (0.013)	0.029 * (0.015)	-1.696 (1.077)	-0.003 (0.006)	-	-	-	-
Site Interactions	-	-	-	-	(-0.013) (0.009)	(-0.019) * (0.010)	(1.086) * (0.600)	(-0.003) (0.004)	-	-	-	-
_constant	1.367 (0.107)	1.350 (0.115)	30.058 (5.357)	-	89.942 (21.981)	78.679 (24.158)	2164.036 (1142.08)	-	87.580 (26.902)	76.168 (33.585)	2265.313 (1215.61)	-

• Each column represents a separate regression model. Co-efficients are reported above and robust standard errors reported below in parentheses. With the exception of "Retained", each co-efficient should be interpretted as the change in average at mean given the presence of the postcard in addition to the VGS. In addition to the listed variables, each model also accounts for market differences.

•• The co-efficient for the retained model is estimated using a non-linear probit model. The co-efficient should be interpreted as the change in marginal probability at the mean given the presence of the postcard.

••• Clustering refers to a technique that treats participants from the same site as a single group. This technique helps to account for variation that stems from some unifying factor, such as a working with the same coach. In this case we have 24 clusters.

* Denotes statistical signifance (p-values = 0.05-0.1)

** Denotes statistical signifance (p-values <0.05)

Appendix 3. Qualitative analysis

Themes

1) Stability

Many messages noted that participants wanted to feel stable. They didn’t want to worry about their finances and wanted to feel secure in their financial positions. A related piece of the stability theme was a feeling of peace. In unstable financial situations, individuals may feel like they have no sense of control over their lives. The feeling of peace is what many participants noted it would feel like when they had achieved this stability and gained a sense of control.

2) Family

Participants expressed that they wanted to have the ability provide for their families. Many noted they wanted to take the kids on vacations or make sure the children were taken care of in the future. Further, many participants noted that they felt like they needed the support of their family and spouses in order to get through these hard times and work towards financial well-being.

3) Freedom

Many noted that when imagining financial wellbeing they did felt like nothing was weighting them down or holding them back. Some postcard noted that did not want to owe anything to anyone, implying that the debts make many feel tied down and bound by those obligations. Participants, in the intervention noted that they wanted to be free from that feeling. An additional piece of this theme was a sense of independence and self-efficacy. Participants wanted to be able to provide for themselves without being dependent on anyone else

4) Journey

Participants recognized that achieving financial well-being would be many steps in a long process toward financial well-being. They anticipated that they would face barriers but imagined themselves as being resilient and still reaching financial success. The resilience piece was notable in several responses. Participants noted that they could and would not give up. There was also this aspect of blind faith: like people didn't know exactly where they were going or how they would get there, but knew that they would somehow.

5) Travel

The messages many participants wrote imply that they have never had the financial capability to spend on luxuries like travel. Many desired this ability to travel and experience the world as what they imagined for their financial future.

6) Concrete Goals

Some messages were outlining clear and concrete goals that participants wanted to achieve. These included very specific tasks like improving credit score, buy a car, and pay off student debt.

7) Limitless possibilities

Many participants messages related to no specific goal or feeling, but instead this excitement for endless opportunity. These messages put no limit on the possible achievements or success the individual would reach. Many messages included phrases like “the sky's the limit” implying that these participants imagined they would go anywhere they wanted in life.

Themes by Card

Beach

Travel

The most prominent theme that emerged in the beach photographs was travel. Most participants in this study were not financially capable of taking vacations due to a variety of financial constraints and it is possible that many had never even been on a vacation before. The desire to travel and experience beach vacations was very prominent in their messages. For example, one participant wrote:

"I choose this card because in the future I wish to travel to lots of beaches and enjoy the nice weather in the summer"

Freedom

Another related theme was freedom. From some messages, it seems that participants wanted to on vacation without worrying about financial issues at home or anticipating consequences they might face for taking on such a luxury. Merely being able to take that time to get away and relax was luxury many imagined as financial well-being.

