Applying Behavioral Science to Nonprofit Program Delivery

Testing a Behavioral Insights Implementation Process with Urban Alliance

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JANUARY 2021

URBAN INSTITUTE

NSIGHTS FROM BEHAVIORAL SCIENCE offer an opportunity for nonprofits seeking to improve their program delivery and overall impact. Urban Institute collaborated with Urban Alliance, a high-performing nonprofit organization, to adapt behavioral science insights to the unique challenges of the organization. In this brief, we document our behavioral insights implementation process, or BIIP, and how we tested that approach with Urban Alliance to improve a key component of its program model. We offer this approach as a resource for other organizations looking to leverage behavioral science.

INTRODUCTION

Nonprofit organizations are increasingly focused on demonstrating outcomes and impact of their work, not just providing services (Liket, Rey-Garcia, and Maas 2014). The reward for showing their effectiveness is clear: government and philanthropy often target contracts and grants to the interventions most likely to deliver positive outcomes (Haskins 2018; Zhang et al. 2017). For nonprofits moving in this evidence-based direction, most of their efforts will be focused on improving the core work of their programs—better counseling services or improved education supports, for example. However, nonprofits should also consider *complementary* interventions to improve their work's overall impact.

Behavioral science offers a unique opportunity for nonprofits seeking to pursue this approach and improve program delivery and overall impact (Richburg-Hayes et al. 2014). Behavioral science takes a microscope to human behavior, focusing on how people make decisions and then act on those decisions. Insights from that research have already seen a wide range of applications. Government bodies have used behavioral science to make programs not only more efficient, but more impactful.[1] Behavioral interventions can target both individual actors and the larger systems within which people operate, and they can be leveraged across different stages of program and policy processes, from initial planning and development to implementation. Behavioral science also spans many different policy areas, from education to financial security to public health (Mitra-Majumdar, Fudge, and Milner 2018).

There are several powerful examples of how these interventions can work. For example, filling out a form for federal financial student aid can be incredibly daunting; when some information was prepopulated, high school seniors were more likely to submit the form *and* enroll in college the next fall (Bettinger et al. 2012). Another example highlights how a low-cost text messaging program for parents of preschoolers sharing information about child development led to increased parental involvement at home and school and higher literacy scores for the children (York, Loeb, and Doss 2019).

Despite the increased focus on evidence and impact, as well as the growing prominence of behavioral science and its applications, most nonprofits do not take advantage of the latest social science research. Emerging lessons from implementation and behavioral science can support nonprofits in important ways. The approach is promising, and studies have shown that relatively minor environmental changes can lead to better outcomes and that newly designed processes can get people to act in ways consistent with program goals (Mayer et al. 2015).

Urban Institute recently collaborated with Urban Alliance (box 1) to connect behavioral science insights to the unique elements of their program delivery for participating young people. We created a pilot approach and tested it with Urban Alliance to improve the jobsite mentoring that youth receive. That approach—the behavioral insights implementation process (BIIP)—uses six steps representing a mix of collaboration and consultation. In this brief, we start with an introduction to behavioral science and then discuss our approach and the behavioral interventions we developed as a resource for other organizations similarly looking to apply behavioral science to their program delivery.

Urban Alliance

Urban Alliance is a nonprofit organization headquartered in Washington, DC, that offers high school seniors from underresourced communities across five regions—Washington, DC; Baltimore, Maryland; Northern Virginia; Chicago, Illinois; and Detroit, Michigan—a high school internship program, which aims to serve young people before they become disconnected from both school and work and help them transition to higher education or employment after graduating from high school. The program incorporates intensive supports to achieve that end, including paid, professional internships with local job partners, mentoring from adult professionals at their internships, coaching from Urban Alliance staff, skills training, and support for alumni who complete the program.

Urban Institute has a long-term relationship with Urban Alliance. With funding from the Corporation for National and Community Service's Social Innovation Fund, Urban Alliance contracted with Urban Institute starting in 2012 to conduct a randomized controlled trial impact and process evaluation of its high school internship program (Theodos et al. 2014, 2016, 2017). Urban Institute is in the middle of a second impact and process evaluation funded by a US Department of Education Investing in Innovation Fund grant (Theodos et al. 2021).

BEHAVIORAL SCIENCE APPLICATIONS

People are constantly processing and sharing information with each other. To make sense of it all, we have each developed strategies for thinking and decisionmaking that are informed by our lived experience. Although we may not admit it, these strategies are less than comprehensive and scientific. They are also influenced by myriad psychological factors, including the behavior of others, the number of choices we are presented with and our cognitive capacity to weigh them, and elements that make behavior more or less difficult to achieve.

Nonprofits should recognize that the people they intend to serve are similarly influenced by such factors. By designing programming with these factors in mind, nonprofits are better poised to improve their program delivery and overall impact. A growing literature examines behavioral science applications that could be relevant for nonprofit program implementation (see the appendix). From these studies, conversations, and experience, we developed a list of behavioral concepts nonprofits can consider that also informed our collaboration with Urban Alliance (box 2). We provide relevant psychological factors that influence behavior as well as common nudge-based interventions that nonprofits can use to bring about desired behavior change.

