

The Busara toolkit: leveraging behavioral science for development

RESEARCH
AGENDA

Key words:

Busara

Behavioral science

Development

Quantitative research

Qualitative research

Global South

Author affiliations:

[1-5] Busara

[6] Implement Consulting Group

[7] sistemaFutura

Conflicts of interest:

There are no conflicts of interest to declare for this study.

Copyedited by:

Aarti Nair

Designed by:

Anthony Mogaka

Lynette Gow

Acknowledgement

The development of this toolkit was a lengthy process that would not have been possible without the tireless efforts of dedicated Busara staff, past and present. Special thanks to past staff, Aya Vang and Steve Wendel, who shepherded the preliminary work on which the current toolkit is anchored. Thanks to Arize Okafor, Chaning Jang, Edel Koki, Jaspreet Singh, and Robert Nyaga, whose efforts have brought this work to fruition. Special thanks to Anthony Mogaka and Micheal Bagorogoza for help with design work, to Prithika Mohan and Ruth Wambua for help with reviewing the toolkit, and to the Voice and Impact team led by Michael Onsando and Mareike Schomerus for their help with the final review and publishing of this toolkit.



Table of contents

Welcome	8
What to expect	9
Busara’s toolkit	11
Our framework, AUDAS.....	11
A bit of terminology and scope	13
Phase 1: Align.....	16
Phase 2: Understand.....	18
2.1: Gather contextual information	19
2.1.1: Identify our gaps and goals.....	20
2.1.2 Define the formative research questions	24
2.1.3 Desk/literature reviews.....	25
2.1.4 Qualitative field research.....	26
2.1.5 Quantitative background analyses	30
2.2: Synthesize information into insights.....	32
2.2.1 Synthesize qualitative data	33
2.2.2 Build a behavioral map	36
Variations on behavioral maps.....	39
Creating behavioral maps from quantitative data.....	39
Creating behavioral maps from qualitative insights.....	40
2.2.3 Develop a theory of change	40
2.3: Diagnose the behavioral challenge	41
2.4: A systems view of opportunities for change.....	44
Phase 3: Design behavioral solutions.....	46
3.1 Ideate – come up with intervention ideas	47

3.2 Review – winnowing them down	49
3.3 Prototype – try them out for real	52
3.4 Refine and Implement	54
Phase 4: Assess and iterate.....	55
4.1 Quantitative methods for inference	56
4.1.1 Approach 1: Randomized control trials	58
Absolute impact: RCT with a null control	58
4.1.2 Approach 2: Quasi-experimental methods.....	61
Difference-in-difference (DiD):	61
Regression discontinuity (RD):.....	61
Propensity score matching:.....	62
Instrumental variable:	62
4.2 Qualitative open-ended observations	63
Phase 5: Share our learnings.....	64
5.1 Confirm audience and needs.....	65
5.2 Generate tailored insights.....	67
5.3 Provide the blueprint.....	68
Conclusion	70
References.....	71



Figures

Figure 1: A quick summary of AUDAS.....	12
Figure 2: Components and deliverables from the Understand phase.....	19
Figure 3: Detailed view of gathering data for qualitative fieldwork	27
Figure 4: Detailed overview of the process of using generated insights to inform design synthesis	33
Figure 5: A sample behavioral map related to the purchase of local produce for children’s meals by parents in Barbados	38
Figure 6: An overview of the steps of design synthesis from ideation to refinement/implementation	46
Figure 7: The prototype scoring template card	51
Figure 8: Prototype/concept card template.....	53
Figure 9: Description of the process of testing and sharing interventions..	56
Figure 10: An overview of the Share phase	64
Figure 11: Documenting lessons from a project cycle.....	67

Abbreviations and acronyms

AUDAS	Align, Understand, Design, Assess, Share
BIT	Behavioral Insights Team
COM-B	Capability, Opportunity, Motivation - Behavior
CREATE	Cue, Reaction, Evaluation, Ability, Timing
DiD	Difference in Difference
IDI	In-Depth Interviews
MOCHA	Manager Owner Consultant Helper Approver
QAP	Qualitative Analysis Plan
RCT	Randomized Controlled Trial
RD	Regression Discontinuity
TESTS	Target, Explore, Solution, Trial, Scale
UNICEF	United Nations International Children's Emergency Fund



Welcome

Thank you for your interest in the Busara Toolkit: leveraging behavioral science in development. With this Toolkit, we are sharing the tools and materials that we use internally for our projects worldwide, for free for anyone to use. We aim to help behavioral science practitioners, especially in development and across the Global South, with a foundation of accessible, engaging, and easy-to-use tools that they can build on and adapt to their needs.

What to expect

The Busara Toolkit includes a framework (AUDAS) and specific tools and templates designed to facilitate impactful and efficient projects. Toolkit covers the entire project life cycle from start to finish - i.e., from the very first stage, where a project is staffed and kicked off, through the delivery, to the end, where a project is closed and signed off with the client and/or partners. We've also added specific deep dives on qualitative behavioral science, the dynamics, and importance of understanding context, and tools for integrating systems analysis with behavioral fieldwork.

In this Toolkit, you'll find:

- An overview of the framework itself
- A summary of how each step works
- Links to practical tools you can use during those steps
- References for more information

This toolkit is meant to be practical, not comprehensive. Here's what you **won't** find:

- We focus on what you can do, not the underlying theory or literature.
- We do not provide much background information about how common processes work (e.g., stakeholder alignment on project logistics, literature reviews, statistical analyses).



Overall, our toolkit focuses on what is unique and different about applied behavioral science in international development. If you'd like to learn more about the underlying theory and evidence base of behavioral science (and of international development), a range of books are available.

Thank you for your interest in our toolkit, and we hope you find it useful!

Busara's toolkit

Let's start with the basics. What does it mean to actually do applied behavioral science? At Busara, we use the term "AUDAS" for the five stages of our process: [Align](#), [Understand](#), [Design](#), [Assess](#) and [Share](#).

Our framework, AUDAS

Busara's AUDAS framework describes how we do research and advisory projects at Busara. It is the glue that connects our high-level mission with specific choices about what projects we take on, how we run those projects, how we staff them, and how we train our staff.

This Toolkit converts our process into specific templates and resources to enable you to do it in practice. Figure 1 summarizes the different stages of AUDAS and why they are needed.



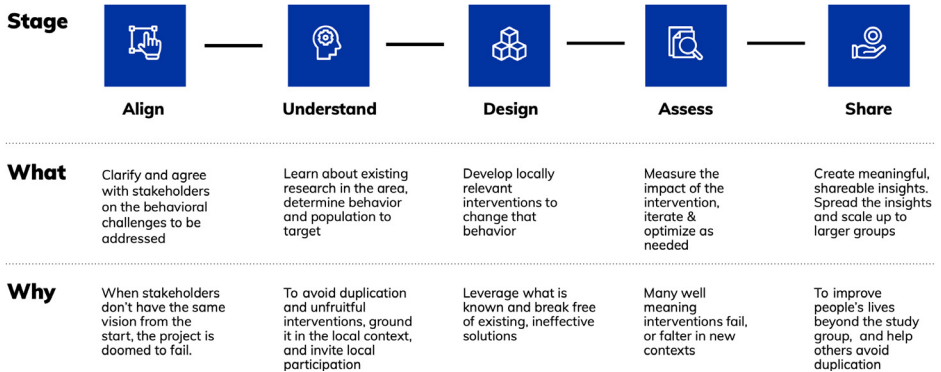


Figure 1: A quick summary of AUDAS

A single organization does not need to do all of these components itself. However, all are required for our field to be effective and to learn over time. In the following sections, we go over tools to help you do each stage: [Align](#), [Understand](#), [Design](#), [Assess](#) and [Share](#). As you'll see, we often have multiple tools to choose from at each stage, depending on the need and type of project.

While we use AUDAS, it's important to note that the high-level process is remarkably similar across all major organizations in the field, from the BIT's TESTS to UNICEF's DEPTHS framework. We, like them, do behavioral problem solving: we or our partner identify a problem in the field, understand the context around it, and then design, assess, and share the solutions. The

frameworks differ in the details: we focused ours on the specific needs of international development and are sharing the detailed templates and tools we use for that purpose.

In particular, in this toolkit, you'll find extensive detail on the Understand and Assess phases. That's because those are the two most challenging and unique ways in which behavioral science changes and expands in international development contexts.

Resources to learn more:

- To learn about the range of frameworks organizations use (and how they are all remarkably similar), “A Review of Behavioral Frameworks”, is chapter four of the book, Behavioral Science in Development.
- Speaking of which, to learn more about behavioral science in international development, Behavioral Science in Development provides a valuable collection of articles from leading researchers and practitioners. It's also free to download.

A bit of terminology and scope

“Behavioral science” is also used in many different contexts, with somewhat different meanings. Without arguing the pros and cons of the options, here is how we use them at Busara:



Behavioral science is the specific research tradition that started with the combination of cognitive psychology and economics (i.e. behavioral economics), but has grown to include like-minded research in other disciplines from psychology, political science, and beyond.

The common core of this tradition is that it generates rigorous empirical evidence (qualitative and quantitative) on how context interacts with cognition and decision-making to drive human behavior. Applied behavioral science uses that research tradition specifically to change behavior and outcomes.¹

Each part of behavioral science is essential for our role in international development and the gap we fill. For too long, international development ignored **context** with cookie-cutter approaches. It also didn't value rigorous **evidence**, relying solely on compelling stories and statistical mirages. Busara was born of these two problems: we exist because of the randomista movement in development that sought rigor and evidence and the desire for

¹ Again, there are many other uses of the term and many similar disciplines. Behavioral design, for example, has the same area of focus (using empirical evidence on the interaction of context and cognition to change behavior), but generally does not seek to contribute back to the rigorous base of empirical evidence in the field.

non-WEIRD, contextually-aware research in behavioral science. Similarly, development initiatives have too often focused on what people “should” do rather than addressing what they are likely to do.

