



USING BEHAVIORAL INSIGHTS TO INCREASE PARTICIPATION IN SOCIAL SERVICES PROGRAMS

A Case Study

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Using Behavioral Insights to Increase Participation in Social Services Programs: A Case Study

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Overview

In 2010, the federal government launched a seven-year project called Behavioral Interventions to Advance Self-Sufficiency, or BIAS, to explore and test the use of insights from behavioral science to improve social services programs that serve low-income and other vulnerable families. The project was sponsored by the Office of Planning, Research, and Evaluation in the Administration for Children and Families and led by MDRC, a social policy research firm. It was the first large-scale project to apply behavioral insights to such programs. MDRC designed and executed 15 randomized controlled trials involving nearly 100,000 clients with eight state and local agencies that engaged in the project. Each agency saw at least one behavioral intervention with a significant impact on a primary outcome of interest.

This case study is designed as a teaching guide for graduate and undergraduate students in behavioral science courses, as well as practitioners interested in this field. It is intended to help readers implement the “behavioral diagnosis and design” methodology developed by BIAS: a multistage process in which researchers analyze each step in a program’s implementation to identify possible “bottlenecks” where the program is not achieving its desired outcomes; adopt the perspective of the program’s participants to search for possible behavioral reasons for the bottlenecks; and design and evaluate behavioral interventions to address those factors. Using the example of a program that was designed to test whether a larger tax credit for single adults without children could increase employment and reduce poverty, this guide presents exercises and worksheets to allow readers to apply the concepts of behavioral science to a real-life problem.

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INTRODUCTION

In 2010, the federal government launched a seven-year project called Behavioral Interventions to Advance Self-Sufficiency, or BIAS, to explore and test the use of insights from behavioral science to improve social services programs that serve low-income and other vulnerable families. The project was sponsored by the Office of Planning, Research, and Evaluation (OPRE) in the Administration for Children and Families (ACF) and led by MDRC, a social policy research firm. It was the first large-scale project to apply behavioral insights to such programs.¹ MDRC designed and executed 15 randomized controlled trials involving nearly 100,000 clients with eight state and local agencies that engaged in the project. Each agency saw at least one behavioral intervention with a significant impact on a primary outcome of interest.

Drawing from that research, this case study is designed as a teaching guide for graduate and undergraduate students in behavioral science courses, as well as practitioners interested in this field. It is intended to help readers implement the “behavioral diagnosis and design” methodology developed by BIAS. Behavioral diagnosis and design is a multistage process in which researchers analyze each step in a program’s implementation to identify possible drop-off points, or “bottlenecks,” where the program is not achieving its desired outcomes. Adopting the perspective of the program’s participants, the team searches for possible behavioral reasons for the bottlenecks, specifically those related to individuals’ decision-making processes and actions. Then the team designs and evaluates behavioral interventions to address those factors that may work as barriers to action.

Case Study Objectives

- Analyze a problem using a behavioral science lens
- Identify possible reasons why the problem is occurring based on research from behavioral science
- Develop behavioral science-based solutions to address the problem

APPLYING BEHAVIORAL INSIGHTS

Many social services programs serving low-income and vulnerable families in the United States are designed so that individuals must actively make decisions and complete a series of steps to benefit from them. They must decide which programs to apply to or participate in, complete forms, attend meetings, and show proof of eligibility. Program designers often assume that individuals will carefully consider options, analyze details, and make decisions that maximize their well-being. However, behavioral science research has shown that human decision-making is often imperfect and imprecise. People procrastinate, get overwhelmed by choices, miss details, rely on mental shortcuts, and are influenced by small changes in their environments. As a result, participation in some social programs is lower than expected, even when the benefits seemingly outweigh the costs of participating.

1 Behavioral science research that is related to low-income individuals and government programs has increased since the launch of the BIAS project. Other federal government agencies, including the Departments of Labor, Agriculture, and the Treasury, are currently funding behavioral economics research with implications for low-income populations. ACF is now funding research through both OPRE and the Office of Child Support Enforcement.

The Earned Income Tax Credit (EITC)

One major public benefit program in the United States is the federal earned income tax credit (EITC). It is a refundable tax credit for low-income workers, particularly those with children. The amount a person can receive depends on the person's income and number of children. For example, in 2017, a working single mother with three children could get a tax refund of up to \$6,318.² The EITC is one of the country's most effective antipoverty policies. However, compared with the benefit that families can receive, the EITC for single adults without children is small.³ In 2017, the maximum credit a worker without dependent children could receive was \$506, and that worker would lose eligibility once his or her earnings reached \$15,000. In other words, a single adult working full time at \$9 per hour would earn too much to qualify for any credit.

The Paycheck Plus Program

The Paycheck Plus program was designed to test whether a larger tax credit of up to \$2,000 for single adults without children could increase employment and reduce poverty.⁴ As of 2018, MDRC, a non-profit, nonpartisan education and social policy research firm, is evaluating this program through a randomized controlled trial in two cities, New York City and Atlanta. The Food Bank for New York City is the organization implementing the pilot in New York, and United Way is implementing it in Atlanta. In 2013 and 2014, Food Bank enrolled 6,000 individuals into the study. Half of the participants were randomly assigned to the program group, where they received the Paycheck Plus bonus offer of up to \$2,000. The other half were randomly assigned to the control group, which did not receive the bonus offer.

The Problem

Recruitment for the study occurred a full year before participants could receive the Paycheck Plus bonus. The time lag ensured that those in the program group had a year to adjust their work and earnings to make the most of the Paycheck Plus bonus; those eligible could claim the bonus if they were employed in 2014, earned wages up to \$30,000, and filed taxes in 2015. However, the Paycheck Plus program operators were concerned that the time lag could reduce take-up of the offer. They had limited time to explain the program at the point of enrollment, so participants might not have fully understood the work requirement. Participants might also have had difficulty fully understanding how to qualify for or claim the income supplement. Even if participants did have a good understanding, they might forget about the Paycheck Plus bonus, because they had to claim the benefit in the following year for work done in the current year. Behavioral science shows that such cognitive challenges affect all of us, not just individuals with low incomes.