BOX 2

Behavioral Concepts

The following behavioral concepts can inform program mapping and intervention design. We organize them into psychological factors that influence behavior and applied nudges.

Psychological factors

Anchoring: The initial presentation of information influences subsequent decisionmaking

Channel factors: Elements can make a behavior easier or more difficult to accomplish

Choice architecture: The design of the decisionmaking environment influences the choices individuals make

Cognitive load: Mental resources can become drained, which can impair consistent decisionmaking

Confirmation bias: Individuals tend to accept new information that confirms their existing beliefs

Ego depletion: Individuals face limits on self-control given cognitive load

Friction costs: Barriers can make tasks more difficult and inhibit behavior

Injunctive norms: Perceived notions of what others would approve of influence behavior

Limited attention: Individuals can process only a limited amount of information at once

Loss aversion: Individuals experience losses more strongly than equivalent gains

Present bias: Individuals tend to overweight the present relative to the future

Social proof: The behavior of others influences how we perceive ourselves

BOX 2 (cont'd)

Nudges

Action steps: Highlighting clear next steps can encourage action

Commitment devices: Tools can overcome limited willpower in achieving goals

Deadlines: Providing the times and dates of future actions can elevate their importance

Defaults: Individuals tend to select the default option

Endowed progress effect: Individuals are more motivated to meet a goal if they are shown they have already made progress toward reaching it

Framing effects: Highlighting the positive or negative aspects of a presented choice can influence behavior

Identity priming: Encouraging an identity can influence how individuals respond to a situation

Implementation intentions: If-then plans can boost goal attainment

Personalization: Adding individually tailored elements can increase engagement

Reminders: Highlighting information and emphasizing timeliness increases the chance individuals will respond to that information

Salience: Elevating information influences its impact in affecting behavior

Sources: James Andreoni, "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow Giving," *The Economic Journal* 100, no. 401 (1990): 464–77; Caitlin Anzelone, Justine Yu, and Prabin Subedi, *Using Behavioral Insights to Increase Participation in Social Services Programs: A Case Study*, Office of Planning, Research, and Evaluation (OPRE) Report 2018-73 (Washington, DC: US Department of Health and Human Services, Administration for Children and Families, OPRE, 2018); Roy F. Baumeister and Kathleen D. Vohs, "Self-Regulation, Ego Depletion, and Motivation," *Social and Personality Psychology Compass* 1, no. 1 (2007): 115–28; *Internal Revenue Service Behavioral Insights Toolkit* (Washington, DC: Internal Revenue Service, 2016); Daniel Kahneman, Jack L. Knetsch, and Richard H. Thaler, "Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias," *Journal of Economic Perspectives* 5, no. 1 (1991): 193–206; Kurt Lewin, *Field Theory in Social Science* (New York: Harper, 1951); Joseph C. Nunes and Xavier Dreze, "The Endowed Progress Effect: How Artificial Advancement Increases Effort," *Journal of Consumer Research* 32, no. 4 (2006): 504–12; and Lashawn Richburg-Hayes, Caitlin Anzelone, and Nadine Dechausay, *Nudging Changes in Human Services: Final Report of the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project*, OPRE Report 2017-23 (Washington, DC: US Department of Health and Human Services, Administration for Children and Families, OPRE, 2017).

OVERVIEW OF OUR APPROACH

Most nonprofit programs and interventions have not undergone rigorous evaluation and demonstrated impact (Haskins and Margolis 2014). However, even the relatively few programs that have demonstrated their effectiveness over time are often marked by program implementation challenges that lead to higher levels of attrition and lower levels of program exposure ("dosage") than desired (Hernández et al. 2019). The takeaway: even high-performing nonprofit programs can increase their impact by addressing implementation issues at key points of delivery.

"Nudges"—small interventions that behavioral science has shown create incremental impacts—could be especially promising for programs that have already demonstrated efficacy. Our hypothesis is that targeting program recruitment, retention, and engagement can increase program effect sizes at a relatively minimal cost and amplify positive outcomes that have been tested and replicated over time.

> "
> *Even high-performing nonprofit programs can increase their impact by addressing implementation issues at key points of delivery.*

To explore the viability of this hypothesis, we developed a collaboration process that could be documented and replicated with future nonprofit organizations. Where other implementation frameworks start with an identification of a problem, our BIIP approach starts with a broader understanding of the needs, capacities, and goals of the partner nonprofit organizations as well as an exploration of challenges.[2] An understanding of the program facilitates collective brainstorming. For external partners, a strong working relationship with the nonprofit and a deep knowledge of the program is critical. This program knowledge may stem from an existing relationship, as was the case with Urban Institute and Urban Alliance, or it may develop over the course of the collaboration.

The BIIP guides a shared understanding of the program and its goals. Participation and buy-in from leadership, program staff, and research and evaluation staff, is important to give the recommendations the strongest chance of success. The structured approach clarifies expectations and helps program leaders reflect on their broader program ambitions.

The BIIP follows six steps:

1. **Goal setting.** Work with nonprofit leadership to identify the organization's goals for program improvement and determine which goals to pursue.

2. **Program mapping.** Create a blueprint of the program, identifying all actors, touchpoints, and timelines. Articulate a theory of behavior change and, for all program touchpoints, seek to understand behavioral hurdles that could impede progress from one step to the next.