Applied behavioral science, with our focus on the interaction of **context, cognition, and behavior**, makes development more realistic and viable: it makes us more impactful and thoughtful about the possibility of change.

Put another way, each part of the behavioral science tradition adds to our work: our ability to do good in the world. Without field testing, we are confident but blind. Without our historical evidence base, we reinvent the wheel. Without knowing the limits of cognition, development projects fall into wishful thinking or paternalistic scolding. And so forth. Our internal commitment to behavioral science guides how and why we are effective.

With that, let’s dive into how we do it - and tools you can use to develop your approach and process.



Phase 1: Align

Align on the outcome and impact you seek from the project.

Commentary: In the Align phase, there are two main things we want to accomplish: **clarity of vision** and **clarity of roles**. Most of this stage is the same as it would be for any (non-behavioral) project, especially any project in international development.

The tools we use: To clarify the project vision, you can start with an [onboarding deck](#).² The first two sections of the template should be filled out by the project team, to capture:

1. Project scope and deliverables
2. Behavioral goals

Then, a project kick-off meeting provides a tool for an in-depth conversation about the scope and goals with clients and external stakeholders. The aim is to uncover and resolve any misalignment. Based on that kickoff, you update the project brief accordingly.

² Project Onboarding template, Busara, 2022.

As part of the kickoff, Busara uses existing tools like [MOCHA](#) to establish clear and defined roles and responsibilities.³ This can avoid clashes between team members who are uncertain about what role they should actively be taking in completing a project.

Resources to learn more:

- As mentioned in the introduction, this toolkit is focused on what is unique and different about Busara’s use of behavioral science in international development, so we do not provide much detail on general project management and stakeholder alignment.
- Thankfully, dozens (if not hundreds) of project management tools, templates, and books cover the initial alignment phase and more. [Here is one list, for example](#)⁴ and a [course from the Project Management Institute](#).

Congratulations! The first stage is done.

3 The Management Center. (2022). *Clarifying Responsibilities with MOCHA* - The Management Center. <https://www.managementcenter.org/resources/assigning-responsibilities/>

4 Aston, B. (2024, February 21). 24 Project management books you need to read in 2024. The Digital Project Manager. <https://thedigitalprojectmanager.com/personal/personal-growth/project-management-books/>



Phase 2: Understand

Understand the underlying context and behavioral causes.

Commentary: In the Understand phase, our primary goal is to understand the context and the opportunity for change. Unlike the Align phase, this stage is highly different from standard practice. In our work in international development, we've found that three areas in particular need targeted tools: (a) understanding context, (b) seeing the systems in which we are embedded, and (c) employing rigorous qualitative methods in diverse settings around the world. We have developed materials and tools to help guide these processes. For that reason, this section is the largest of the toolkits.

An overview of the process

We can think of the Understand phase in three steps: gather information about the local context, synthesize our understanding of that context (people, behaviors, incentives, and mechanisms), and then diagnose the specific behavioral problem we need solutions for.

These steps, summarized in Figure 2, can be conducted at various levels of detail: from a few days of interviews and workshops to years of detailed fieldwork. It depends on the cost of the intervention (the more costly the intervention, the more important it is to “get it right” from the start) and how familiar and known the context is.

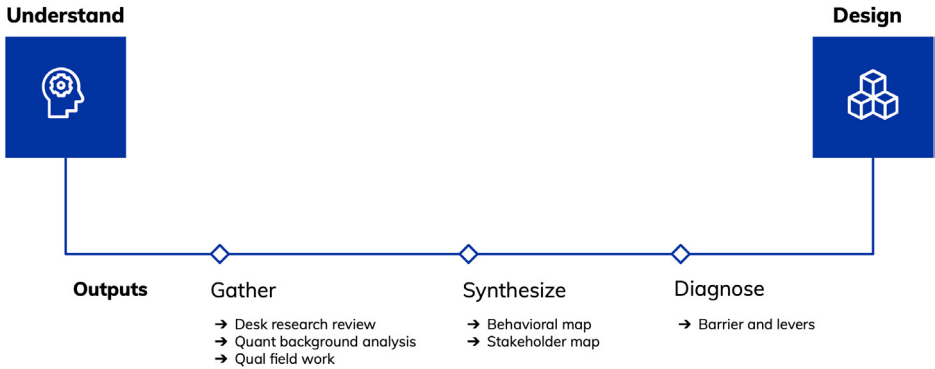


Figure 2: Components and deliverables from the Understand phase

Since each step can take many different forms, it is essential to evaluate it on a case-by-case basis with your team to see what tools are appropriate. This section of the toolkit presents our most common activities in the Understand phase, along with links to additional resources and templates. Depending on the context of the study, the Understand phase may also be used to scope a subsequent project.

2.1: Gather contextual information

We have three main approaches to understanding the context we're working in **desk research**, **quantitative analyses**, and **qualitative field work**. It all



starts with a short, simple, but easy-to-overlook step: **identifying our gaps and goals** in understanding the context.

2.1.1: Identify our gaps and goals

Context is one of those words that we all abuse in international development and in behavioral science. It's widely accepted in Behavioral Science that 'context' matters. We often hear that those in the context know better and can create better behavioral science than those that don't understand 'the context'. But what do we mean when we talk about context, and how does one go about achieving that 'contextual knowledge' or know when one has it?

At Busara, we define context as follows:

*Context is the internal and external setting that affects a person's decision-making and behavior. Contexts are made up of the interaction between **people** (demographics, norms, personal history) with a **place** (physical environment, available resources) at a specific **moment** (including the person's mindset and the local stimuli) concerning a particular **activity** (which aspect of their lives we want to understand).*

Both **people** and **place** are deeply shaped by both historical commonalities and local, personal differences. For example, people are influenced by

the surrounding culture, expected roles (group commonalities), and their particular personalities, habits, and mental models (personal differences). The importance of a **place** in decision-making and behavior is not just the particulars surrounding a person at the **moment** (e.g., environmental cues that trigger action) but also historical facts such as a history of civil violence, being prone to flooding, etc. Context encompasses the interactions of people with their physical environment, their experienced history, and their perceived future.

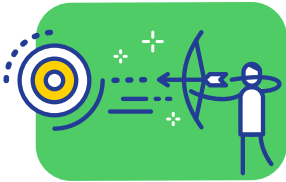
Context isn't a static thing; it's not a background that one can study and observe at a single point in time, nor is it a 'thing' one receives by birthright or simply through demographic inclusion. Indeed, most development projects entail people working in different contexts: even if we are from a particular country, our teams are rarely from the specific physical and social context of the project.

Thus, we try to "gain context" or "understand the context" before we can effectively work with that context. We employ that contextual understanding in three main ways: designing **interventions** to improve people's lives, **changing the context** as part of the intervention itself, and weaving the knowledge into developing **contextualized insights**.

This process of gaining context is always imperfect: we cannot ever fully understand the context in which we hope to intervene. Thus, it is essential to include truly local participants in the process. However, since our backgrounds shape much of the research process, we try to gain this understanding in



addition to using participatory design techniques. Finally, understanding context is a process that you continually engage in, learn from, and adapt to the project’s needs. In the “Deep Dives” section of this toolkit, we’ve shared a detailed analysis of context, but here, we can skip to the three main steps needed to identify our gaps and goals – i.e., to help us gain context.



Step 1: Identify the context you want to understand. This combines people, places, and activities you wish to understand better. For example, this might be female entrepreneurs in Kibera looking for new business ideas or philanthropist activists in Silicon Valley deciding on investments in green technology. Typically, you’ll determine this in alignment with your partner. An important note here is the concept of adjacency. This refers to contexts that are similar but not the same as the target context, which might give you a broader perspective. For example, understanding female startup owners in Dar es Salam may give you a valuable adjacent perspective on entrepreneurship in Kibera.



Step 2: Catalog your perspective. What do you already know about the context? What insider and outsider knowledge do you have through your background, education, or lived experience? Do you have a particular emic (insider) perspective because you come from a similar background or do you already have intimate knowledge of the subject? Perhaps you have etic knowledge of useful theories and frameworks for dissecting a situation. What are your information gaps? Preconceived notions? Biases and beliefs? What are the initial hypotheses about what the context might be to learn from, utilize, or shape?



Step 3: Choose high-impact data/experience. Choose activities that round out your perspective based on what you already know. If you lack that “insider” knowledge, you may want to schedule a field visit or do mystery shopping. If you seek an “outside” perspective, you may visit an adjacent setting or read papers on your context. Whatever you choose should be guided by what you’d like to learn and what perspective you’d like to view it from.



The process of identifying our gaps and goals in understanding context leads naturally to the creation of formative research questions: both that we seek to experience and that we strive to ask of participants.

2.1.2 Define the formative research questions

Formative research is what we need before we design and run an intervention. We list the questions, how we'll research them, and how the answers will be used. A good rule for all research (including formative): if you don't know how to use the information, don't spend time gathering it! With countless topics to explore, outlining what you need to know helps you stay on track.