The Informational Meeting

To address these challenges, Food Bank developed an informational meeting to take place in the spring following program enrollment — a 30-minute, one-on-one orientation to the program. The informational meeting was intended to remind participants in the program group about the Paycheck Plus bonus, the work and eligibility requirements, and procedures for claiming the benefit. The program operators devised the following provisions and incentive to encourage meeting attendance:

² Internal Revenue Service (2018).

³ Center on Budget and Policy Priorities (2018); Nichols and Rothstein (2016).

⁴ Miller et al. (2017).

- Meetings were offered at several Food Bank sites across New York City for the convenience of participants.
- Participants were given a four-week time frame in which to attend one of the meetings.
- As an incentive to attend, the program operators offered each participant a \$50 gift card.

The program operators planned to invite participants to attend the informational meeting by sending a postcard containing information about the program and its benefits, but they were concerned that the postcard approach might not be enough to encourage many participants to attend the informational meeting. To maximize attendance, they wanted to use a behaviorally informed outreach strategy. This decision offered an opportunity to test whether the postcard design could make a difference in meeting attendance.

WHY MIGHT MEETING ATTENDANCE BE LOW?

The standard Paycheck Plus postcard in Figure 1 provides all the necessary information for participants to decide whether they want to attend the meeting. It includes details about when and where to go; gives flexibility to choose from various locations, days, and times; and offers a \$50 incentive to attend a 30-minute meeting. Traditional economic theory assumes that providing information, varied date and time options, and monetary compensation allows participants to consider the costs and benefits, determine whether to attend the meeting, and develop and execute a plan to attend. However, behavioral science research suggests that this may not be enough. People do not always respond to offers even when they seem beneficial and require relatively minimal effort to achieve. For example, college students fail to apply for financial aid, customers forgo mail-in rebate offers, and patients miss scheduled appointment times.⁵

Behavioral science focuses on insights from research on human cognition, decision-making, and behavior to explain and address lower-than-expected rates of uptake. Behavioral science uses a realistic understanding of how humans think and make decisions to turn their intentions into actions. A behavioral perspective asserts that low participation may be related at least in part to challenges in

- paying **attention** to the provided information,
- having **motivation** to take action, and
- turning motivation into **action**.

Attention

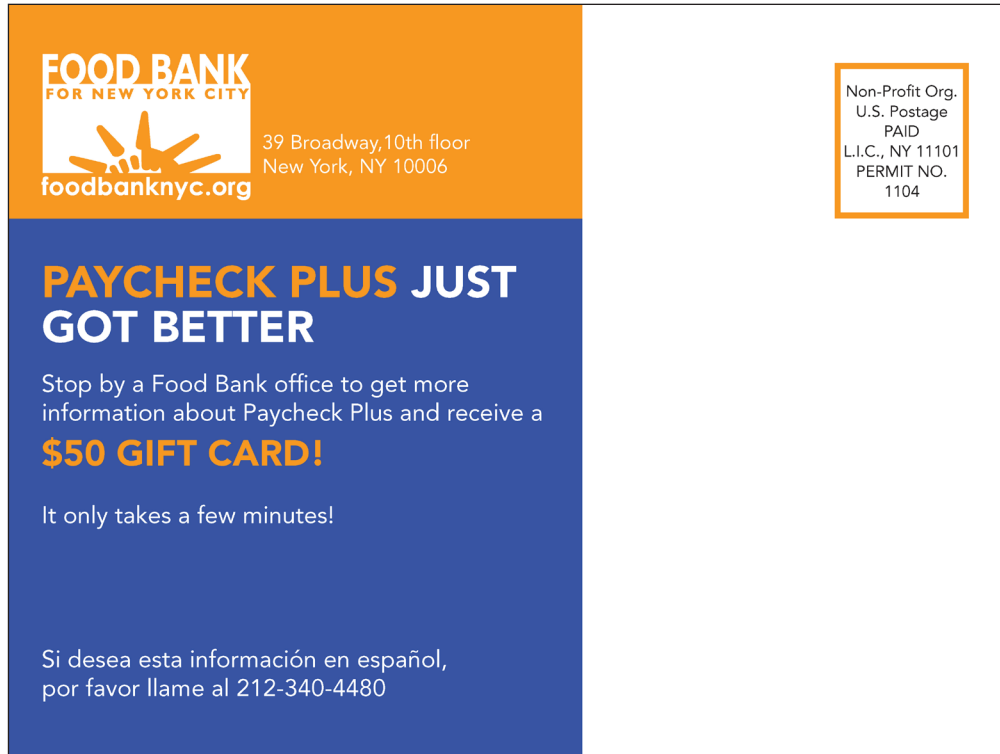
People often do not pay attention to or understand information provided to them.

People experience many sources of stimuli every day. **Cognitive load** refers to the total amount of mental effort being used. Because of inherent limits on cognitive ability, we subconsciously ration our cognitive load when making decisions. **Limited attention** refers to the brain's ability to process a restricted amount of information at any given time. We rely when possible on fast, intuitive thinking and reserve deliberative thinking for special situations. The sheer cost of evaluating options may also discourage people from taking action — we experience **choice overload**, whereby

⁵ See Bettinger, Long, Oreopoulos, and Sanbonmatsu (2012); Davis and Millner (2005); Dechausay and Anzelone (2016).

FIGURE 1 Proposed Postcard

FRONT



BACK



presenting a large number of choices hinders decision-making. These concepts may be especially important for social services programs, where beneficiaries must often participate in detailed orientations about rules, responsibilities, and procedures.

Motivation

People who understand the information presented often do not accurately weigh the benefits and costs of the offer.

People are influenced by different cognitive biases that may make benefits seem more or less important compared with costs. People often take their behavioral cues from **social norms**, the perceived behavior of others, and **social proof**, or descriptive information about how peers behave in a similar situation. We also experience **present bias**, the tendency to weigh current concerns more heavily than future ones, and we are **loss averse**, having a stronger emotional response to a loss than to an equal-sized gain. Last, we avoid or ignore negative information, known as the **ostrich effect**. Decision-making based on incomplete or biased evaluation of cost and benefit information may lead people to be less motivated to take action.