3. **Background research and intervention design.** Identify relevant insights from implementation and behavioral science and create behavioral interventions that leverage those insights.

4. **Assessment development.** Create systems with program partners to collect data tied to impacts of the behavioral interventions.

5. **Implementation of research insights.** Develop and implement a strategy for implementing the behavioral interventions.

6. **Analysis and continual development.** Analyze programmatic implementation and outcome data to understand intervention impacts, and use the data to refine program development.

Goal Setting

The first step engages leadership in honest conversations about the program improvements they hope the organization can achieve. These conversations are rooted in a deep understanding of the nonprofit and are especially productive when a strong relationship with the nonprofit already exists. The purpose of these conversations is to articulate goals that are both *meaningful* and *measurable*. *Meaningful* goals are connected to outcomes relevant for the nonprofit. *Measurable* goals can be assessed quantitatively or qualitatively over time. Ideally, these goals would also be tied to the program's strategic vision.

This initial step also involves working with the nonprofit's leaders to articulate five elements for each goal. Organizational capacity and unique programming features can influence the number of goals a nonprofit chooses to target with interventions informed by behavioral science. The five elements are the organizational challenge the goal seeks to address, a hypothesis or theory of change for how pursuing the goal would improve outcomes, metrics that can assess progress toward achieving the goal, potential behavioral interventions, and any questions that have yet to be answered.

Leaders can also begin discussing whether and how to deploy interventions experimentally or quasi-experimentally, so the causal impact of the agreed programmatic changes can be rigorously assessed. Conveniently, behavioral interventions can often, though not always, be implemented in the context of a randomized controlled trial. Initial conversations around intervention design should discuss whether a randomized controlled trial is feasible and appropriate given the context, and, if not, whether to change how the interventions are implemented to accommodate other forms of impact assessments.

Program Mapping

The second step engages the nonprofit to map the goals to target. This detailed blueprint should identify key actors, touchpoints from one step in the program to the next, and timelines. This comprehensive mapping exercise reveals opportunities for behavioral interventions by separating programs into specific steps and identifying where behavioral barriers could impede progress. During program mapping, consider separating barriers into those that are logistical and psychological in nature. This step also clarifies the key elements to program implementation, and it helps the organization focus on how best to deliver those elements.

Background Research and Intervention Design

The third step identifies relevant insights from implementation and behavioral science that can operate within the program map created in the previous step. Building off the most recent literature, this step considers which insights will best apply to the program's goals and theory of behavior change. These insights then inform the design of the behavioral interventions intended to overcome hurdles and make progress toward goals.

Like with the previous steps, intervention design involves ongoing engagement and refinement with the nonprofit. Interventions should be connected to meaningful outcomes, be consistent with the program, not be disruptive to the nonprofit's staff or target population, be aligned with behavioral science, and be measurable. Nonprofit staff will know what is feasible and what may be most impactful, and it is important to leverage their institutional knowledge as in designing behavioral interventions.

Assessment Development

The fourth step, which happens in parallel with the third, puts the data-collection systems in place that would allow for measuring program changes quantitatively and/or qualitatively over time. This step includes creating a plan for how the data will be collected, which staff at the nonprofit will be responsible for collecting the data, when the data should be collected, which technology systems should be used, and what quality control checks will be put in place.

Implementation of Research Insights

The fifth step implements the research insights. Staff members should be assigned responsibilities in carrying out the behavioral changes. They should have clear timelines. We recommend holding regular check-ins with the nonprofit to ensure they have the support they need to effectively roll out the interventions.

Analysis and Continual Development

The last BIIP step involves analyzing programmatic implementation and outcome data to understand whether the interventions resulted in gains for participants and the magnitude of those gains. In this step, it will be necessary to determine who will be responsible for data analysis, discuss how data and analyses will be transferred, and create a plan for how the learning will contribute to the refinement of the program going forward.

CASE STUDY: PILOT WITH URBAN ALLIANCE

To pilot the BIIP, we sought out a nonprofit organization that met several criteria. First, it was important that the organization had already demonstrated its effectiveness in past evaluations. The goal of the pilot was to show that even high-performing organizations could benefit from relatively simple behavioral interventions. Second, the organization needed a clear, established leadership structure. Because the organization would be asked to explore and commit to programmatic changes, leadership buy-in and stability would be critical. Finally, we wanted to work with an organization with whom we already had a relationship. For this pilot, we believed that a strong baseline understanding of the program would increase the likelihood of our ability to add value to the organization. Urban Alliance met all three criteria: it had undergone rigorous evaluation and demonstrated its efficacy in specific outcome areas; it had a strong, well-established organizational leadership that was invested in finding innovative ways to improve the program; and it had a relationship with Urban Institute lasting well over a decade.

We piloted the BIIP approach with Urban Alliance to apply behavioral insights to its programming during the 2019–20 academic year. While we were able to complete many steps of the approach as planned, the onset and ongoing impact of the COVID-19 pandemic prevented full implementation and data collection.