"This is freedom to me because I will be able to take time to go on a trip and not be overwhelmed"

"I have a vision of one day sitting at the beach and feeling very relieved, while watching my two kids play on the sand"

Winding road

Journey

Many imagined the picture of winding road as the road they would take to financial well-being. However, unlike the picture, which was free of barriers, participants recognized that the road would not be easy. Many anticipated a long road to financial well-being with obstacles and setbacks along the way. Although participants knew it would be a difficult journey, the messages still conveyed a sense of commitment and dedication to achieving their goals.

"It's a long road to my goals but with goals in place I will reach them."

"It takes some time to get anywhere in life. As long as you make positive and good decision and stay focus you can get to that special place"

Stepping Stones

Concrete Goals

Many messages in the stepping stones postcard suggested a sense of progression toward achieving goals. The stones seemed to represent a "take it one-step at a time" mindset, implying that participants realized achieving financial well-being would not be an overnight process.

"There are steps to take to reach the end goal of owning my own home and be debt free."

"It represents the stepping stones to my financial future with a career and education."

Instability

Interestingly, a few messages also implied that the stones were more representative of instability. These participants saw the stones as a path that they could easily fall off of or just a means to getting to a more stable place. These messages were interesting because it might signal that when starting along this process toward financial well-being, participants may still feel unstable even with the support and guidance of a financial coach.

"The stones are for stepping onto a more secure and grounded position. Getting to solid ground."

Holding Hands

Family

Most participants expressed strong family-based aspirations in their messages. Many noted that they wanted to be in a better financial position in order to provide for their families and give their children better lives. Some also expressed the need for family support in this process, implying that the family plays both a motivational and supportive role in financial goal achievement.

"I have a responsibility owed to myself and my four sons to fulfill my goals to achieve financial stability. Goals include: certified nurse midwife, business owner, and homeowner"

"I cannot do it alone, but with my husband we can work together for a peaceful mind and to build a better future."

Bricks

Stability

Participants who selected this photo seemed to connect with the stability aspect of bricks. Many wrote about creating a stable foundation for their financial future, similar to the idea of building a house in which the foundation ensures that the home will remain stable for years to come. Perhaps participants were hoping that once they had created their financial foundation they could continue building without worrying it might collapse later on.

"Its solid. Can't be pushed or blown over"

Family

The second major theme was creating this foundation for children. Many participants noted that they wanted a better and more secure future for their children.

"It is an image of someone building which is my financial goal to be able to build a secure future for me and my children."

"Because I deeply want to build my financial future to ensure that I teach my children and their children better habits that I had."

Keys

Concrete goals

The keys seemed to be a literal representation of these financial goals for many participants. Nearly every message written in the key postcards mentioned aspirations to buy a house or a car. Owning a home and reliable transportation are two significant financial investments many of us make at some point during our lifetime. For the lower income participants enrolled in financial coaching, these milestones may act as a marker of financial success and security.

"Within two year you will be a new home owner"

"Keys to my house to own property. Keys to my new car"

Zen Stones

Freedom

The feeling of peace can often be associated with being free from debt and financial hardships. The Zen Stones appeared to evoke a sense of sense of serenity as many participants wrote about wanting to feel calm, peaceful, or relaxed in their financial futures.

"Peace of mind comes with financial well-being. There's also a sense of security for your future."

Airplane

Limitless possibilities

While we anticipated that participants might connect with this card in their desires to travel, majority of messages expressed a desire for success far beyond any kind of specific financial goal. Participants imagined their financial futures as exceeding their expectations and "soaring" to the highest heights. From these messages, it seems that many participants had confidence in their abilities to overcome their present financial setbacks and achieve financial well-being.

"I want my finances to be up and beyond anything I could ever image. I want my financial picture to be bright and sunny like this photo."

"I always wanted to soar, fly high, encounter no limits."