Each project varies, but a few big categories for formative research are:

- 1. Cause of the “problem”:** What factors contribute to the problem? Audience: Ourselves (design phase), client (final report), blog/public audience (narrative about the study). Tools: desk research, qualitative and quantitative research, and systems mapping.
- 2. Existing solutions:** What is working, and what others are already doing to address the problem? Audience: Ourselves (design phase); client (literature review or other report); academic audience (literature review for an academic paper). Tools: desk research focused on rigorous field studies; direct qual interviews; observational qual.
- 3. Target population and segments:** Who is the project meant to help? What are their experiences now, and how can we understand their setting and situation? This could include demographics, knowledge, attitudes, and current practice, as well as their current outcomes.

4. **Local stakeholders and relationships:** In addition to the target population, who is relevant to the project and might be affected by an intervention or hinder/support its implementation. Audience: Ourselves (design phase), client (final review), blog/public audience (narrative of the study). Tools: desk research, qualitative interviews, systems mapping.
5. **Responses and adaptations:** what might complicate our efforts to intervene, and how people are likely to respond, thus shaping long-term outcomes. Audience: Ourselves (design phase). Tools: qualitative field work, desk research focused on people and their lives.

With these formative questions in hand, we then deploy the three main tools of data collection to answer them: desk reviews, qualitative fieldwork, and quantitative analyses.

2.1.3 Desk/literature reviews

We often do a **desk review** of external and internal research and insights to see what problems other people have faced, and what solutions they have implemented. The result is a **background report**.

First, we look for rigorous empirical evidence about the local context - such as administrative data and first-hand qualitative reports and insights. Second, if you are using prior interventions to understand the context,⁵ look for the

⁵ We discuss the use of prior interventions to guide the design process (and the need for replication) later, in the Design phase of AUDAS.



rigor of methods. For example, RCTs are imperfect tools for all development projects but are often excellent for direct impact assessments of interventions. We seek replicated empirical data similarly: do multiple researchers arrive at similar conclusions? How does the context of the researcher affect the findings—what perspectives and biases come through the report that we should be wary of? We can draw inspiration from unverified, less rigorous background research—but be careful to segregate those lessons and use them only as inspiration.

2.1.4 Qualitative field research

We use qualitative research to contextualize and diagnose a problem. In many ways, qualitative research is the process that ‘makes the world visible.’ Through qualitative research, we can understand how people construct their lives and their lived experiences.⁶ Qualitative research asks the questions of ‘why’ in addition to ‘what’.^{7,8} This section presents how you can use these tools in practice.

Qualitative research for behavioral science entails a detailed process: targeting your questions of interest, gathering data in the field, and

6 Jackson II, R., Drummond, D., & Camara, S. (2007). *What is qualitative research?* *Qualitative Research Reports in Communication*, 8, 21- 28. Doi: 10.1080/17459430701617879.

7 Lindlof, T. R. & Taylor, B. C. (2011). *Qualitative communication research methods* (3rd ed.). Thousand Oaks, CA: Sage.

8 Aspers P, & Corte, U. (2019). *What is Qualitative in Qualitative Research?* *Qualitative Sociology*, 42(2):139-160. doi: 10.1007/s11133-019-9413-7.

synthesizing them into useful findings. We start by examining the process of targeting questions and gathering of data in the field, which is shown in Figure 3.⁹

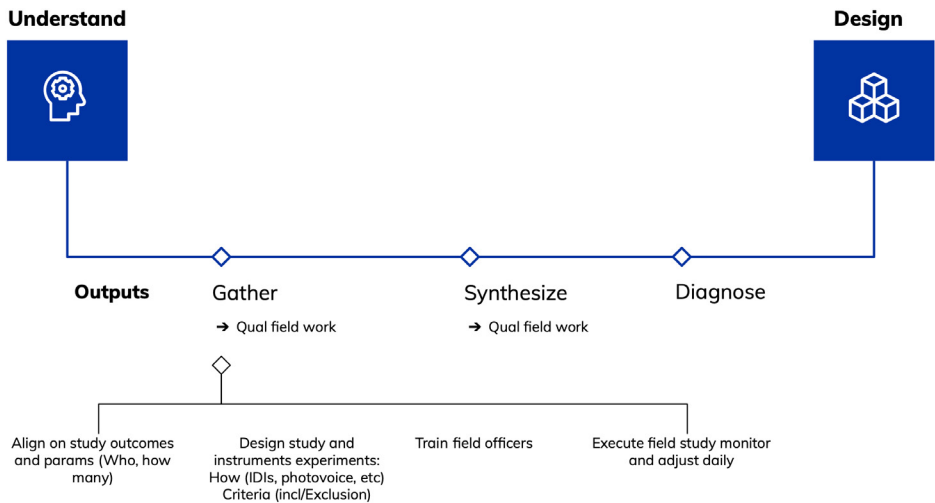


Figure 3: Detailed view of gathering data for qualitative fieldwork

⁹ We discuss tools for synthesizing qualitative research in Section 2.2.1.



To gain a contextual understanding of a situation, desk research and quantitative analysis can only take us so far. Many of the gaps in contextual knowledge (section 2.1.1) and the formative research questions (2.1.2) can only be answered through direct engagement with the community and their lives. Qualitative research provides decades of experience in how to do so thoughtfully and rigorously.

After developing the research goals, we take these goals and study parameters and create a qualitative analysis plan (QAP). QAP aims to promote integrity and clarity in the steps followed in data analysis.¹⁰ Here is an example of a [QAP template](#).¹¹

We select the right method or tool based on the context of the study. This includes factors such as the sensitivity of the topic, literacy level of participants, sampling method, and program funding.¹² For example, based on the context, in-depth interviews serve as a rapid and frequently employed tool. Photovoice, vignettes, and story completion are particularly effective for populations with limited literacy and for sensitive topics. Focus group discussions are good when looking for group similarities and differences

10 Moravcsik, A. (2019). Transparency in qualitative research. Sage Research Methods: London. <http://dx.doi.org/10.4135/9781526421036>

11 The qualitative analysis plan is adapted from Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Nursing Plus Open*, 2, 8-14. <https://doi.org/10.1016/j.npls.2016.01.001>.

12 Gentles, S. J., Charles, C., Ploeg, J., & McKibbin, K. (2015). Sampling in qualitative research: Insights from an overview of the methods literature. *The Qualitative Report*, 20(11), 1772-1789. <https://doi.org/10.46743/2160-3715/2015.2373>.

concerning a topic. Sometimes, we use games to make data collection fun and engaging. [Here](#) is an example of some qualitative games we have used in the past.¹³

Training field officers

We can think of the process of training field officers in three parts: our preparation, their training, and their iterative learning. To prepare, we first make sure the materials are ready. This includes note-taking sheets the data collection team can use in the field. Field notes are essential in qualitative research as they enable the interviewers to quickly reflect upon the respondents' views and adapt the interviews as necessary. See an example of note templates [here](#).¹⁴

In addition, we prepare for field officer training by ensuring that the instrument is translated into the language that the field officers and participants understand. Translating the instrument empowers them to describe their experiences easily and more vividly. This goes a long way in ensuring that the collected data are valid, rich, and reflective of the participants' experiences.

During the training, we start by thanking everyone for participating and introducing the purpose of the study. Then, explain to the field officers what

13 Busara and CSBC (2019) Family Planning Games: Unpublished.

14 Field notes template, Busara 2019: Unpublished.



qualitative research is, how to conduct qualitative research (e.g., how to build rapport with the participants), delve into the dos and don'ts of qualitative research, and eventually, pilot the instrument with a small sample before the primary data collection exercise to enhance the validity of the instrument and to check that the field officers are adequately prepared.

Remember: Always include more officers than you think you need in the training. Some will drop out or be unavailable for fieldwork.

2.1.5 Quantitative background analyses

We have two main sub-steps to gather quantitative contextual information: collecting the data itself and answering our formative questions with it.

Other authors cover gathering administrative data, cleaning it, and exploring it. Thus, we'll focus on particular behavioral science and development issues here, especially when gathering quantitative survey data.

Gathering survey data

Often, there are gaps in our background knowledge about the broad characteristics of a population and its sub-segments, and surveys are the only cost-effective way to fill those gaps.

15 Copper, S., & Perry, K. (2023). Survey design. Retrieved from <https://www.povertyactionlab.org/resource/survey-design>.

- **Survey design.** There are many useful guides to survey design available. [Here is one we like from JPAL](#).¹⁵
- **Validated measures.** Use established and validated measures better to understand the participants' current perceptions or behaviors whenever possible. Busara's manages the [Science of Behavior Change \(SOBC\)](#)¹⁶ Measure Repository, a searchable, living repository of hundreds of measures that are useful for behavior change research. Start there.

Answering formative questions

- **Quantitative segmentation:** Segmentation is dividing quantitative observations into 'meaningful' groups naturally occurring in the data. An important consideration here is to structure the questionnaire to give meaningful data. Busara has published [a guide](#) to creating questionnaires for segmentation.¹⁷
- **Descriptive statistics:** Using statistical tools like R or Stata, one can summarize the broader trends in data, use data visualizations to graph meaningful relationships, and understand our data to lay the groundwork for our future inferential analysis. [This document](#)^{18,19} contains some broad examples of the uses of descriptive statistics and data visualization.

16 Science of Behavior Change (SOBC) Measure Repository: https://measures.scienceofbehaviorchange.org/?measure_source=All&domains=All&behaviors=All&measurement_mode=All&validity_studies_uploaded=All&target_population=All&language=All&duration=All&data_base=All&page=1&page_size=10&data=&sort_by=popular.

17 Segmentation toolkit: Best practices. Busara, 2019.

18 Descriptive analysis toolkit, Busara, 2021.

19 The R graph gallery, Available at: <https://r-graph-gallery.com/index.html>.



At this stage, we are simply trying to understand the population better on a larger scale. This is typically referred to as descriptive statistics or non-causal quantitative methods. We will return to quantitative analysis to target and assess interventions in the Design and Assess phases.