Action

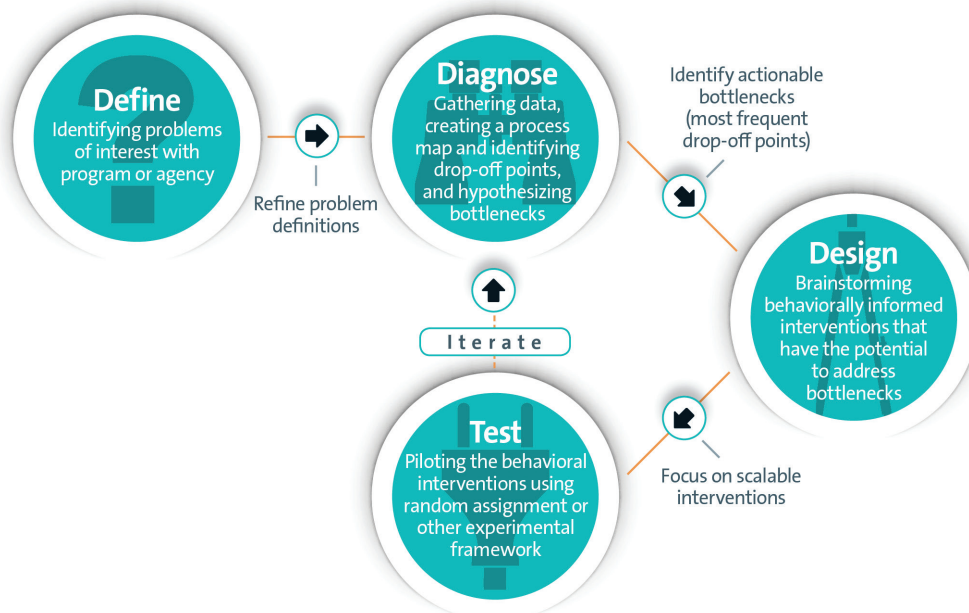
People who are motivated to take action often fail to do so.

Even when people intend to complete an action, we do not always follow through on that intention. **Hassle factors** are situational features or details that make a behavior harder to perform. This could be, for example, a small barrier to completing a task, such as filling out a form or waiting in line. We also experience **prospective memory failure**, forgetting to perform a planned action or intention at the appropriate time, and we **procrastinate**, delaying or postponing tasks we planned to complete. While these factors may seem trivial and are often neglected in program design, addressing these intention-action gaps may have an outsized impact on a program's outcomes.

EXERCISE 1

Identifying Barriers to Attending the Meeting

The BIAS team used a process called behavioral diagnosis and design to solve the problem of low meeting attendance. This process, which was used in all the BIAS studies, consists of four phases: define, diagnose, design, and test.



The first step in the process is to define the problem in terms of the desired outcome, without making presumptions about the cause. In this case, the problem is defined: “Participants may not attend the informational meeting, even when program operators offer a \$50 incentive and explain the purpose.” Problem statements such as “participants will not attend an informational meeting because they do not think attending is important” make an assumption about the reasons for low attendance. The purpose of the diagnosis phase is to understand the reasons for low attendance using a systematic approach and not to rely on assumptions.

Taking into account what you know about the problem and behavioral reasons why people may not complete an action, imagine the program operators approached you to help them improve their current postcard and overall outreach strategy. Use Worksheet 1 to diagnose the problem and reasons why people might not attend the meeting.

1. Use the first column of Worksheet 1 to list and describe potential reasons why participants may fail to attend the meeting despite receiving information, times and locations, and a monetary incentive. You will be making educated guesses about the reasons for nonparticipation or hypothesized “bottlenecks.”

TIP: Think about the potential reasons by adopting the perspective of participants. If you were to receive a similar offer, what reasons could have prevented you from attending the meeting? Think about the different steps participants need to take to attend the meeting and explore specific reasons why participants may fail to complete these steps.

2. Use the second column of Worksheet 1 to classify the reasons you have identified into one of the three categories described above: Attention, Motivation, or Action.
3. Use the last column of Worksheet 1 to identify relevant behavioral concepts for the reasons you have listed. Focus on theories and concepts of human cognition and decision-making. You may refer to the behavioral concepts mentioned on the previous pages; the glossary provides a more comprehensive list of terms. You can apply more than one concept for a given reason a participant might not attend.

WORKSHEET 1

What behavioral barriers could prevent Paycheck Plus bonus recipients from attending the meeting?

HYPOTHESIZED BARRIER TO ATTENDING MEETING	CLASSIFICATION	ASSOCIATED BEHAVIORAL CONCEPT(S)
1.	<input type="checkbox"/> Attention <input type="checkbox"/> Motivation <input type="checkbox"/> Action	
2.	<input type="checkbox"/> Attention <input type="checkbox"/> Motivation <input type="checkbox"/> Action	
3.	<input type="checkbox"/> Attention <input type="checkbox"/> Motivation <input type="checkbox"/> Action	
4.	<input type="checkbox"/> Attention <input type="checkbox"/> Motivation <input type="checkbox"/> Action	
5.	<input type="checkbox"/> Attention <input type="checkbox"/> Motivation <input type="checkbox"/> Action	

BEHAVIORAL STRATEGIES TO INCREASE PARTICIPATION

Behavioral insights help explain not only *why* people fail to act, but *what can be done* to encourage people to take action. Created by the BIAS team, the SIMPLER framework describes behavioral principles that were commonly applied across the project’s interventions. These concepts have been implemented and studied widely beyond BIAS and across many domains. The framework is not meant to depict the full breadth of behavioral concepts that exist. It was developed as a helpful organizing structure and starting point for thinking about designing and implementing behavioral interventions.