Goal Setting

At the beginning of our engagement with Urban Alliance, we held several brainstorming conversations with the chief impact officer to discuss potential areas for improvement of the organization's youth development programming. We had these conversations with a common understanding of the overall goal of our engagement: to increase program impact by improving program retention (dosage) and/or implementation (quality). We also agreed that we would consider program improvement goals that were measurable and were connected to meaningful outcomes for Urban Alliance.

Coming out of these initial conversations, we identified three potential program improvement goals: (1) recruiting and retaining potential Urban Alliance participants during their senior year of high school, (2) strengthening the relationship between program participants and professional mentors during their internships, and (3) better supporting the transition to work or school after graduation from high school. For each goal, we articulated five focus areas: the challenge, a hypothesis or theory of change, relevant metrics, possible behavioral interventions, and outstanding questions.

After detailing the focus areas for each potential program goal, we met with Urban Alliance's leadership team and program officers from the Annie E. Casey Foundation (the project funder) to discuss the goals in detail. Each potential goal occurs at a specific program moment: recruitment and selection of potential participants occurs toward the end of participants' junior year of high school into the beginning of their senior year; mentoring typically begins toward the end of the calendar year as young people participating in the program are matched to internship jobsites; and discussion around post-program transitions begins toward the end of the program as participants prepare to graduate from high school.

Urban Alliance leadership ultimately selected the second goal—working to improve the mentoring experience for young people and the mentors themselves. We detail the five focus areas for that program improvement goal in box 3. During initial meetings, we also discussed the potential for a randomization design with a defined treatment group and control group. Because of the many potential sites and the desire to make sure everyone in those sites had the chance to participate in the interventions, we decided against establishing formal treatment and control groups. The planning group collaboratively decided to fully implement the behavioral approach at two sites (Baltimore, Maryland, and Washington, DC) and partially implement the behavioral approach at the other three (Chicago, Illinois; Detroit, Michigan; and Northern Virginia).

BOX 3

Mentoring Program Improvement Goal Outline

Challenge

Mentoring is a key component of Urban Alliance's program model and its organizational theory of change. Each young person participating in Urban Alliance's internship program is assigned a mentor at her or his internship jobsite. Experiences of interns with their mentors can vary across jobsites, as can the backgrounds of the mentors themselves. Urban Alliance believes strong mentor commitment and engagement are vital for young people participating in the program. Urban Alliance is interested in improving the mentor-intern relationship.

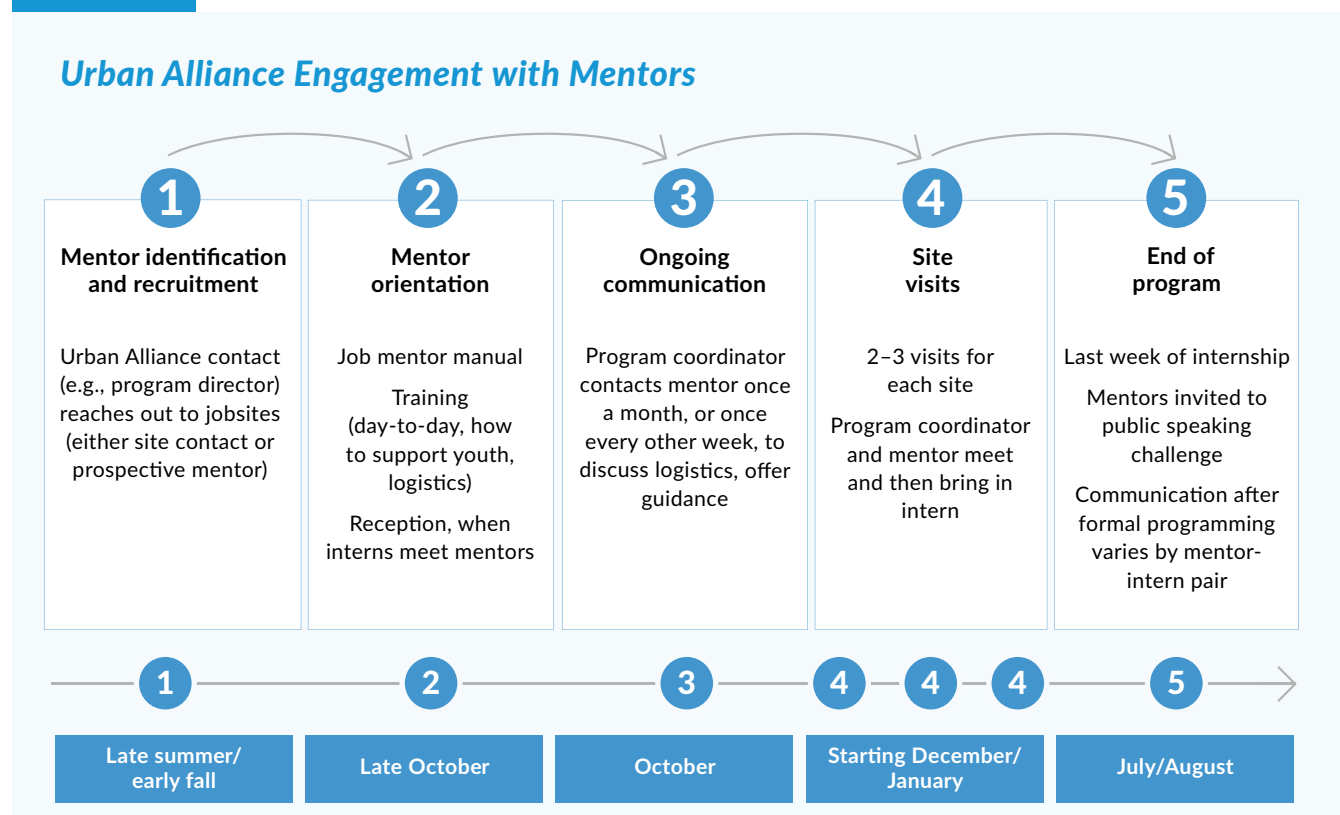|	
Hypothesis/Theory of Change	By strengthening the relationships between mentors and interns, Urban Alliance participants will be more likely to stay in the program and ultimately achieve better program outcomes.
Metrics	▪ improved participant satisfaction with mentoring experience ▪ improved mentor satisfaction with mentoring experience ▪ increased student retention
Potential Behavioral Interventions Informed by Behavioral Concepts	▪ **Commitment device:** Develop a contract for young people and mentors to sign to commit to the key components of the relationship ▪ **Personalization:** Improve training for mentors with effective mentoring strategies; provide job mentors more guidance on responsibilities and youth development; engage job mentors in post–high school planning for mentees ▪ **Reminders:** Provide mentors with simple messages and tools that clearly convey action items they might perform as mentors; send texts to remind mentors about effective mentoring strategies; increase the amount of communication between mentors and mentees via texting or other regular forms of communication, providing mentors with sample language or prompts ▪ **Salience and framing effects:** Rebrand "job mentor" to a title that signals additional support; increase the salience of a "mentor identity" so it is understood that job mentors should work with young people on their development; provide mentors with a certificate or sample language they might use on a résumé
Outstanding Questions	▪ How can we improve mentor personal motivation and outlook on the job mentor role? ▪ How might we measure whether "good" mentoring is happening? ▪ How might we improve mentor-mentee matching?