"I want to be able to travel and see different things."

Appendix 4. Visual Goal Setting Photographs

Appendix 5. Additional methods

We examined four primary outcome variables related to engagement:

- The total number of sessions within between June 1st and December 11th.[28] This outcome is a broad reflection of a client's engagement with financial coaching and is only meaningful in the aggregate.
- The total number of sessions within 3 months, regardless of type. This outcome is the broadest definition of retention and does not account for the quality of engagement.
- The average number of days between sessions. This outcome is another broad reflection of a client's engagement.
- The percentage of retained clients. This outcome best reflects both degree and quality of a client's engagement with financial coaching.

Underlying these outcome variables are important decisions about how to differentiate a session versus an interaction. For our analysis, a session must have been conducted either over the phone or in-person. We defined session two ways relative to duration: a short session was defined as the coach having made contact with the client and the interaction lasting for at least 10 minutes. A full session was defined as the coach having made contact and the interaction lasting for at least 30 minutes or the client having taken a CFA assessment. We only report differences in full sessions here.

We constructed two types of regression models to understand the effect of the visual goal setting exercise and the postcard to future-self on client retention. The first was a set of multiple linear regression multiples using:

$$y_{sessions} = \beta_{vgs\ (condition)} + \beta_{enrolled\ date} + \alpha_{demographics} + \alpha_{market} + \epsilon$$

Where $\alpha_{\mathbf{demographics}}$ is equal to a vector of demographic controls, including race/ethnicity, age, gender, educational attainment, and employment status at enrollment.

The co-efficients on the primary regressor in the models can be interpreted as the difference in means in the presence of the intervention. The co-efficient on enrolled date can be interpreted as an estimate of time effects, meaning the differential effect of enrolling earlier or later in the experiment. The co-efficient on the market variable can be interpreted as variations in labor market and FOC eco-system between cities.

[28] These averages will be changed within the final analysis to reflect the full intervention window spanning June 1st through January 15th.

We also compared those who only received the VGS exercise with those who also wrote a postcard. Using a probit regression model, we constructed a similar analysis that compared the probability of being retained between each of the three groups.

$$\mathrm{P}\,(y_{retained} = 1) = \beta_{vgs\,(condition)} + \beta_{enrolled\ date} + \alpha_{demographics} + \alpha_{market} + \epsilon$$

Where $\alpha_{\mathrm{demographics}}$ is still equal to a vector of demographic controls, including race/ethnicity, age, gender, educational attainment, and employment status at enrollment.

In this model, our primary outcome is structured as a binary variable. To estimate the effect of the intervention, we used a probit model. All the tables reported the derived marginal probabilities. The co-efficient of the primary regressor or can be interpreted as the change in retention from the average in the presence of the intervention. The co-efficient on enrolled date can be interpreted as the change in the probability that a given participant would be retained depending on when they enrolled. The co-efficient on market similarly estimates the change in the probability that a given participant would be retained depending on what city they are in.

Both sets of models were clustered at the site level. The intervention was administered at the level of the coach, meaning that how the intervention was implemented depended on the skill and experience of the coach. Clustering simply re-runs the same models as before but under the assumption that if two participants meet with the same coach, part of their success or failure is attributable to the coach and not the intervention.

Appendix 6. Identified barriers and BE Glossary

Barriers to preparing participants appropriately during the first session

		Associated BE Principles
1	Financial coaching may be presented in ways that don't fully convey all the ways financial coaches can work with participants	Framing
2	The integrated service model may present financial coaching as a "condition" to getting other services, which may reduce motivation for participants whose primary interest is not financial coaching.	Relativity; Tunneling
3	The intake process may be long and require participants to share a large amount of personal information, signaling to participants that financial coaching is an equally arduous and long process.	Friction