S	SOCIAL INFLUENCE	Social influence broadly refers to direct or indirect persuasion by society, peers, or a person of influence. This powerful tool can have large effects on behavior: It can change someone’s mind about a decision already reached or motivate a person to follow through on a plan.
I	IMPLEMENTATION PROMPTS	Plan-making devices like implementation prompts — which encourage people to map out the precise steps they will take to complete a task — are effective ways to move people to action. These tools help people capitalize on their intended plan in subtle but meaningful ways. Laying out the steps a person needs to complete in a clear and concise format makes the task seem more feasible.
M	MAKING DEADLINES	Behavioral science has demonstrated that people, by nature, procrastinate. Findings have pointed to the idea that deadlines may activate a sense of urgency and can be especially powerful at calling people to action.
P	PERSONALIZATION	Personalization can be implemented in at least two distinct forms — through written communications and through personal interactions like face-to-face meetings between program participants and staff members. Personalizing written communications includes techniques like handwriting a note or using technology to prepopulate information in communications materials, such as the client’s name, specific greetings, or reminders on sticky notes.
L	LOSS AVERSION	Sometimes reframing the proposition is enough to lead people to a different outcome. Loss aversion refers to a preference for avoiding losses over acquiring gains of equal size, relative to a reference point.
E	EASE	Given that people have a limited capacity to process, absorb, and recall information, a key mantra in behavioral science is to make things as easy as possible in order to increase the likelihood that people will act. People tend to stick with the status quo, because it is more familiar and requires less effort to maintain.
R	REMINDERS	Repeated contact (through reminders and through various communication channels) generally leads to stronger results. Reminders reduce the cognitive load required to complete an action successfully. They accomplish this goal by providing a cue that the action hasn’t been completed. Almost everyone has planned to complete a task and has simply forgotten to do it — and reminders increase the likelihood of remembering.

In Worksheet 2, you will apply relevant behavioral concepts from the SIMPLER framework to address reasons for nonparticipation. The program operators are seeking your assistance in two areas:

- A. Incorporating relevant behavioral insights in revising the postcard.
- B. Adding supplementary behaviorally informed strategies besides sending postcards.

EXERCISE 2

Applying Behavioral Concepts to Revise the Postcard

In this exercise, propose improvements to the postcard in Figure 1. Start by taking a moment to go over the reasons you listed on Worksheet 1 for failure to attend the informational meeting. Next, examine the postcard, focusing on its content and design. Then think about the relevant behavioral concepts that could be used to tackle the hypothesized reasons for nonparticipation and that can be applied to revising the postcard. Keep in mind that your goals here are to

- increase participants' attention to the postcard and to information in the postcard,
 - motivate participants to attend the meeting, and
 - facilitate action and follow-through for participants to attend the meeting.
1. Use the first column of Worksheet 2 to choose letters in SIMPLER that you plan to incorporate into the postcard (for example, social influence or reminders).
 2. Use the second column to identify which hypothesized behavioral reasons for nonparticipation from Worksheet 1 each technique will address (you can use one concept to address multiple reasons).
 3. Use the last column to describe how the content or design of the postcard could be revised based on each behavioral concept. *You may need to (i) rephrase or remove existing content or (ii) add new content to revise the postcard. If so, describe the proposed revision in the table and/or demonstrate it in the postcard (Figure 1).*

WORKSHEET 2

What changes to the postcard might increase meeting attendance?

BEHAVIORAL CONCEPTS FROM <i>SIMPLER</i>	BARRIERS ADDRESSED FROM WORKSHEET 1	HOW TO USE THIS CONCEPT IN THE POSTCARD
1.		
2.		
3.		
4.		
5.		

EXERCISE 3

Applying Behavioral Concepts to Design Additional Outreach

Now, broaden the use of these SIMPLER concepts to more than just postcard techniques. What strategies beyond mailing postcards could increase attendance? Use Worksheet 3 to suggest other applicable approaches. Keep in mind that your choice of these new approaches should be guided by the behavioral reasoning you listed in Worksheet 1. For example, increasing the monetary incentive to attend the meeting is not a behavioral strategy, but framing the existing incentive in a more salient way could be a behavioral strategy. You can think about strategies that can be applied (i) in addition to sending the postcard and (ii) as an alternative to sending the postcard. Explore the possibility of employing new communication technologies and media.

1. Use the first column of Worksheet 3 to list your new strategies.
2. Use the second column to list each behavioral concept that you plan to incorporate into your new strategy, such as those from SIMPLER.
3. Use the third column to identify which reasons for nonparticipation this concept will address (you can use one concept to address multiple reasons).
4. Use the last column to explain how this strategy would be implemented.

WORKSHEET 3

What additional strategies might increase attendance?

DESCRIPTION OF NEW STRATEGY	BEHAVIORAL CONCEPTS FROM <i>SIMPLER</i>	BARRIERS ADDRESSED FROM WORKSHEET 1	DESCRIPTION OF STRATEGY IMPLEMENTATION
	1.		
	2.		
	3.		
	4.		
	5.		

Finalizing Your Behavioral Intervention Design

Your feedback based on behavioral principles is certainly valuable for the program operators in increasing meeting attendance. However, it may not always be feasible or effective to apply all suggested approaches at one time. Review the behavioral strategies you listed in Worksheets 2 and 3 and select those that you want to include in your final recommendation to the program operators. Put an asterisk next to each selected behavioral strategy in the last column of the worksheets. Your final recommendation is your proposed intervention design.

DETERMINING WHETHER THE BEHAVIORAL STRATEGY IS EFFECTIVE

If you carefully examined reasons for nonparticipation and used a thorough selection of established behavioral concepts to redesign the outreach strategy, your proposed intervention may improve participants' attendance at informational meetings. However, it is important to empirically verify whether and to what extent your intervention works (produces the intended impact) and what problems you might encounter when you attempt to implement your solution (for example, cost or organizational pushback due to increased workload). Testing is important because it is not possible to determine whether a change caused an improvement unless alternative explanations are ruled out. In the absence of a strong evaluation design, it will be unclear whether observed trends following an intervention reflect true effects of the intervention or whether they are caused by other factors. While there are many types of evaluation methods, it is best to rely on randomized controlled trials — often called the “gold standard” of evaluation. Randomizing a sample of participants either to a group eligible to receive an intervention (the program group) or to the status quo condition in which they do not receive an intervention (the control group) and examining the difference between outcomes for each group at a later period is the best way to assess the program's effect, or impact.

EXERCISE 4

Implementation and Evaluation Plans

1. In a few sentences, please describe how you would test the effectiveness of your proposed intervention at increasing meeting attendance.

2. Please rate your proposed behavioral design on the following criteria.

a. How feasible do you think it is to implement your proposed intervention design?

(Not at all feasible) 1 2 3 4 5 6 7 (Very feasible)

b. How likely do you think it is that your proposed intervention design will increase meeting attendance?

(Not at all likely) 1 2 3 4 5 6 7 (Very likely)

c. How costly do you think it is to implement your proposed intervention design?