Program Mapping

In consultation with Urban Alliance staff members, we mapped out the life-cycle of the engagement with mentors, the mentoring experience for young people, and the various touchpoints that could be leveraged with behavioral science (figure 1). We identified sequential stages for how Urban Alliance engages its mentors: initial identification and recruitment, orientation, ongoing communication, visits to each internship jobsite, and end of program. For each stage, we described any interactions involving Urban Alliance, mentors, and participants. We also identify the timing of each stage, which aligns with Urban Alliance's program model.

FIGURE 1

Urban Alliance Engagement with Mentors

1	**2**	**3**	**4**	**5**
Mentor identification and recruitment	**Mentor orientation**	**Ongoing communication**	**Site visits**	**End of program**
Urban Alliance contact (e.g., program director) reaches out to jobsites (either site contact or prospective mentor)	Job mentor manual Training (day-to-day, how to support youth, logistics) Reception, when interns meet mentors	Program coordinator contacts mentor once a month, or once every other week, to discuss logistics, offer guidance	2–3 visits for each site Program coordinator and mentor meet and then bring in intern	Last week of internship Mentors invited to public speaking challenge Communication after formal programming varies by mentor-intern pair

1	2	3	4 — 4 — 4	5
Late summer/ early fall	Late October	October	Starting December/ January	July/August

For each of the five stages, we then mapped out the actors, touchpoints between those actors, potential behavioral insights, and possible measures for assessment. We provide a mapping of the first stage in Urban Alliance's mentoring program—initial identification and recruitment of mentors across internship jobsites—in figure 2. During the mapping process, we sought to identify places where behavioral interventions could improve interactions between participants and the program. We learned that program staff from Urban Alliance, such as a program director or similar staff person, begins this process in late summer or early fall. They employ two approaches: they reach out to jobsites asking them to identify who could serve as mentors for participating young people, and they reach out to professionals directly, particularly those who had previously served as Urban Alliance mentors.

This initial identification and recruitment strategy offers three unique opportunities for behavioral interventions in the form of messaging that applies behavioral science principles: an initial email from Urban Alliance to jobsite contacts, such as human resources departments; an initial email from Urban Alliance directly to professionals that had previously engaged with the program; and an email from the jobsites themselves to their staff soliciting participation as an Urban Alliance mentor. Program maps that break program design down into its component parts—each action and actor involved—are a useful tool for understanding the behavioral hurdles that can impede progress from one step to the next. We map the three messaging opportunities in figure 2 and highlight potential behavioral insights that could be applied. For example, we brainstormed highlighting testimonials from previous Urban Alliance mentors to leverage social proof, as well as including elements in the messaging that could increase the salience of a mentor identity.