2.2: Synthesize information into insights

Remember the start of our “gather the data you need” phase? The Gather and Synthesize phases begin with your formative research questions: what do we want to know about the context? As you synthesize the results, the main focus of your synthesis should be the specific formative research questions (gaps in contextual knowledge, potential causes of the problem, existing solutions, stakeholders and relationships, reactions, and adaptations). You may find other results “that just happen to be interesting,” but those should usually be given second priority.

2.2.1 Synthesize qualitative data

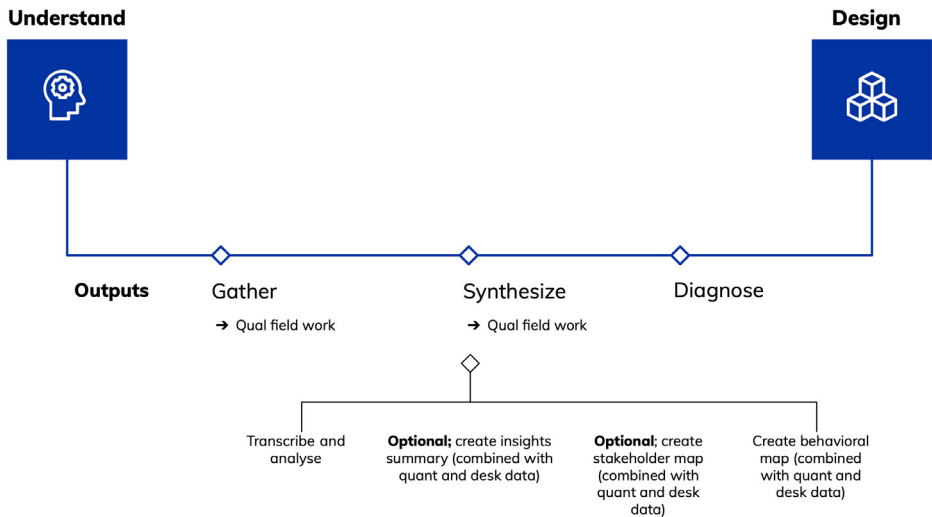


Figure 4: Detailed overview of the process of using generated insights to inform design synthesis

After data is collected (e.g., through in-depth interviews, focus group discussion, story completion, etc.), the next step is to analyze them to see the patterns and themes that emerge.²⁰ The data from qualitative fieldwork

²⁰ Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.



is often voluminous – detailed, semi-structured information about people’s responses and lives. To draw practical insights from qualitative data, we transcribe, analyze, summarize, and then (along with quantitative data) potentially create stakeholder and behavioral maps.

Transcribing and analyzing qualitative data

Each interview is transcribed into a transcript that clearly shows the input of the interviewer and the respondent. This can be done with AI tools, but a trained person from the local context is ideal, especially when learning uncommon languages and themes.

We then analyze data from the transcripts using the methods identified in your PAP (e.g., thematic analysis, narrative analysis, grounded theory, content analysis, etc). Often, data from interviews can be analyzed using the thematic analysis technique, which involves analyzing and reporting patterns within data, but other tools can better fit the need.^{21,22} The interviews are then coded to establish concepts, examples, and themes that address the research questions.²³

21 Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.

22 Braun V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3, 77-101. doi: 10.1191/1478088706qp063oa.

23 Lune, H. & Berg, B. (2017). *Qualitative Research Methods for the Social Sciences* (9 ed). UK: Pearson Education.

We then interpret the themes from the findings and use them to address the research questions under study. This involves synthesizing the findings into a report that ties the themes to the research questions of the survey. There is often a temptation in qualitative research to share all that we learn in the field. Start with the actual questions from the PAP: what we sought to answer. Then, provide meaning and structure around the unexpected.

Throughout the process, remember the focus of qualitative research is on the transferability of findings rather than the generalizability of the findings to a population.²⁴ Thus, the depth and richness of data matter more than concerns over causality, effect sizes, sample size, etc., which are common behavioral science standards. It does not emphasize a focus on numbers, treatments, and/or manipulation of variables as is the case in behavioral science.

The end products of qualitative research usually include:

- A qualitative report with key findings from the analysis.
- A behavioral map that guides the design of interventions.
- A Journey map indicating the steps that an end user will follow (for a new product or desired behavior).

24 Lune, H. & Berg, B. (2017). *Qualitative research methods for the social sciences* (9 ed). UK: Pearson Education.



The behavioral and journey maps can be done through qualitative or quantitative data (or a mix of both). We cover those deliverables in the next section.

2.2.2 Build a behavioral map

One of the key lessons of behavioral science is that the details matter - in a specific moment, in a specific context, the decision-making environment can strongly affect what a person chooses and does. A behavioral map analyzes the particular “micro-behaviors” that lead up to the big behavior and outcome of interest: it helps us identify which details matter, why, and what to do about them.²⁵

The process of creating a behavioral map is straightforward:

1. Identify the specific situation of interest: who is there, and what are they ‘normally’ doing?
2. Write down each micro-behaviors (each small physical action) that the person would take from what they are ‘normally’ doing to what you consider ‘success’.
 - a. For example, if your goal is handwashing before a restaurant meal, it might be: enter the restaurant, find a place to sit, sit, see a hand-washing station, walk up to the station, use soap, turn on the water, wash hands for 30 seconds, turn off.

25 Ng, C. F. (2016). Behavioral mapping and tracing. In R. Gifford (Ed.), *Research methods for environmental psychology* (pp. 29–52). Wiley.

- b. Micro-behaviors are not mental states: we don't include things like "person DECIDES to wash hands." Why? A conscious decision is only one of the pathways to action. Habits don't involve conscious decisions; neither do most semi-conscious behaviors like food selection in regular eating.
3. After you've written it out, look over the list again. At each step, ask if there is anything else. Is there something in between this step and the next?

The behavioral map is our foundation for diagnosing behavioral obstacles (section 2.3.) We need the micro-behaviors because behavioral obstacles (and behavioral interventions) don't occur in general; they always happen in specific moments and settings; without a behavioral map, we tend to make overly general, vague interventions.

Here is an example from a Barbados project showing how parents would purchase local produce for their kids' meals.



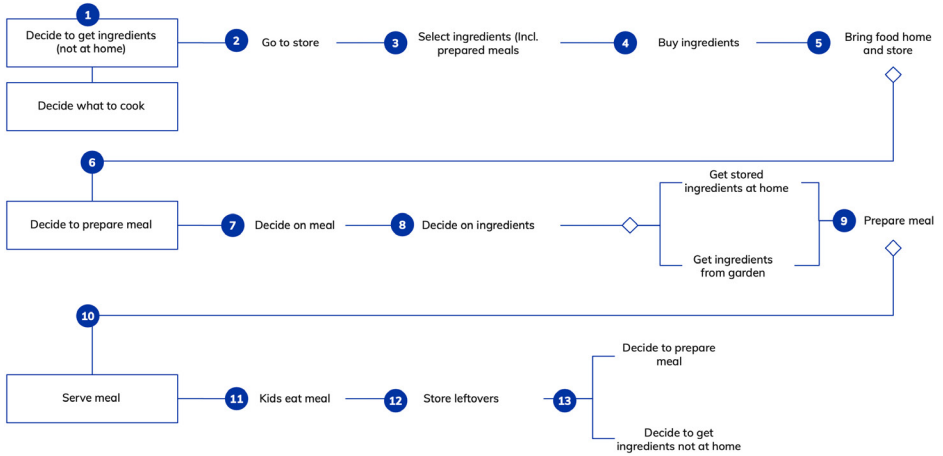


Figure 5: A sample behavioral map related to the purchase of local produce for children’s meals by parents in Barbados

The tools we use: Template for both the mapping and diagnosis stages.²⁶

26 Adapted from White A. & Matt R. T. (n.d). *Behavioral mapping and blueprinting cheat sheet A quick reference guide to creating behavioral maps and behavioral blueprints*. Retrieved from <https://advanced-hindsight.com/blog/introducing-the-behavioral-mapping-case-study-cheat-sheet/>

Variations on behavioral maps

At Busara, we take three different approaches to behavioral maps based on what we are trying to accomplish.

1. **Identify obstacles on a predetermined path.** This is what we do most often. In this case, the behavioral map describes what we want people to do, and we look for problems along the way. In our terminology, this is a “status quo only” map.
2. **Switch from a current behavior to a new one.** In this case, we have two versions of the map: the “status quo” and the “ideal path,” we compare them to find opportunities for change. This is especially relevant for qualitative research when we can explore hypotheticals with participants.
3. **Achieve an outcome, regardless of the behavior that drives it.** This is also known as the “practical engineer” route at Busara. In this case, we come up with ideas or approaches to achieve the outcome using a starfish diagram, then do a behavioral map for each approach. See the [Starfish tool](#) for a step-by-step guide.²⁷

Creating behavioral maps from quantitative data

We often have quantitative data about behavior within a digital environment - like a marketing website or product app. The client usually wants to know

²⁷ Busara. (2022). Process discovery: Using the starfish.



“why don’t more people do X”. For this, we use the behavioral map to identify obstacles on that predetermined path. The behavioral map is straightforward: each click is a micro-behavior, and the administrative data gives the dropoff at each stage, is also known as a (marketing) funnel in the marketing and tech product world.