Barriers to engagement during the early sessions

1	Participants may find it difficult to fully trust the financial coaches at first because of past negative experiences with social services or financial providers.	Availability bias
2	Participants may avoid talking about their financial hardships at the beginning of their relationship with their coach. For example, some participants may not show up for the session because they might want to avoid talking about their expenses and credit score.	Ostrich effect
3	Small factors or cues in participants' experience with financial coaching might affect how much trust they put in the coaches.	Trust
4	Participants may decide to put off working with a financial coach because they optimistically think it will be better to work with a financial coach in the future, when their earnings have increased.	Optimism-bias; Procrastination
5	Participants might think that financial coaching is for "other types of people" who are in worse situations than them. In addition, participants might not want to tell family or friends that they are seeing a financial coach.	Social norms

Barriers to continued engagement in the coaching process and goal attainment

1	Financial coaching offers benefits that materialize in the future, so participants may give up if they do not feel they're making progress early on.	Present-bias; Goal gradient theory
2	Participants may simplify their engagement with an FOC by choosing to work with the one coach that they best developed a relationship with, which may not be the financial coach.	Friction
3	Participants may struggle to track their expenses between their first and second sessions if they do not have the effective tools, leading them to give up if it isn't easy.	Loss aversion; Ostrich effect; Planning fallacy
4	When clients don't complete their assignment from the first session, they might avoid showing up for the following ones.	What-the-hell effect
5	For clients who are working on a specific issue or crisis, the relationship with the coach ends once it is solved.	Opportunity Cost Neglect

Logistical barriers to attending sessions

1	Seemingly small friction costs may deter participants from scheduling or re-scheduling appointments.	Friction
2	Participants lack free time or have schedules that leave them exhausted and can make attendance difficult.	Ego-depletion
3	Participants might lack access to transportation necessary to facilitate attendance.	Friction

Glossary of Associated Behavioral Principles

Framing	The way a good or service is described can prime short-cuts or filters that people use to make sense of the world. By priming specific filters, differing descriptions of financial coaching can lead to different behaviors.
Relativity	People evaluate options by comparing them to what else is around. People may make different decisions about engaging with a financial coaching program when it is compared to employment coaching or another kind of program.
Tunneling	During times of emergency or scarcity, people tend to focus even more on solving short-term problems. Clients who enter into financial coaching programs at times of crisis may find it even more difficult to think about the future.
Friction	Even small hassles or complexities can have outsized effect on people's decisions. If something seems hard or complicated, clients may find it easier to put off financial coaching until later.
Availability bias	People tend to focus on what easily comes to mind (often vivid or recent events) and give undue weight to those events."
Ostrich effect	People tend to avoid negative or painful information, even if it is beneficial for them. People may avoid financial coaching because they will be asked to confront past decisions they are embarrassed or ashamed of.
Trust	People make the decision to trust sources of information based on a range of small cues in the environment, not necessarily based on whether or not the information is accurate.
Optimism-bias	People tend to be over-estimate the likelihood of positive events in the future and under-estimate the likelihood of negative events. Financial coaching clients may put off coaching because they unrealistically think future is less busy, more stable, or they may be more likely to have income.
Procrastination	People generally do not manage their time well and constantly wait until the last possible moment to do anything.
Social norms	People tend to do what others are doing and their decisions are influenced by what they think other people will think of their choices.
Present-bias	People tend to give unduly weight costs and benefits that are closer to the present time. Financial coaching clients may undervalue their long-term goals.
Goal-Gradient Theory	People find it easier to see progress when they are close to completing a task and will work harder to achieve a goal as the goal gets closer. When progress is harder to perceive, they may be less motivated to continue.
Loss Aversion	People try to prevent losses more than they try to make gains.

Planning fallacy	People consistently underestimate how long things will take and how many resources they will require.
Opportunity Cost neglect	People tend to ignore what they give up when they make choices
What-the-hell effect	People give up on getting back on track when something goes wrong.
Ego-depletion	People's ability to make good decisions is based on a limited resource that can be drained by decision overload and fatigue.