FIGURE 2

Mapping of Mentor Identification and Recruitment
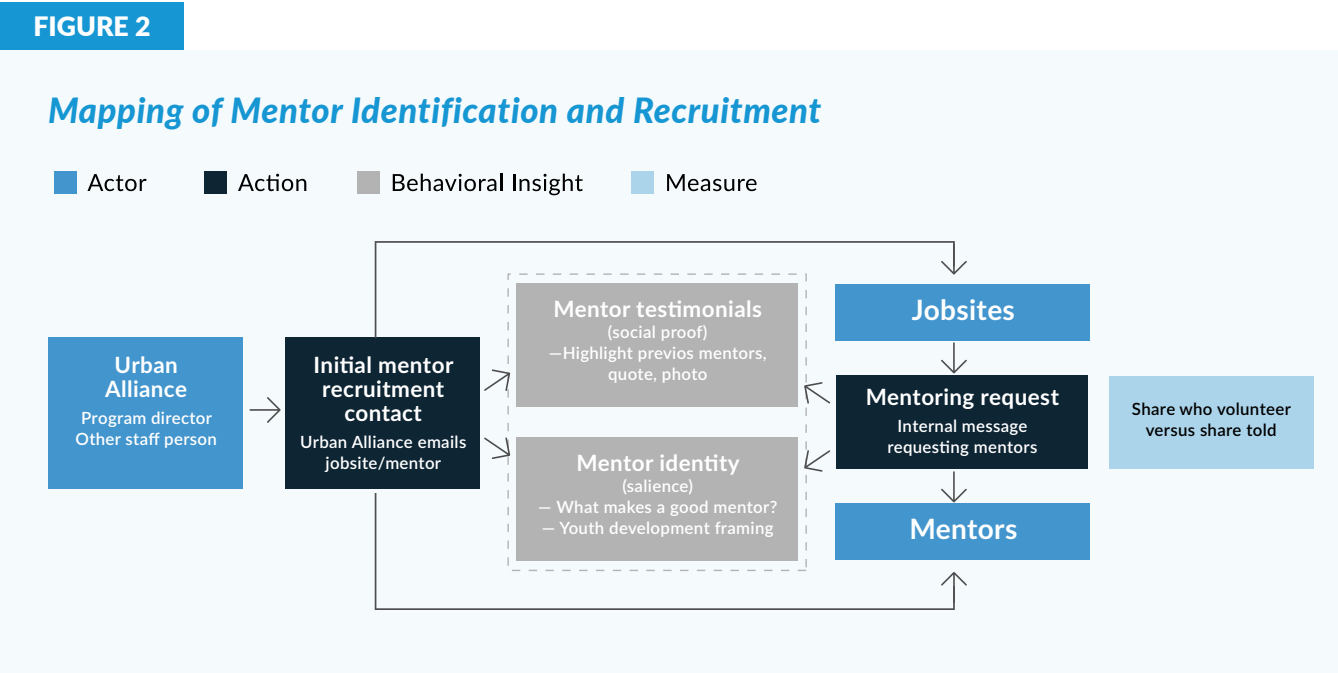
We created similar maps for the other four stages of Urban Alliance's mentoring program. These visual maps facilitated conversations with Urban Alliance about opportunities to apply behavioral insights. They also informed the next step in our engagement.

Background Research and Intervention Design

We scanned the literature for behavioral insights that could be leveraged across the five stages of Urban Alliance's mentoring program, as well as examples of behavioral interventions that could be adapted to Urban Alliance's programming (see the appendix). We considered research operating within a similar youth development context as well as research spanning other policy and program areas.

With the onset of the COVID-19 pandemic in early 2020, we conducted a supplementary literature review for best practices on how to adapt a mentoring program and apply behavioral insights during a time of physical distancing.

With this set of behavioral insights and examples of how they have been leveraged, we began working with Urban Alliance in designing behavioral interventions. As the designs took shape, we engaged in an iterative development process, where either Urban Institute or Urban Alliance would create an initial mock-up, and the organizations would then pass the design back and forth for further refinement. Box 4 lists the designs we developed.

BOX 4

Behavioral Interventions

In close collaboration with Urban Alliance, we created the behavioral interventions below.

Stage 1: Mentor Identification and Recruitment	▪ **Initial recruitment email:** Formalize the mentor identification process by creating sample language that encourages participation and the mentor identity (identity priming). Use the individual's first name (personalization), elevate how the individual's fellow colleagues have participated in the past (social proof), and include language about not losing out on the opportunity to participate (loss aversion). ▪ **Mentor expectations and testimonials:** Revise a current mentor expectations document to include testimonials from mentors that previously participated. Elevate the mentor's role in youth development
Stage 2: Mentor Orientation	▪ **Mentor orientation registration email:** Send a survey to mentors providing information about orientation and requesting registration. Use the individual's first name (personalization), structure the registration as opt-out (status quo bias), and add extra steps to the opting out process (friction costs). ▪ **Reminders to attend:** Send mentors emails and/or text messages about attending orientation. Remind mentors to add the event to their calendars (implementation intentions), include language about not losing out on the opportunity to participate (loss aversion), and elevate deadlines (deadlines). ▪ **Mentor checklist:** Create a simplified 3" x 5" mentor checklist, including immediate steps the mentor could take during their intern's first week. Include action-oriented steps (choice architecture and cognitive load) and include as the first item "attend mentor orientation" (endowed progress effect). ▪ **Commitment pledge:** Create a commitment pledge. Include language about their role as an Urban Alliance mentor (salience) and have them sign the pledge in a social setting (commitment device).