(Not at all costly) 1 2 3 4 5 6 7 (Very costly)

3. While doing this exercise, you may have had several questions about the program or you may have had to assume information about the program. The limited amount of information available may have restricted your ability to make suggestions for improving the outreach strategy — which is often what happens in reality. List additional pieces of information you think would be helpful to learn about the program and indicate the implication of each for your intervention design.

4. List additional questions you might have about the program operations and the implication of the new information on the behavioral intervention.

WHAT ACTUALLY HAPPENED

Read this section only once you've completed the exercises above.

Paycheck Plus program operators approached the BIAS team at MDRC seeking assistance in designing a behaviorally informed outreach strategy. The BIAS team designed, implemented, and tested the effectiveness of three behaviorally informed interventions to increase meeting attendance. (For details, see the [full report](#).)⁶

Below is a high-level overview of the BIAS strategy.

Identifying Barriers to Attending the Meeting

The BIAS team focused on understanding factors that might influence participants' decisions and actions. The team mapped the steps participants needed to take to attend the meeting and identified behavioral reasons for not completing each step:

- Participants signed up for the program more than a year before they were eligible to receive their first earnings supplement. Thus, the benefits of the future supplement may be abstract, or **psychologically distant**, to participants. Attending an information session about the supplement may not be at the front of their minds.
- The concept of cognitive **scarcity** encompasses the idea that poverty and the ever-present concerns that come with it place a heavy burden on people's limited mental resources. Low-income participants, who are often juggling personal, financial, health, and other life challenges, simply may not be able to expend the mental resources needed to plan for and attend the meeting.
- Some participants may be **distrustful** or skeptical of offers that seem "too good to be true." Receiving a postcard offering a \$50 gift card for a short meeting may raise participants' suspicions, especially if they do not recognize the Food Bank logo or Paycheck Plus name.
- Participants may plan to attend the meeting, but **procrastinate** or become distracted by other matters, placing other priorities in front of their plan to attend.
- Having to show up for a short meeting may not seem like a big hurdle when the reward is valuable information and a generous monetary incentive. But seemingly insignificant contextual factors can have outsized effects on follow-through and therefore become **hassle factors**. The travel time or challenges of figuring out how to get to the office may reduce participation.
- Participants may forget their plan or intention to attend the meeting when the scheduled time comes. This is an instance of **prospective memory failure**.

Behavioral Solution

The BIAS team designed a postcard that incorporated concepts from behavioral science (a "behavioral" version). Like the standard postcard (Figure 1), the behavioral postcard (Figure 2) contained the critical information that participants needed to successfully attend a meeting.

⁶ Dechausay, Anzelone, and Reardon (2015).

The behavioral postcard used the following strategies:

- **Loss aversion** was activated with phrases such as “With this postcard, \$50 is yours. Don’t miss out!”
- Participants received not just one but two postcards, and **deadlines** were prominently displayed on both. The first behavioral postcard imposed an artificially early deadline of March 29 to prompt immediate action. The second behavioral postcard arrived around March 29 and described the remaining two weeks leading up to the real deadline (April 9) as an extension.
- The **endowed progress effect**, whereby people are more likely to achieve a goal when they feel they have made progress toward attaining it, was employed by providing participants with a list of “easy steps” they needed to take to receive valuable information about Paycheck Plus and the \$50 gift card. The first step, “enrolling in Paycheck Plus,” was checked off to indicate to participants that they had already started the process and completed one of the steps. Creating a sense of accomplishment was designed to increase their motivation to complete the remaining steps. The standard postcard did not use this technique.
- An **implementation prompt** encouraged participants to make a plan for when they were going to come in for a meeting. (“Check off one location you’ll go to; write down when you will go.”) The hours of operation were displayed in a calendar graphic to help the reader visualize the week.
- The postcard made it **easier** for participants by simplifying the list of office locations where participants could attend a meeting, showing only the two closest to the participant’s home address.

FIGURE 2 Behavioral Postcard



(continued)

FIGURE 2 continued

BACK

SIGN UP FOR PAYCHECK PLUS – DONE!
Follow these 3 easy steps to get your \$50 gift card and much more...

1 **Choose a location and time to visit by March 29**

Check off one location:

Community Kitchen & Pantry of West Harlem
252 W. 116th St., New York, 10026

MON	TUES	WED	THU	FRI	SAT
closed	9-3	9-3	9-3	closed	9-3

Northern Manhattan Improvement Corp.
76 Wadsworth Ave., New York, 10033

MON	TUES	WED	THU	FRI	SAT
closed	12-7	12-7	12-7	closed	9-5

2 **Write down when you will go: Date** **Time** **AM/PM**

3 **Stop by and have a short conversation with Food Bank staff to learn how you can earn a \$2000 bonus next year**

Get your \$50 gift card!

For other locations or questions call 646-981-6111

Endowed progress effect (points to the 'DONE!' text)

Implementation prompt (points to step 1)

Limited location options (points to the two location choices)

In addition, some participants were sent text message reminders. The messages within the texts were either behavioral or standard, corresponding to the type of postcard sent to the participant.