Creating behavioral maps from qualitative insights

When we’re working with people in the field and trying to understand how to encourage a particular behavior, we can ask open-ended questions: “What would you do if you wanted to ...”. That is a significant improvement and allows us to better switch from a current behavior to a new one, using the two maps described above a status quo and an ideal path.

2.2.3 Develop a theory of change

The Understand phase is often used to form a theory of change: How, in theory, would this project fix the problem? To do so, we explain why and how the program should affect the outcome variables of interest. We then define the causal pathways of how the possible interventions should reach its goal. Throughout the rest of the project, we validate the theory of change created and update it with all the new information we get.

The most common approach in development is a linear theory of change: effectively, what we want to happen. A template for the theory of change

can be found [here](#),²⁸ but if you want to learn more about this topic, you can visit the [Center for Theory of Change](#) website for more resources. In section 2.4, we offer a non-linear, systems-based approach to understanding the dynamics at work in a given context and how our interventions could fit in.

2.3: Diagnose the behavioral challenge

For most of our work, we try to determine what stops people from taking a desired action (or causes them to take an undesired action) based on the contextual understanding we've gained earlier.

At Busara, we primarily use our “Barriers and Levers” tool, COM-B and the CREATE framework. Each case aims to identify whether and why people stop at a particular micro-behavior in your behavioral map. Often, neither the cause nor the solution is directly related to a cognitive bias or heuristic, which is a common misconception of behavioral science.

Specifically, the process is:

1. Make sure you have a clear behavioral map: a list of each individual's micro-behavior.

28 Innovation for Poverty Action (2016). *Guiding Your Program to Build a Theory of Change*. Retrieved from <https://poverty-action.org/sites/default/files/publications/Goldilocks-Deep-Dive-Guiding-Your-Program-to-Build-Theory-of-Change.pdf>.



2. Find the (likely) steps that are obstacles. If we work with a quantitative behavioral map, we look for the step(s) with the steepest drop-off in the data. If we use a qualitative field study, we compare the status quo to the ideal path to see where they diverge.
3. Then, drawing on your contextual understanding, evaluate the potential causes of the obstacle at that micro-behavior. Use your chosen framework, such as [Busara's Barriers and Levers](#),²⁹ [t](#),³⁰ or [CREATE](#).
4. When you find an issue - that is a potential problem (a diagnosis) of why people aren't taking the action.

Tip for the diagnosis process

1. *Psychological Barriers aren't necessarily biases. Often, we won't connect behavior to a specific bias at all – and that's ok.*
2. *Barriers have to be specific to the moment - to the micro-behavior. It's not about a "state of mind" or a "general feeling"; it's a barrier to a specific micro-behavior facing a particular person in a specific situation.*
3. *Not every step should have a barrier. We're looking for the most critical obstacles, not an exhaustive list of what "might be an issue."*

29 Adapted from White A. & Matt R. T. (n.d). *Behavioral mapping and blueprinting cheat sheet* A quick reference guide to creating behavioral maps and behavioral blueprints. Retrieved from <https://advanced-hindsight.com/blog/introducing-the-behavioral-mapping-case-study-cheat-sheet/>

30 Michie, S., van Stralen, M.M. & West, R. (2011) *The behaviour change wheel: A new method for characterising and designing behaviour change interventions*. *Implementation Science* 6 (42), 1- 11. <https://doi.org/10.1186/1748-5908-6-42>.

4. *Levers should come directly from your research - desk, qual, and quant. It's not an open ideation process. It's a way to apply your contextual knowledge of this specific situation.*
 5. *The prior stages are not optional. If you don't already have a clear behavioral map (with step-by-step micro-behaviors), everything after it, including Barriers and Levers, will be a vague mess. Similarly, it'll be a generic mess if you don't have a contextual understanding.*
-

The tools we use (summary):

- Barriers and Levers, by Busara³¹
- COM-B, by Michie et al.³²
- CREATE, by Stephen Wendel³³

31 Adapted from White A. & Matt R. T. (n.d). *Behavioral mapping and blueprinting cheat sheet A quick reference guide to creating behavioral maps and behavioral blueprints*. Retrieved from <https://advanced-hindsight.com/blog/introducing-the-behavioral-mapping-case-study-cheat-sheet/>

32 Michie, S., van Stralen, M.M. & West, R. (2011) *The behaviour change wheel: A new method for characterising and designing behaviour change interventions*. *Implementation Science* 6 (42), 1-11. <https://doi.org/10.1186/1748-5908-6-42>.

33 Wendel, S. (2020). *A toolkit on designing for behavior change. Applying psychology and behavioral economics* (2nd ed.). <http://behavioraltechnology.co/workbook>.



2.4: A systems view of opportunities for change

Commentary: Across international development, we find complex, interconnected problems. Given situational and cognitive constraints, people are embedded in local contexts that shape their behavior, and they make the best choices they can. Their actions then shape how the system behaves and the very choices that the individuals within it face, often in non-obvious ways. When these systems go awry, hurting the livelihoods and well-being of people within them or vulnerable populations, at Busara we call them broken behavioral systems.

Once we start looking, it is not hard to find these broken behavioral systems: they arise in everything from poverty traps and racial wealth inequality to corrosive norms of behavior on social media. Such systems change because people change, even in the face of structural problems. Sometimes, that means individual consumers or citizens make different choices. That means policymakers or engineers sometimes work to address the broader macroeconomic structure. Either way, behavior change is essential for systemic change. The challenge is finding the leverage points within the system and how to use them to shape the system for the good of all.

Resources to learn more:

- Busara's [summary of how and why](#)³⁴ we work with Behavioral Systems
- Our Detailed methodology in a [Busara Groundwork report](#).³⁵
- A compilation of [resources about the tools of systems analysis](#).³⁶
- The Behavioral Systems group hosted by the non-profit organization, Bescy. [Website and place to learn about its months events](#). [Online discussion group](#).

34 Busara. 2024. Behavioral Systems Positioning Piece.

35 Díaz Del Valle, E., Jang, C., Wendel, S. 2024. Behavioral systems: Combining behavioral science and systems analysis. Busara Groundwork (Genre - Research Agenda), No. 8. Nairobi: Busara.

36 Busara. 2024. Systems Analysis Resources.



Phase 3: Design behavioral solutions

Commentary: The design phase is notably enjoyable, in all honesty. It starts with a creative process—coming up with ideas—then we converge through refinement and prototyping in the field. We iterate until we're satisfied and then move to a full implementation.

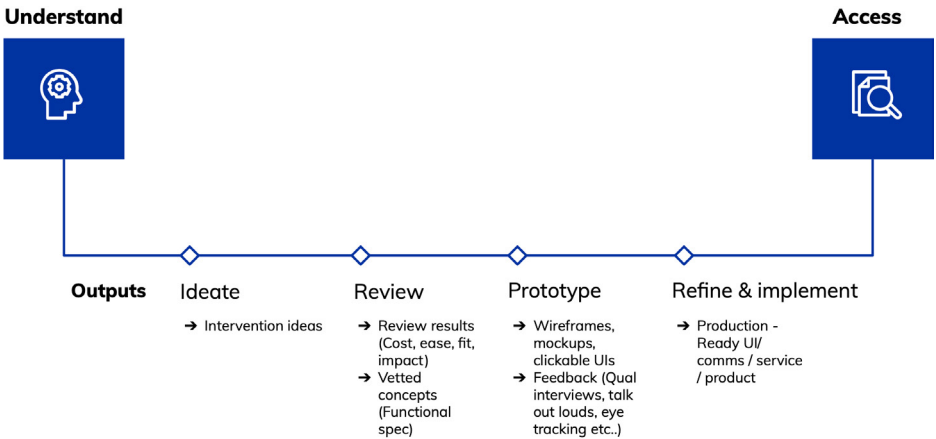


Figure 6: An overview of the steps of design synthesis from ideation to refinement/implementation

3.1 Ideate – come up with intervention ideas

Commentary: Behavioral solutions and interventions help our end users/target audiences to overcome barriers identified during the “Understand” phase. To develop these solutions and interventions, we start with a divergent idea generation process.

There are two main challenges during the ideation phase. First, there’s a big temptation at Busara and elsewhere in the field to use a favorite technique like Social Norms without digging into the details of the context and whether that intervention is appropriate. We don’t want to blindly apply techniques we’re excited about or appear to have worked elsewhere.

The second challenge is a related one: often, people come up with an intervention that is about a high-level behavioral goal (“encourage people to eat healthy food”) and not rooted in the specific micro-behaviors involved (“overcome the habit of shopping in the same convenience store so that people can be healthier food”). We tend to forget the detailed insights from our field research when designing the intervention itself!

The solution in both cases is context: keep the particular behavioral context in mind when developing interventions - the people, the time, the environment at that moment, the specific micro-behavior that’s a problem.



The tools we use: Here are tools you can use, rooted in the local context (person + place time + activity), to develop intervention ideas:

- We already identified the levers that can work around or overcome the barrier during diagnosis. These are ideas that come directly from the research.
- Specific prior research we've discovered for that micro-behavior and barrier during our **desk review**.
- Specific suggestions came from prior **qualitative research or new co-design sessions** about microbehavior and barriers.
- Our lookup table matches prior techniques in the literature to types of barriers. Each central framework (Busara's Barriers and Levers, COM-B CREATE) has an associated "lookup table" of appropriate interventions.
- **We come up with other creative ideas** – but **ONLY** for that specific situation and barrier.

At this stage, all intervention ideas are equally wrong until shown otherwise by field data. And yes, we mean wrong (not correct): since that should always be our assumption. However, some ideas are less likely to be wrong: the ideas are based on our contextual understanding of the problem.