BOX 4 (cont'd)

Stage 2: Mentor Orientation	▪ **Updated mentor manual:** Update the mentoring manual. Use the individual's first name (personalization) and include action-oriented steps (choice architecture and cognitive load). ▪ **Role-playing exercises:** Incorporate role-playing exercises in orientation so mentors can work through specific scenarios to encourage youth development (implementation intentions) and elevate the "mentor identity" (salience and identity priming). Solicit buy-in from more experienced mentors by having them share their insights (warm-glow effect).
Stage 3: Ongoing Communication	▪ **Monthly mentor tips:** Send mentors a monthly email with mentoring tips. Action-orient the tips (choice architecture and cognitive load). ▪ **Pulse survey:** Design a survey that asks the mentor to assess how many of the month's mentoring tips they completed. Emphasize the mentor identity by asking mentors to describe a positive interaction they had with their intern over the past month (salience and identity priming). The pulse survey also signals to mentors that Urban Alliance is invested in the completion of these tips (injunctive norms).
Stage 4: Site Visits	▪ **Updated site visit forms:** Revise the forms that Urban Alliance staff complete when they meet with mentors and interns to collect standardized information across jobsites.
Stage 5: End of Program	▪ We did not design behavioral interventions for this stage given the uncertainty surrounding programming resulting from to the COVID-19 pandemic.

Implementation of Research Insights

For each behavioral intervention, we engaged Urban Alliance staff in articulating a description of the intervention, the behavioral concepts that could be leveraged, the individuals responsible for implementing each intervention, whether Urban Institute or Urban Alliance would create the initial prototype before passing the intervention back and forth for further refinement, and a target date for finalized materials. Table 1 shows a detailed accounting for the behavioral interventions we designed for the first stage, mentor identification and recruitment.

TABLE 1

Detailed Behavioral Interventions with Plans for Implementation

INTERVENTION	DESCRIPTION	BEHAVIORAL CONCEPTS	RESPONSIBLE PARTY
Initial recruitment email	Formalize the mentor identification process by creating sample language that encourages participation and the mentor identity	**Personalization** (use employee name) **Social influence** (how many have participated) **Status quo bias** (pre-enroll in info session) **Loss aversion** ("Don't lose out on this opportunity") **Deadlines** (include a deadline) **Friction costs** (make enrollment easy) **Salience** (elevate the mentor identity)	Urban Alliance program staff to send to jobsite contacts
Mentor expectations and testimonials	Revamp a mentor expectations document and include mentor testimonials; make expectations and connection to youth development clear	**Social influence** (include mentor testimonials) **Salience** (elevate the mentor identity)	Urban Alliance program staff to include in outreach materials

We continually referred to the full document containing the description of all behavioral interventions and scheduled recurring check-ins with Urban Alliance during implementation.

Assessment Development

As we developed behavioral interventions with Urban Alliance, we discussed measures that could be used to quantitatively and qualitatively assess their impact. Table 2 highlights the measures we discussed with Urban Alliance across the five stages of their mentoring program.

Measures for Each Stage of Engagement of Mentors

STAGE	MEASURES
Stage 1: Mentor identification and recruitment	▪ Number of recruitment emails sent by Urban Alliance to jobsites and directly to professionals ▪ Number of returning mentors versus number of new mentors, compared with previous years
Stage 2: Mentor orientation	▪ Attendance at job orientation, broken out for new mentors and returning mentors ▪ Number of signed commitment pledges
Stage 3: Ongoing communication	▪ Results from ongoing pulse surveys
Stage 4: Site visits	▪ Qualitative assessment of information collected from mentors through standardized site visit forms
Stage 5: End of program	▪ We did not design behavioral interventions for this stage given the uncertainty surrounding programming resulting from the COVID-19 pandemic

Before our engagement, Urban Alliance was already regularly surveying its mentors and participating young people. A major consideration for our measures was whether they would be an additional burden for mentors, young people, or Urban Alliance staff given the program's other data collection efforts. Some measures are outputs rather than outcomes, and the measures that do point to outcomes are limited by few months of data collection and lack of a comparison group. Although the measures are limited, they helped us assess in real time some preliminary potential impacts of the behavioral interventions. They are also helpful for creating a benchmark against which to compare implementation of interventions in future years.

Analysis and Continuous Development

Urban Alliance collected and compiled data for several measures. The COVID-19 pandemic complicated these efforts, as some behavioral interventions were put on hold and as the nature of the engagement itself between mentors and young people changed from in-person to virtual interactions. Despite these challenges, Urban Alliance was able to collect some data on the behavioral interventions that were implemented.

For example, during the ongoing communication stage of Urban Alliance's engagement with mentors, they sent ongoing tips to mentors and then sent follow-up pulse surveys, asking mentors to indicate which activities they had completed as well as how frequently they were interacting with their mentees. As indicated by pulse surveys fielded in late 2019 into early 2020, a high share of mentors had connected with young people on both long-term and short-term goals, had provided honest and specific feedback, had assigned projects contributing to professional soft skill development, and had checked in with youth on their overall wellness. The pulse surveys showed that a high majority of mentors had checked in with their mentees and assigned them projects for skill growth and development frequently—either weekly or every two or three weeks.