Evaluation Results

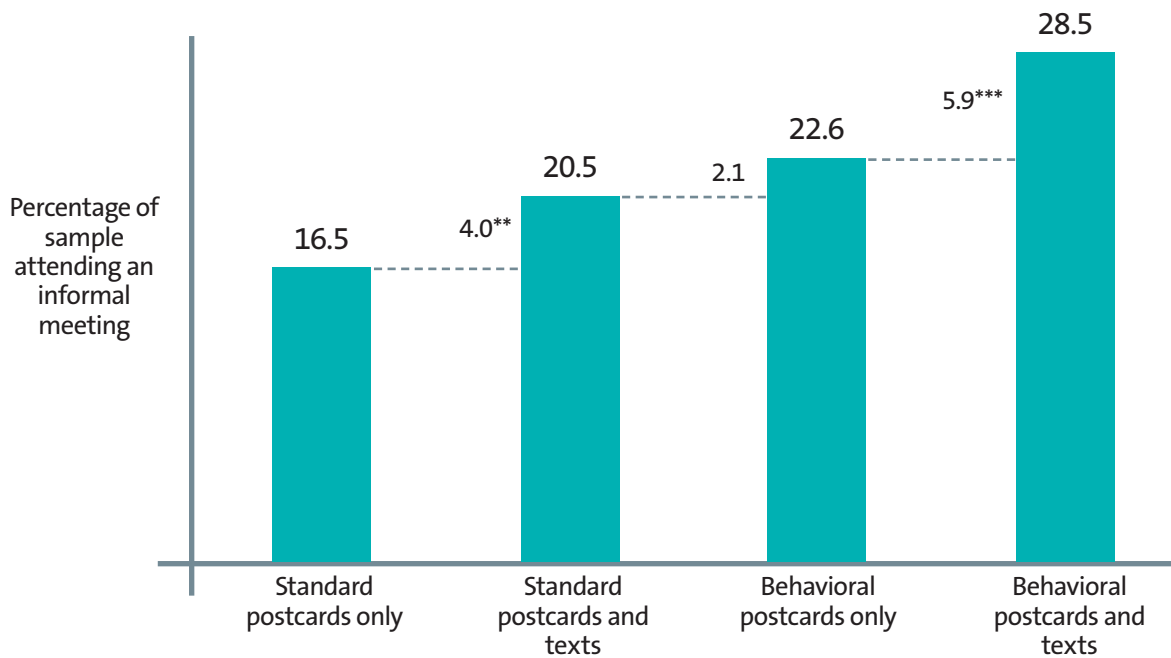
Study 1 tested the effectiveness of the behavioral postcard and text messages through a randomized controlled trial with four research groups. Group 1 was sent only behavioral postcards, and Group 2 was sent behavioral postcards with behavioral text messages. Group 3 was sent only standard postcards, and Group 4 was sent standard postcards with standard text messages.

As Figure 3 indicates, the behavioral postcard was more effective than the standard postcard — while only 16.5 percent of participants who received the standard postcard attended the meeting, 22.6 percent of those who received the behavioral postcard attended the meeting. Furthermore, participants who were sent the behavioral postcard *and* text messages were the most likely to attend the meeting: 28.5 percent of these participants attended.

The behavioral messaging conditions clearly increased participants' response to the outreach, but the overall turnout was still lower than the program operators desired. During the time of Study 1, only 22 percent of all participants attended the meeting. There seemed to be room to improve this participation rate. Food Bank agreed to hold additional meetings. The BIAS team reviewed the findings from Round 1 and rapidly designed another intervention, based on the initial work done in the diagnosis phase and on the results from the first study.

Study 2 included only participants who were targeted but did not participate in an informational meeting during Study 1. The BIAS team designed a version of the meeting that could be delivered

FIGURE 3 Study 1 Results



NOTE: Statistical significance levels are indicated as: * = 10 percent; ** = 5 percent; and *** = 1 percent.

over the phone rather than in person. Participants were randomly assigned to either a meeting by phone or a meeting in person. For both groups, the team used multiple forms of outreach using all communication channels for which the participant had provided contact information and consent — mail, email, texts, and robocalls — to convey information about the meeting. All participants in Study 2 received communications that were designed using behavioral concepts, including implementation prompts, reminders, and prominent deadlines. In addition, communications in the second round were personalized and took advantage of social influence by stating that hundreds of Paycheck Plus members had already responded to this appeal. Results indicated that there was no statistical difference in meeting attendance between the phone group (37 percent) and the in-person meeting group (34 percent). Participants in the phone group responded to the marketing materials more quickly than those in the in-person group, but this effect diminished as the deadline approached. This lack of statistically significant results reinforces the importance of testing behavioral hypotheses. However, in Study 2, 832 participants responded to the marketing, 177 more people than in Study 1. The participants contacted in Round 2 were by definition more difficult to engage than those in Round 1 since they had not responded to earlier outreach.

One of the central mantras in the application of behavioral science to social programs is that if program operators want people to do something, they should make it easy. The behavioral messaging used in these experiments made the task seem easier and more salient by helping people develop a plan of action and providing multiple reminders in different formats to help them stick to it. Other research in this field has shown that increasing the number of reminders can improve follow-through, though presumably there is a point at which additional reminders do not increase the return.

DISCUSSION QUESTIONS

- What do you see as the strengths and weaknesses of the Paycheck Plus intervention?
- Did the results of the studies surprise you, or were they what you expected?
- The BIAS Paycheck Plus intervention aimed to increase participation at an informational meeting. Do you think your intervention or the BIAS intervention might also have longer-term outcomes? If so, what might some of these outcomes be (for example, an increase in participants' employment, income, or filing of taxes)? Explain your reasoning.
- To what other social and governmental programs do you think you could apply your intervention or the BIAS team's to increase participation? Discuss the potential application and limitations of the intervention.

Glossary of Behavioral Science Terms

AFFECTIVE RESPONSE: Decision-making that is driven by a feeling or an emotion. Emotions can drive our choices much more than we expect, and “gut” decisions have far-reaching consequences. For example, “crimes of passion” may reflect a momentary affective response.

ANCHORING: Decision-making that is based on first observations and other contextual factors that may or may not be obvious. That is, responses often depend on the way information is presented initially, and different presentations can yield different responses.

AUTOMATICITY: The process of making automatic, nonconscious choices. In many situations, the likely automatic process is simply to do nothing.

CHANGE BLINDNESS: The inability to notice all visual stimuli as a result of a limited attention span.

CHANGING THE CHOICE SET: Altering the perception of available choices — for example, by modifying the availability or saliency of different options. In one study, purchases of jam increased when shoppers were presented with 6 varieties to choose from rather than 24 varieties.

CHANNEL FACTOR: A feature of the environment or a situational detail that makes a behavior easier to accomplish. For example, providing students with a map to a campus health center can increase their use of public health services.

CHOICE ARCHITECTURE: The idea that decisions can be influenced by the way in which choices are presented. For example, organ donation registration can be the default on driver’s license renewals, requiring people to actively opt out if they don’t want to be organ donors. (See **default**.)

CHOICE CONFLICT: The inability to make a choice when the decision-making process requires too much time or mental energy. (See **deliberation costs**.)