In addition, we don't try to filter or judge the ideas (that come next). However, we try to focus the process on the particular problems that our population faces. In other words, we don't look for interventions "in general" – we look for specific changes at specific points in the behavioral maps where we found obstacles. If we don't focus on the process, we get a mishmash of popular

ideas: unrelated to the local context. Thus, we should prioritize developing ideas from the particular barriers identified during the prior step and convert them into design questions to generate solutions.

Resources to learn more:

- [Barriers and Levers reference table](#)³⁷
- [COM-B reference table](#)
- [CREATE Reference Table](#)
- The Human Behaviour Project's behavior change [Theory and Technique Tool](#)³⁸

3.2 Review – winnowing them down

With a set of ideas, what do we do with them? We use a convergent process to vet the ideas regarding ease, impact, cost, and fit. All of this is made possible by our contextual understanding from phase 2.

37 Barriers & Levers framework, Busara 2021.

38 The Human Behaviour Project. *The Behaviour Change Theory and Technique Tool*. Available at <https://theoryandtechniquetool.humanbehaviourchange.org/>



For each intervention, we'll assess it on a scale of 1 through 5, according to the degree to which you agree with the following:

- 1. Cost (of creating the intervention):** Will it be a relatively inexpensive use of your organization's resources to deploy the intervention? 5 = cheap/easy; 1 = hard/expensive.
- 2. Ease (of behavior change).** If you deploy the intervention, how likely will it change the immediate behavior you seek i.e. how difficult is it for the end user to act on the requested behavioral change? 5=very easy; 1=very difficult.
- 3. Impact (of behavior change on outcome):** If you deploy the intervention and people change their behavior, how much of an impact do you expect it will have on the real-world outcome that we care about? For example, if you could successfully change data entry procedures at a hospital (targeted behavior change), how much would that impact patients' quality of care (outcome of interest)?
- 4. Measurability:** If we deploy the intervention, can we readily and accurately measure the impact of that intervention to know whether or not it worked?
- 5. Fit (with the culture of Busara and the client):** Does implementing the intervention (and the behavior change it encourages) make sense for Busara's and the client's larger goals and culture?






	INTERVENTION 1	INTERVENTION 2	INTERVENTION 3
 Cost			
 Ease			
 Impact			
 Measurability			
 Fit			
Total			

Figure 7: The prototype scoring template card

Other criteria you may find useful are:

- What is the expected reach of the intervention - to what extent will it be noticed/used by the targeted community members?
- What is the level of engagement (i.e., touchpoint, two-way) offered by this intervention?
- What is the scalability offered by the intervention across the target audience and areas?
- What is the level of accessibility (i.e., physical, comprehension) offered for the target population?
- What is the likelihood of this intervention changing the behavior of broader communities beyond the individuals targeted?



3.3 Prototype – try them out for real

Prototyping is an iterative process in which you test and get feedback on your ideas before rolling them out to users. Once you have potential intervention(s), you can take them to the prototyping stage. Prototypes are standard tools in the design community; we don't need to repeat those tools here. Instead, check out sources such as [Ideo.org's Design Kit](#)³⁹ and [Ideo.org's downloadable field guide](#)⁴⁰ for existing worksheets and instructions.

When prototyping behavioral interventions, there are a few special considerations.

- Unlike many user interface designs, behavioral interventions usually have a specific, research-backed mechanism and target behavior. It is vital to test that mechanism and behavior.
- As much as possible, see if you can observe the behavior rather than ask them about it. Do they click on the relevant button, for example?
- To support these goals, build a specific learning plan for each prototype - it should align closely with your original project brief and the behavioral hypotheses developed earlier.

39 Ideo.org (n.d). *Design Kit: Determining What to Prototype*. Available at: <https://www.designkit.org/methods/determine-what-to-prototype.html>

40 Ideo.org (n.d). *The Field Guide to Human-Centered Design*. Available at <https://www.designkit.org/resources/1.html>

One tool we use at Busara to guide this process is shown below; it helps you highlight why your intervention is needed and what it is solving for. This enables you to get clear on why we're proposing an intervention, how it will work (channels, messengers, approach), and what prototypes will be built from it, leveraging underlying behavioral mechanisms.

Name of Intervention	INSIGHTS What are the key insights that the intervention relies on? What did we hear / see and learn?	BEHAVIORAL MECHANISMS TO BE LEVERAGED What are the underlying mechanisms that the intervention relies on?
HYPOTHESIS What do we think will be the outcome of the intervention	INTERVENTION IDEA How will the intervention be design? What are the details of the intervention? How does it work?.	
TARGET POPULATION Who is the intervention targeting? Which individuals perception do we want to change?	BEHAVIORAL OUTCOME What is the key outcome / measure of this intervention?	
BARRIERS What are the key barriers that the intervention is solving for?	CHANNEL / MESSENGER Who or what will be used for the intervention?	
	PROTOTYPE What will comms be building? How will the intervention be designed? What form does it take?	

Figure 8: Prototype/
concept card template



3.4 Refine and implement

Each prototype ends with feedback from your stakeholders – the clients and, ideally, the end user. As time and budget allow, you repeat this process to make designs everyone is happy with. On some projects, we stop there and hand the entire implementation to another company that specializes in mass media advertising, software design, etc. In other cases, the client wants us to be the implementor.

Phase 4: Assess and iterate

Evidence is needed before broad implementation—so we often like to run a formal test of an initial implementation (high-fidelity prototype) with our audience. We should expect that the result isn't perfect the first time either: and so iteration and learning are an integral part of the process.

Once we have an implementation of the design we're happy with, then we combine qualitative and quantitative methods to more rigorously assess the impact of the intervention. In particular, the assess phase seeks to answer either one or all of the questions below:

1. **What** is the impact of an intervention? (Absolute)
2. **Which** is the best intervention to implement? (Comparative)
3. **For whom** is the intervention impactful? (Conditional or by segment)

This phase is also commonly referred to as the **testing phase**.



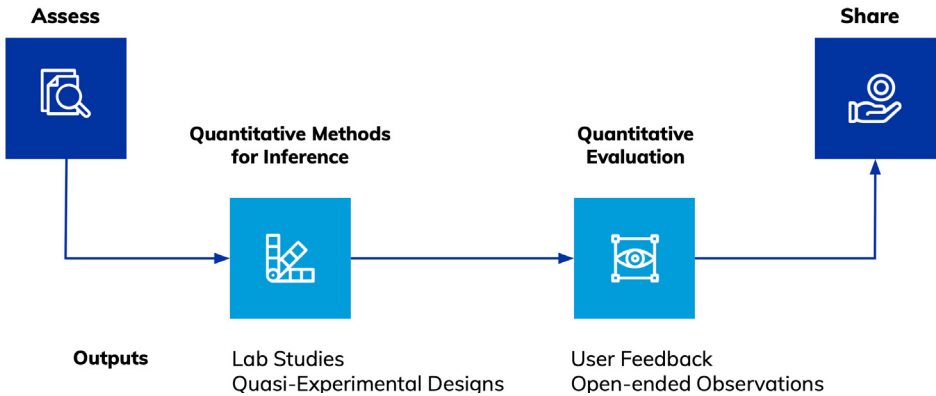


Figure 9: Description of the process of testing and sharing interventions

4.1 Quantitative methods for inference

The methods of quantitative assessment at Busara differ around three main questions: where do we collect data (controlled or uncontrolled environment), how do we collect data (administrative, self-report survey, enumerated), and how we assess impact (experimental versus non-experimental).

The **“how we assess”** question is the one that we often spend the most time on at Busara. To quantitatively assess the impact of an intervention, we have two main options:

1. **Randomized Controlled Trials (RCTs):** This is a type of experimental design where participants are randomly assigned to intervention groups or a control group. The intervention group receives the treatment being studied, while the control group does not.
2. **Quasi-experimental design:** This is a design that is similar to an RCT, but participants are not randomly assigned to groups. Instead, researchers select groups that are similar in certain characteristics, such as age or gender. This type of design is often used when it is impractical to randomize participants. Examples are highlighted below in Section 4.1.2.

In both cases, our assessment can occur in **three different types of environment:**

1. **Lab studies:** These take place in a fixed controlled setting and usually examine the effects of specific variables in isolation.
2. **Field studies:** These usually take place in natural settings, such as homes or public spaces and are usually conducted to examine the effects of real-world conditions on behavior. They are however not easily replicable because the conditions cannot be more precisely controlled.
3. **Lab-in-the field studies:** These combine both field and lab studies, as the name suggests. Lab equipment is brought to natural settings to conduct experiments in the real world. Some examples of lab in the field studies include conducting cognitive psychology experiments in a school classroom, conducting behavioral economics experiments in a market, or conducting medical interventions in a community health clinic.



Finally, we use the following tools for **how we collect** data:

1. **“Administrative” data** - automatically collected data, usually about specific behaviors. This is ideal, as it is generally the highest quality. We gather it by drawing from the underlying database (or data store) that keeps it. For example: clicks on a webpage.
2. **Observed data** - we collect it by observing people. For example, the number of people our enumerators see picking a healthy meal at lunch versus an unhealthy one.
3. **Self-reported data** - often via a survey, people provide an answer for themselves. For example, answering a survey question on whether or not they had a healthy lunch that day.

These can provide outcome metrics; they are also the same tools we use during the ‘Understand’ phase - just for a different purpose. Now, let’s dive into more detail on selected aspects of this quantitative assessment, starting with RCTs.