Ideally, this ongoing data collection and analysis could inform further refinement of previous behavioral interventions and inspire new interventions.

CONCLUDING THOUGHTS

There appears to be value in the structured approach of the BIIP. The conversations it spurred and the research that it tapped into for relatively simple behavioral interventions added value for Urban Alliance. It was also clear that simply creating the space for reflection on programmatic elements and targeted improvements was useful. According to Dan Tsin, the former chief impact officer at Urban Alliance, the BIIP's holistic approach was especially helpful. He called out the use of "naming the behavioral insights, the social pressure, the pre-enrolling of folks, using every one of these opportunities to name how you want people to act. Small, easy nudges that can remind people to do x, y, z." He also believed that the simplicity of the interventions "made it very easy to do," and that there was great utility in the way that the BIIP "made it bite-size for us."

However, given the disruption of COVID-19 and the broader pandemic context, we were unable to measure the impact of the interventions in a meaningful way. Further, the pandemic drastically changed the way Urban Alliance delivered its program, and it remains to be seen how those changes affect post-pandemic programming. Nonetheless, the BIIP was clearly helpful despite these challenges. The program was still able to use some lessons from our early engagement in its approach to COVID-19 programming. According to Dan Tsin, Urban Alliance "used insights and ideas that we learned from [BIIP] in its COVID response. Our work centered on the role of the mentor in a young person's life. In COVID, we realized we needed to double down on that."

It will be worthwhile to find new ways to support nonprofit organizations through the BIIP and to seek ways to embed elements of the approach in other research projects.

APPENDIX

Below is a list of resources for practitioners interested in applying behavioral science to their program delivery. Resources include an overview of behavioral science and some behavioral concepts as well as recent work in applying behavioral science to communications and engagement and to education.

Overview of Behavioral Science, Key Concepts, and Applications

- "Behavioral Insights Toolkit" by the Internal Revenue Service
- About nudges: *The BASIC Toolkit: Tools and Ethics for Applied Behavioural Insights* by the Organisation for Economic Co-operation and Development

Communications and Engagement Methods

- "Behavioral Insights Communications Checklist" by Mathematica Policy Research
- *EAST: Four Simple Ways to Apply Behavioural Insights* by the Behavioural Insights Team
- "Making the Best Laid Plans Better: How Plan-Making Prompts Increase Follow-Through" by Todd Rogers, Katherine L. Milkman, Leslie K. John, and Michael I. Norton
- "Nudging Changes in Human Services: Final Report of the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project," by Lashawn Richburg-Hayes, Caitlin Anzelone, and Nadine Dechausay; published by the US Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation
- "The Power of Prompts: Using Behavioral Insights to Encourage People to Participate," by Nadine Dechausay, Caitlin Anzelone, and Leigh Reardon; published by the US Department of Health and Human Services, Administration for Children and Families, Office of Planning, Research and Evaluation

Education-Specific Examples

- "Getting Students to Day One: A Communications Toolkit for the California Community Colleges," by Harrison Neuert, Shera Kenney, Katy Davis, and Allison Yates-Berg
- "Improving Student Outcomes in Online Learning: A Behavioral Approach," by Alex Alhadeff, Dana Guichon, Emily Zimmerman, Ethan Fletcher, and Rachel Taylor
- "Nudging for Success: Using Behavioral Science to Improve the Postsecondary Student Journey," by Ideas42
- "Small Changes Make a Big Difference: How Behavioral Science Improved Participation in Advanced Placement," by Naihobe Gonzalez; published by Mathematica Policy Research
- "Using Behavioral Science to Encourage Postsecondary Summer Enrollment," by Camielle Headlam, Caitlin Anzelone, and Michael J. Weiss

NOTES

1 For example, President Obama created the Social and Behavioral Sciences Team through executive order in 2015. See Congdon and Shankar (2015) for lessons learned in year one and the team's 2016 annual report (Executive Office of the President National Science and Technology Council 2016).

2 MDRC, Mathematica, and ideas42 have their own frameworks. MDRC uses a six-step approach: defining problems in a measurable way, clarifying the context to inform understanding of barriers to success, diagnosing reasons for problems using behavioral insights, designing solutions that address barriers, developing the design ideas and a plan for implementation, and testing the designs to determine effectiveness ("Our Approach to Problem Solving," infographic, MDRC, Center for Applied Behavioral Science, June 2018, available at https://www.mdrc.org/publication/cabs-approach).

Mathematica employs a six-step approach: understanding the problem, diagnosing the problem by mapping out behavioral bottlenecks, designing and field-testing interventions that fit the context of the program and the program's available resources, supporting frontline staff with intervention implementation, evaluating the intervention using rigorous and low-cost strategies, and learning from that evaluation ("Program Design and Improvement Services: Behavioral Science" Mathematica, accessed December 7, 2020, https://www.mathematica.org/services/program-design-and-improvement/behavior-science).

Ideas42 uses a five-step approach: defining a problem, diagnosing the bottlenecks that may be contributing to the problem using quantitative and qualitative methods, designing interventions that address those bottlenecks, testing the intervention, and scaling the solution if the intervention is effective (Tantia et al. 2019).

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ACKNOWLEDGMENTS