CHOICE OVERLOAD: The inability to compare choices across meaningful metrics because too many choices have been provided. An excess of choices for people can increase the burden on mental resources and the time and mental energy required to make a choice, reducing the net satisfaction that can be derived from making a decision or even paralyzing some individuals and preventing them from being able to make a decision at all. (See **cognitive load** and **deliberation costs**.)

COGNITIVE LOAD: Overburdened mental resources that impair individual decision-making. People typically think that they will be able to pay attention to information and then understand and remember it as long as it is important. However, an individual’s mental resources — which are often taken for granted — are not unlimited and are more fallible than people often recognize. Challenges and emotional stress can drain these mental resources and make it difficult to make good decisions.

CONFIRMATION BIAS: The tendency of people to accept information that confirms their beliefs or hypotheses.

DEFAULT: A particular predetermined outcome that requires no action on the decision-maker's part. For example, holders of credit cards are often automatically placed on a list to receive marketing materials from various companies. In order to remove their names from this list, they must actively opt out; if they do nothing, they will remain on the list, which is the default option.

DELIBERATION COSTS: The costs of making a decision — in time or in mental effort.

DISCOUNTING: Placing greater value on a present or short-term consequence than on a future consequence, for reasons such as uncertainty or changing tastes. “Zero discounting” means that people value present and future experiences equally.

ENDOWED PROGRESS EFFECT: The development whereby when people feel they have made progress toward their goals, they are even more committed to achieving those goals.

FORCED CHOICE: A program design that attempts to prevent people from being trapped by indecision when faced with a choice. In this approach, there is no default and one cannot move on without making a decision. (See **default**.)

FRAME: The way in which information is presented. Every piece of information can be presented in different ways, and small changes in the wording of a message or a choice can drastically change the way it is perceived and the choices that people make with regard to it. Information is never evaluated in a neutral or impartial way, because every way of presenting information is a frame that leads people in one direction or another. (See **framing (positive)**.)

FRAMING (POSITIVE): Presenting information or choices in a way that accentuates positive aspects of the consequences or outcomes. For example, saying that a treatment has a “90 percent chance of saving your life” is the same as saying it has a 10 percent chance of resulting in death. But people prefer the treatment when it is framed the first way. Positive framing can tap into personal values, identity, and emotion-based decision-making to motivate certain actions. (See **reason-based choice** and **affective response**.)

HASSLE FACTOR: A feature or situational detail that makes a behavior harder to accomplish. This could be, for example, a small barrier to completing a task, such as filling out a form or waiting in line. While these factors may seem trivial and are often neglected in program design, reducing or eliminating them can have an outsized impact on outcomes.

HEURISTIC: A simple question or “rule of thumb” that is used when making difficult decisions. When a person is asked a very hard question that demands time and thought, an answer may come to mind immediately because the brain tends to substitute an easier question for the difficult one. For instance, the question “How happy are you with your life these days?” is difficult to answer: It requires an appraisal of all aspects of one’s life. People tend to answer instead the much easier question, “How happy are you right now?”

HOT-COLD EMPATHY GAP: The notion that people have difficulty predicting what they will want and how they will behave in an emotional state that is different from their current state. For example, in a “hot” state such as anger, people may not recognize that their perspective may change when they calm down. People also find it hard to put themselves in the place of someone in an opposite state. (See **affective response**.)

IDENTITY PRIMING: Encouraging one identity (for example, being female) to influence a response to a stimulus. Decisions and actions differ depending on which identity is active, and identities can become active because of small changes in the environment. For example, priming someone’s identity as a good student could boost her performance on an exam.

IMPLEMENTATION INTENTION: A self-regulatory tactic, sometimes referred to as an “if-then plan,” that increases the attainment of desired goals. The tactic takes the form of “When situation X arises, I will implement response Y.”

LIMITED COGNITION: A bounded capacity to process, understand, and recall information. Since people have a limited rate of information processing, they can only pay attention to, comprehend, and remember a restricted amount at any given time.

LOSS AVERSION: The tendency for decisions and behavior to be influenced by the wish to avoid a loss. For example, when loss aversion is at work, the pain of losing \$20 is greater than the pleasure of finding \$20. Program designers who rely on loss aversion to increase the number of drivers observing the speed limit believe that fining noncompliant drivers is more effective than rewarding compliant drivers.

MENTAL ACCOUNTING: The set of cognitive operations that individuals and households use to organize, evaluate, and keep track of financial activities. People resist shifting their beliefs about financial resources even in response to traditional stimuli like price shocks.

MERE-EXPOSURE EFFECT: A preference for the familiar.

OSTRICH EFFECT: The tendency to avoid undesirable information, even when that information might have significant negative implications, including in matters of life and death.

PLACEBIC INFORMATION: An explanation comprising information that is already known or obvious. Providing such placebic information has been shown in certain circumstances to be effective at influencing behavior. For example, in one study, subjects at a copy machine permitted another individual to go ahead of them if that person said, “May I use the copy machine first, *because I have to make copies?*” This “explanation” was shown to be as effective at eliciting the desired response (being allowed to go ahead) as providing a more logical explanation, like “because I’m in a rush.”

PLAN-MAKING: Committing to a specific plan for a goal that not only makes it easier to accomplish tasks but also reduces the burden on an individual’s mental resources. (See **cognitive load**.)

PRESENT BIAS: The tendency to give more weight to present concerns than to future ones. People tend to make plans to do unpleasant tasks “tomorrow” and make the same choice when “tomorrow” becomes “today.”

PROSPECTIVE MEMORY: The ability to remember to perform a planned action or intention at the appropriate time.

PSYCHOLOGICAL DISTANCE: The “distance” (spatial, temporal, or probable) between an individual and some outcome or decision. When an event is psychologically distant, it is perceived in an abstract manner, and potentially important details are disregarded.

PSYCHOLOGY OF SCARCITY: The pressure of negotiating life under conditions of poverty, which exacts a particularly high toll on cognitive resources.

REASON-BASED CHOICE: The act of creating reasons or explanations for certain choices in order to resolve any conflicts about that choice and to justify the decision to oneself and to others.

REBIASING: Changing an individual bias in order to affect decision-making. For instance, a government program that targets a particular population may face a negative bias about government programs in general; the program designers would have to rely on rebiasing to change people's minds about such programs in order to get them to participate.