4.1.1 Approach 1: Randomized control trials

Absolute impact: RCT with a null control

Step 1 - Define the outcome of interest: To make sure everything is clear regarding the results of an evaluation. It is essential to highlight the program/intervention being evaluated and the outcome variable of interest.⁴¹

41 Busara (2024) Designing your own experiment: What to measure? And how?, Internal document: Unpublished.

Step 2 - Design experiment: With the outcome of interest and theory of change in place, now design the experiment. See [here](#)⁴² for some guidelines for basic experiment design and types of experiments.

Step 3 - Assess the validity of the experiment: This includes:

1. How accurately will changes in the outcome reflect the effect of the intervention (internal validity- is the experiment measuring the effect of the intervention).
2. How likely it is that these results will provide accurate information on how similar interventions would perform in different contexts at different times.(external validity- the generalizability of the experiment findings to the population of interest).

You can find more information on bias and validity in outcome measures [here](#).⁴³

Step 4 - Sample size, sample design and statistical power: The power of a statistical test is the probability that the test will reject the null hypothesis when it is false. In the context of an experiment, the hypothesis test is a test of whether the treatment group mean equals the control group mean, which is a test for whether the average treatment effect is zero. [Here](#)⁴⁴ is some guidance on sample power.

42 Busara (2024) Casualty, correlation and what to do about it. Internal document: Unpublished.

43 Busara (2024) Reliability, bias and validity. Internal document: Unpublished.

44 Busara (2024) Piecing together causal inference. Internal document: Unpublished.



Step 5 - Testing in action: Setting up the study covers all study implementation related tasks from reaching out to support teams like labs / softwards etc. to creating an analysis plan.

- Create a study protocol to guide the study design. This [template](#) gives an example protocol for a lab study.⁴⁵
 - You may need to involve the labs, software or technical vertical teams at this step.
- Create an analysis plan. A conceptual one like [this](#)⁴⁶ would serve as a good starting point. The OSF also provides [guidelines](#)⁴⁷ by IPA and J-PAL, which should be followed for research intended for publication.

Resources for more information:

- Busara Research Labs Guidance on Behavioral Games, [here](#).
- Textbooks: Glewwe, Paul; Todd, Petra. 2022. *Impact Evaluation in International Development: Theory, Methods and Practice*. © Washington, DC: World Bank. <http://hdl.handle.net/10986/37152> License: CC BY 3.0 IGO. (World Bank Open Knowledge Resource, see [here](#)).

45 Busara (2024). *Template for a study protocol*. Available at https://docs.google.com/document/d/101aeKP_yYnag2_xFyBuGisCpGDQG0MdsOb8u2EJ04q3A/edit.

46 Busara (2024). *Sample Pre-Analysis Plan Template*. Available at https://docs.google.com/spreadsheets/d/1Rv_Ar4YCFN4dsM6y3eH4JUeTN5SMR0OSDbi_zwASzvc/edit#gid=130892285.

47 Chuang E., & Wykstra S. (2015). *A guide to pre-analysis plans*. Innovations for Poverty Action. Available at <https://osf.io/sh4v8/download>.

- Textbook: Seltman, H. J. (2012). *Experimental design and analysis*. (Intended by the author as a companion resource for their course at Carnegie Mellon University - see Preface. Available from the CMU [website](#)).

4.1.2 Approach 2: Quasi-experimental methods

Difference-in-difference (DiD):

This is particularly useful when it is not feasible or ethical to conduct a randomized experiment. Here, we compare the change in outcomes between two groups over time, one of which received the treatment or intervention (treatment group) and the other did not (control group). The difference in the change in outcomes between the two groups is then used to estimate the effect of the treatment or intervention. To learn more, World Bank DIME presents a brief [outline](#).⁴⁸

Regression discontinuity (RD):

This is used to estimate causal effects by exploiting naturally occurring “discontinuities” in the relationship between an outcome and a continuous variable. RD is appropriate when a treatment or intervention is assigned based on a threshold or cutoff value of a continuous variable. To learn more, read the World Bank DIME [description](#).⁴⁹

48 World Bank: Dimewiki. *Difference-in-differences*. Available at <https://dimewiki.worldbank.org/Difference-in-Differences>.

49 World Bank: Dimewiki. *Regression Discontinuity*. Available at https://dimewiki.worldbank.org/Regression_Discontinuity.



Propensity score matching:

This is used to estimate causal effects by exploiting naturally occurring “discontinuities” in the relationship between an outcome and a continuous variable. RD is appropriate when a treatment or intervention is assigned based on a threshold or cutoff value of a continuous variable. To learn more, you can refer to the [introduction](#) from World Bank DIME.

Instrumental Variable:

An Instrumental Variable (IV) is used to control for confounding and measurement errors in observational studies so that causal inferences can be made. Suppose X and Y are the independent and dependent variables of interest, and we can observe their relation to a third variable, Z. Let Z be associated with X. Still, not associated with Y except through its association with X. Here, Z is called an instrumental variable (IV) or instrument. An IV is a factor associated with the dependent variable but not with the outcome variable. For example, the price of beer can affect the likelihood of drinking beer in expectant mothers, but there is no reason to believe that it directly affects the child’s birth weight. In practice, instrumental variables are tough to find and justify.

[This](#)⁵⁰ resource from Mailman School of Public Health, Columbia University, introduces Introduction Variables and some other resources.

⁵⁰ *Instrumental Variables Resource*. Available at: <https://www.publichealth.columbia.edu/research/population-health-methods/instrumental-variables>.

4.2 Qualitative open-ended observations

Qualitative testing can augment the quantitative approach discussed above. While, for instance, we might use an experimental approach to know which interventions are most effective, using qualitative methods can help us to probe deeper into the nuances of why an intervention is more effective than others.

The qualitative techniques (e.g., focus group discussions, in-depth interviews, etc) that can be used during testing are similar to those used in the Understand phase (Section 2).



Phase 5: Share our learnings

The Assessment process helps us understand the events, their beneficiaries, and, when feasible, their underlying causation. In the sharing phase, we consolidate our data into insights and share them with our diverse audiences. In particular, we connect our results to our stakeholders' questions and goals to make them meaningful and valuable.

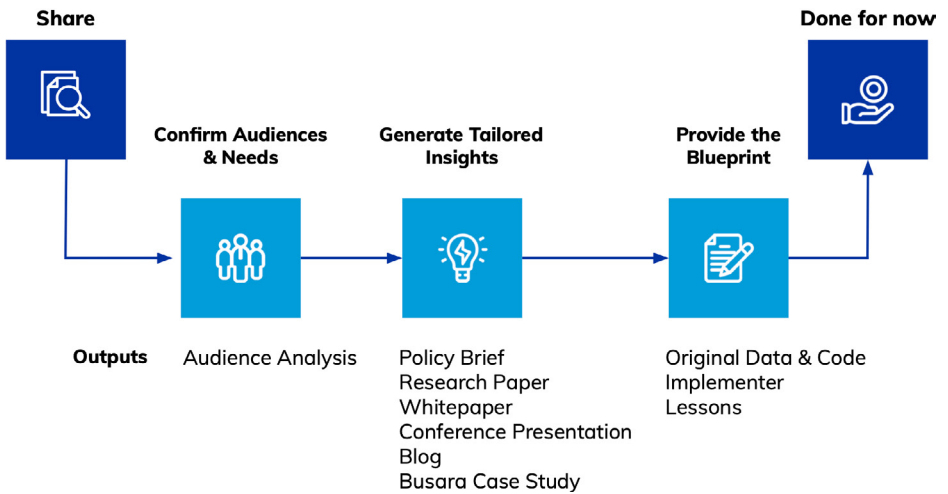


Figure 10: An overview of the Share phase

5.1 Confirm audience and needs

It would seem evident that clients and other stakeholders want to know the project's results. In reality, often they don't. Instead, they want answers to their questions: the results and the project itself are merely a means to gather the raw material needed to create those answers. Those questions (and thus the answers that matter) differ by audience.

Thus, our first step is to confirm our audience and their needs. We confirm rather than discover since we should have already identified our client's primary audience as part of our initial project brief in the Align phase. We should have similarly captured them, and our core questions in our Pre-Analysis-Plans. However, sometimes things change: we find new audiences for the findings or their goals change. Hence, we confirm and correct our understanding as appropriate.

In particular, for each audience, we want to know:

1. What specifically do they want to know?
2. Why? How do they intend to use the insights?
3. What format do they want it in?

The project's funder is one of the audiences. There are usually at least two more: participants in the project and our staff. It is the responsibility of every project to give back to participants, in addition to gathering data from and about them. A simple community meeting, or digital distribution



(where applicable) is a good step. Asking participants what is most useful and important to them is even better. For staff members, often their needs are quite different: where do we find the code and results, how can we build on them, and what does this mean for other projects?

Where possible, we should also investigate if the results can be shared with the broader research community through an academic publication, or a repository of studies such as the Behavioral Evidence Hub.⁵¹ For findings of particular broad relevance, ask whether there are specific media outlets and their viewers/readers who might be interested, both traditional media (TV, newspaper) and newer media (podcasts, LinkedIn, Medium).

Sharing with internal staff

Just like with a client audience, we have multiple purposes and audiences within an organization:

1. People who apply for grants in the future, and need to know what has already been done.
2. People who want to know if an organization has worked with a partner before, and how it went.
3. People who want to build on the research, perhaps replicate it or run additional analyses. For them, keep **all project files** in the appropriate project folder.
4. For the analysis code, which can be on Github repository.

51 The Behavioral Evidence Hub. Available at <https://www.bhub.org/>

5. Teammates who may want to learn about the mechanics of the project and how the project functioned.
6. You can use a set of questions below on how to run a post-mortem within the team.