REFERENCE POINT: A point of comparison, such as a past event or a small contextual feature, that determines or influences people's reactions going forward. That is, a person's emotional response to an event is determined not by the outcome itself, in absolute terms, but by the outcome relative to the person's reference point.

REMINDER: The noticeable display of a specific piece of information to increase the chances of an individual's acting on that information. Reminders often work when they are related to something the individual intends to do.

SOCIAL INFLUENCE: Direct or indirect persuasion that fosters a behavior. For example, an influential peer or authority figure can often establish the guidelines for socially appropriate and inappropriate behavior. Also known as *social proof*.

SOCIAL NORM: Behavior that is established by others as a cue for one's own behavior.

STATUS QUO BIAS: A bias that occurs when the current state of the world dominates an individual's decision-making. People can find it difficult to imagine that the world will be different tomorrow, or five minutes from now, and they often accept an outcome simply because it is the status quo.

STRESS OF WAITING: Stress associated with the uncertainty of waiting, which may cause one to become impatient, frustrated, and hostile. It is also time-consuming and expensive in terms of one's cognitive resources.

References

Bettinger, Eric P., Bridget Terry Long, Philip Oreopoulos, and Lisa Sanbonmatsu. 2012. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block FAFSA Experiment." *Quarterly Journal of Economics* 127, 3: 1205-1242.

Center on Budget and Policy Priorities. 2018. "Policy Basics: The Earned Income Tax Credit." Website: www.cbpp.org/research/federal-tax/policy-basics-the-earned-income-tax-credit.

Davis, Douglas D., and Edward L. Millner. 2005. "Rebates, Matches, and Consumer Behavior." *Southern Economic Journal* 72, 2: 410-421.

Dechausay, Nadine, and Caitlin Anzelone. 2016. *Cutting Through Complexity: Using Behavioral Science to Improve Indiana's Child Care Subsidy Program*. OPRE Report 2016-03. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Dechausay, Nadine, Caitlin Anzelone, and Leigh Reardon. 2015. *The Power of Prompts: Using Behavioral Insights to Encourage People to Participate*. OPRE Report 2015-75. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Internal Revenue Service. 2018. "2017 EITC Income Limits, Maximum Credit Amounts and Tax Law Updates." Website: www.irs.gov.

Miller, Cynthia, Lawrence F. Katz, Gilda Azurdia, Adam Isen, and Caroline Schultz. 2017. *Expanding the Earned Income Tax Credit for Workers Without Dependent Children: Interim Findings from the Paycheck Plus Demonstration in New York City*. New York: MDRC.

Nichols, Austin, and Jesse Rothstein. 2016. "The Earned Income Tax Credit." Pages 137-218 in Robert A. Moffitt (ed.), *The Economics of Means-Tested Transfer Programs in the United States*. Chicago: University of Chicago Press.

Earlier Publications from the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project

BEHAVIORAL INTERVENTION MATERIALS COMPENDIUM

2018. Caitlin Anzelone, Nadine Dechausay, and Xavier Alemany (eds.).

OPRE REPORT 2018-08. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

NUDGING CHANGE IN HUMAN SERVICES: FINAL REPORT OF THE BEHAVIORAL INTERVENTIONS TO ADVANCE SELF-SUFFICIENCY (BIAS) PROJECT

2017. Lashawn Richburg-Hayes, Caitlin Anzelone, and Nadine Dechausay with Patrick Landers.

OPRE REPORT 2017-23. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

SIMPLIFY, NOTIFY, MODIFY: USING BEHAVIORAL INSIGHTS TO INCREASE INCARCERATED PARENTS' REQUESTS FOR CHILD SUPPORT MODIFICATIONS

2016. Asaph Glosser, Dan Cullinan, and Emmi Obara.

OPRE REPORT 2016-43. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

CUTTING THROUGH COMPLEXITY: USING BEHAVIORAL SCIENCE TO IMPROVE INDIANA'S CHILD CARE SUBSIDY PROGRAM

2016. Nadine Dechausay and Caitlin Anzelone.

OPRE REPORT 2016-03. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

FRAMING THE MESSAGE: USING BEHAVIORAL ECONOMICS TO ENGAGE TANF RECIPIENTS

2016. Mary Farrell, Jared Smith, Leigh Reardon, and Emmi Obara.

OPRE REPORT 2016-02. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

NUDGES FOR CHILD SUPPORT: APPLYING BEHAVIORAL INSIGHTS TO INCREASE COLLECTIONS

2016. Peter Baird, Dan Cullinan, Patrick Landers, and Leigh Reardon.

OPRE REPORT 2016-01. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

ENGAGING PROVIDERS AND CLIENTS: USING BEHAVIORAL ECONOMICS TO INCREASE ON-TIME CHILD CARE SUBSIDY RENEWALS

2015. Alexander K. Mayer, Dan Cullinan, Elizabeth Calmeyer, and Kelsey Patterson.

OPRE REPORT 2015-73. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

THE POWER OF PROMPTS: USING BEHAVIORAL INSIGHTS TO ENCOURAGE PEOPLE TO PARTICIPATE

2015. Nadine Dechausay, Caitlin Anzelone, and Leigh Reardon.

OPRE REPORT 2015-75. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

REMINDERS TO PAY: USING BEHAVIORAL ECONOMICS TO INCREASE CHILD SUPPORT PAYMENTS

2015. Peter Baird, Leigh Reardon, Dan Cullinan, Drew McDermott, and Patrick Landers.

OPRE REPORT 2015-20. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

TAKING THE FIRST STEP: USING BEHAVIORAL ECONOMICS TO HELP INCARCERATED PARENTS APPLY FOR CHILD SUPPORT ORDER MODIFICATIONS

2014. Mary Farrell, Caitlin Anzelone, Dan Cullinan, and Jessica Wille.

OPRE REPORT 2014-37. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

BEHAVIORAL ECONOMICS AND SOCIAL POLICY: DESIGNING INNOVATIVE SOLUTIONS FOR PROGRAMS SUPPORTED BY THE ADMINISTRATION FOR CHILDREN AND FAMILIES

2014. Lashawn Richburg-Hayes, Caitlin Anzelone, Nadine Dechausay, Saugato Datta, Alexandra Fiorillo, Louis Potok, Matthew Darling, and John Balz.

OPRE REPORT 2014-16A. Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

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