What went well?	What can be improved?	How can we transfer these lessons to other projects?
<i>Reflect on processes e.g. data collection</i>	<i>If something in the process was a challenge, how can it be improved?</i>	<i>How can these lessons help us to improve processes? e.g. better training of data collectors, client engagement, etc</i>
<i>Reflect on client management e.g. Did we meet their expectations for us?</i>	<i>What did we learn from this project?</i>	
<i>Reflect on the quality of deliverables</i>		
<i>Reflect on team dynamics</i>		

Figure 11: Documenting lessons from a project cycle

5.2 Generate tailored insights

These audience-specific questions drive the insights: start by simply answering their questions, in their requested format. There is no single, standard report format nor content that goes into it. Our report to the



client should not be a detailed explanation of the analyses we ran and the statistical (or qualitative) results - unless the client specifically asks for that, which is rare!

Instead, we return to the beginning of the project: why did the client want to do this project? How do they intend to use it? That gives us an initial sense of what they need. Then, we go back to them and confirm or adapt the plan. For example, the client may need:

1. A five page beautifully designed piece to share with their funder. No stats, only lessons.
2. A detailed “how to” write up for an implementing team—with tips on what can go wrong, based on our experiences.
3. A journal-publication-ready academic writeup of the research and its full results.

Please, avoid the temptation to “just write the report”; ask them first what they want. That can save countless hours of unproductive writing. Often what the client wants is much shorter and easier than a ‘detailed writeup of the results’.

5.3 Provide the blueprint

At Busara, we are committed to Open Science: our work should be public and replicable whenever possible. Some funders restrict this, but we are

increasingly moving to a default stance that the data and code should be publically available.

Sharing the blueprint for others to replicate includes:

1. The pre-analysis plan and pre-registered hypotheses.
2. The original, underlying data. Not just processed results.
3. The code used to analyze the data.

In addition, we think of the blueprint as the lessons that others can build on. This overlaps with “Generating Tailored Insights”, but with a distinct goal: to help others improve on what we’ve done. In particular, we also want to share lessons for implementers and researchers: what went wrong or was unexpected? How did we adapt the process to make it effective in a particular context?



Conclusion

We hope you find this toolkit useful in your work. Busara works with researchers and organizations to advance and apply behavioral science in pursuit of poverty alleviation. Thus, we are sharing this as an open source resource to interested researchers and practitioners for use in their work. However, make sure you properly credit us in your use. We would also welcome your feedback via contact@busara.global.

References

1. Aston, B. (2024, February 21). 24 Project management books you need to read in 2024. *The Digital Project Manager*. <https://thedigitalprojectmanager.com/personal/personal-growth/project-management-books/>
2. Aspers P, & Corte, U. (2019). What is Qualitative in Qualitative Research? *Qualitative Sociology*, 42(2):139-160. doi: 10.1007/s11133-019-9413-7.
3. Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Nursing Plus Open*, 2, 8-14. <https://doi.org/10.1016/j.npls.2016.01.001>.
4. Busara. (2021). *Barriers and levers framework*, Internal documents: Unpublished.
5. Busara. (2024) *Casualty, correlation and what to do about it?* Internal documents: Unpublished.
6. Busara. (2021). *Descriptive analysis toolkit*. Internal documents: Unpublished.
7. Busara. (2024) *Designing your own experiment: What to measure? And how?* Internal documents: Unpublished.
8. Busara. (2019) *Field notes template*. Internal documents: Unpublished.
9. Busara. (2024). *Piecing together causal inference*. Internal documents: Unpublished.
10. Busara. (2022). *Process discovery: Using the starfish*. Internal documents: Unpublished.
11. Busara. (2024). *Reliability, bias and validity*. Internal documents: Unpublished.
12. Busara. (2024). *Sample Pre-Analysis Plan Template*. Available at https://docs.google.com/spreadsheets/d/1Rv_Ar4YCFN4dsM6y3eH4JUeTN5SMR0OSDbi_zwASzvc/edit#gid=130892285.
13. Busara. (2019) *Segmentation toolkit: Best practices*. Internal documents: Unpublished.
14. Busara. (2024). *Systems Analysis Resources*. Internal documents: Unpublished.
15. Busara. (2024). *Template for a study protocol*. Available at https://docs.google.com/document/d/101aeKP_yYnag2_xFyBuGisCpGDQG0MdOb8u2EJ04q3A/edit.
16. Busara & CSBC. (2019). *Family Planning Games*. Busara Internal documents: Unpublished.



17. Braun V., & Clarke, V. (2006). *Using thematic analysis in psychology*. *Qualitative Research in Psychology*, 3, 77-101. doi: 10.1191/1478088706qp063oa.
18. Chuang, E., & Wykstra, S. (2015). *A guide to pre-analysis plans*. *Innovations for Poverty Action*. Available at <https://osf.io/sh4v8/download>.
19. Copper, S., & Perry, K. (2023). *Survey design*. Retrieved from <https://www.povertyactionlab.org/resource/survey-design>.
20. Columbia University Mailman School of Public Health. *Instrumental Variables Resource*. Available at: <https://www.publichealth.columbia.edu/research/population-health-methods/instrumental-variables>.
21. Diaz Del Valle, E., Jang, C., & Wendel, S. (2024). *Behavioral systems: Combining behavioral science and systems analysis*. Busara Groundwork (Research Agenda), No. 8. Nairobi: Busara.
22. Gentles, S. J., Charles, C., Ploeg, J., & McKibbin, K. (2015). *Sampling in qualitative research: Insights from an overview of the methods literature*. *The Qualitative Report*, 20(11), 1772-1789. <https://doi.org/10.46743/2160-3715/2015.2373>.
23. Ideo.org (n.d). *The field guide to human-centered design*. Available at <https://www.designkit.org/resources/1.html>.
24. Innovation for Poverty Action (2016). *Guiding your program to build a theory of change*. Retrieved from <https://poverty-action.org/sites/default/files/publications/Goldilocks-Deep-Dive-Guiding-Your-Program-to-Build-Theory-of-Change.pdf>.
25. Jackson II, R., Drummond, D., & Camara, S. (2007). *What is qualitative research?* *Qualitative Research Reports in Communication*, 8, 21- 28. Doi: 10.1080/17459430701617879.
26. Lindlof, T. R, & Taylor, B. C. (2011). *Qualitative communication research methods* (3rd ed.). Thousand Oaks, CA: Sage.
27. Lune, H. & Berg, B. (2017). *Qualitative Research Methods for the Social Sciences* (9 ed). UK: Pearson Education.
28. Michie, S., van Stralen, M.M. & West, R. (2011) *The behaviour change wheel: A*

- new method for characterising and designing behaviour change interventions. *Implementation Science* 6 (42), 1-11. <https://doi.org/10.1186/1748-5908-6-42>.
29. Moravcsik, A. (2019). *Transparency in qualitative research*. Sage Research Methods: London. <http://dx.doi.org/10.4135/9781526421036>.
 30. Ng, C. F. (2016). Behavioral mapping and tracing. In R. Gifford (Ed.), *Research methods for environmental psychology* (pp. 29–52). Wiley.
 31. Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage.
 32. Science of Behavior Change (SOBC) Measure Repository (n.d). https://measures.scienceofbehaviorchange.org/?measure_source=All&domains=All&behaviors=All&measurement_mode=All&validity_studies_uploaded=All&target_population=All&language=All&duration=All&database=All&page=1&page_size=10&data=&sort_by=popular.
 33. The Human Behaviour Project (n.d). The behaviour change theory and technique tool. Available at <https://theoryandtechniquetool.humanbehaviourchange.org/>
 34. The Management Center. (2022). Clarifying responsibilities with MOCHA - The Management Center. <https://www.managementcenter.org/resources/assigning-responsibilities/>
 35. Wendel, S. (2020). *A toolkit on designing for behavior change. Applying psychology and behavioral economics* (2nd ed.). <http://behavioraltechnology.co/workbook>.
 36. White A. & Matt R. T. (n.d). Behavioral mapping and blueprinting cheat sheet. A quick reference guide to creating behavioral maps and behavioral blueprints. Retrieved from <https://advanced-hindsight.com/blog/introducing-the-behavioral-mapping-case-study-cheat-sheet/>
 37. World Bank (n.d). Dimewiki. Difference-in-differences. Available at <https://dimewiki.worldbank.org/Difference-in-Differences>.
 38. World Bank (n.d). Dimewiki. Regression discontinuity. Available at https://dimewiki.worldbank.org/Regression_Discontinuity.



About Busara

Busara is a research and advisory organization, working with researchers and organizations to advance and apply behavioral science in pursuit of poverty alleviation. Busara pursues a future where global human development activities respond to people's lived experience; value knowledge generated in the context it is applied; and promote culturally appropriate and inclusive practices. To accomplish this, we practice and promote behavioral science in ways that center and value the perspectives of respondents; expand the practice of research where it is applied; and build networks, processes, and tools that increase the competence of practitioners and researchers.

About Busara Groundwork

Busara Groundwork lays the groundwork for future research and program design. As think pieces, they examine the current state of knowledge and what is needed to advance it, frame important issues with a behavioral perspective, or put forward background information on a specific context.

How to cite:

Jang, Chaning; Koki, Edel; Nyaga, Robert; Okafor, Arize; Singh, Jaspreet; Vang, Aya; Wendel, Steve. *The Busara toolkit: leveraging behavioral science for development*. Busara Groundwork No. 10 (Research Agenda). Nairobi: Busara, 2024. DOI: doi.org/10.62372/WQSB6195

38 Apple Cross Road,
Lavington, Nairobi, Kenya
www.busara.global

