Busara Groundwork

THOUGHT PIECE

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What is rigorous qualitative research in behavioral science?

THOUGHT PIECE

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Abbreviations and acronyms

AUDAS Align, Understand, Design, Assess, Share

PAR participatory action research

QAP qualitative analysis plan

What is rigorous qualitative research in behavioral science?

Introduction

Research remains at the core of international development and is often utilized to inform many aspects of development, such as program design and monitoring and evaluation. However, while much is known about quantitative and experimental research approaches and their applications in the development sphere, less is known about the contribution of qualitative research, especially in behavioral science.

Rigorous qualitative research in behavioral science guides the understanding of the intricacies of human behavior, motivations, and experiences. It transcends mere observation, and delves into the depths of individual experiences and socio-cultural nuances. Through replicable research design, transparent data collection processes, and systematic analysis, rigorous qualitative research endeavors to unearth rich insights that quantitative and experimental approaches alone cannot capture. It offers a profound understanding of our world, contributing to the advancement of theory and practice within behavioral science.

When applied in behavioral science, qualitative research provides a meaningful richness of insights, an approach we call qualitative behavioral

science. Qualitative behavioral science synthesizes the long and deep traditions of qualitative research with the specific insights and goals of applied behavioral science: to understand and make meaningful, measurable changes in people's lives.

In this groundwork, we explore the essence of rigorous qualitative research, its methodologies, challenges, and the invaluable contributions it makes to our understanding of human behavior. Most importantly, we discuss combining and applying this research in behavioral science for development.

About qualitative research

Qualitative research is a type of scientific inquiry that is mostly concerned with gaining a deeper understanding of human experiences and relationships.[1],[2] Generally, qualitative research involves an in-depth investigation of a phenomenon without relying on the quantitative manipulation of variables and/or quantities.[3] Qualitative research is based on the richness of data and

1 Jackson II, R., Drummond, D., & Camara, S. (2007). What is qualitative research? *Qualitative Research Reports in Communication*, 8, 21- 28. https://doi.org/10.1080/17459430701617879
2 Gordon, W. (2010). Behavioral economics and qualitative research- a marriage made in heaven? *International Journal of Market Research*, 53, 171- 18. https://doi.org/10.2501/IJMR-53-2-171-186
3 Moser A., & Korstjens I. (2017). Series: Practical guidance to qualitative research. Part 1: Introduction. *European Journal of General Practice*, 23(1, :271-273. https://doi.org/10.1080/13814788.2017.1375093

its comprehensive analysis, prioritizing the transferability of the findings while abstaining from generalizing to an entire population.[4],[5]

In addition, qualitative research helps understand our target populations' world views and experiences.[6] Unlike quantitative research that focuses on numbers, in qualitative research, the emphasis is mostly on questions of 'how' and 'why', and data is presented in textual format rather than numbers.[7],[8],[9] We use qualitative research in contexts where little is known about a phenomenon and in diagnosing problems through in-depth analysis of data.[10],[11]

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

5 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

6 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

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

9 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development. Busara Groundwork (Research Agenda). Nairobi: Busara*

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

11 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Behavioral science and qualitative research

At Busara, we rely on detailed qualitative research throughout our behavioral science work. We refer to the overall behavioral science process as AUDAS: Align, Understand, Design, Assess, and Share. A detailed description of this framework has been published in our Groundwork Report, The Busara Toolkit: Leveraging Behavioral Science for Development.[12] Busara's AUDAS framework describes our end-to-end research and advisory process in our projects as described in the figure on the next page.

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12 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

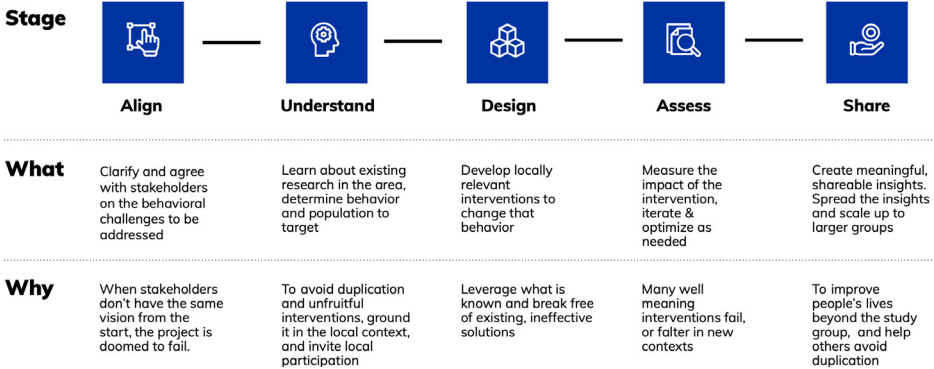| Stage	Align	Understand	Design	Assess	Share
What	Clarify and agree with stakeholders on the behavioral challenges to be addressed	Learn about existing research in the area, determine behavior and population to target	Develop locally relevant interventions to change that behavior	Measure the impact of the intervention, iterate & optimize as needed	Create meaningful, shareable insights. Spread the insights and scale up to larger groups
Why	When stakeholders don't have the same vision from the start, the project is doomed to fail.	To avoid duplication and unfruitful interventions, ground it in the local context, and invite local participation	Leverage what is known and break free of existing, ineffective solutions	Many well meaning interventions fail, or falter in new contexts	To improve people's lives beyond the study group, and help others avoid duplication

Figure 1: A quick summary of AUDAS (Source: Busara)[13]

Qualitative research is one of the three possible engines that drive this process forward, along with quantitative research (including experiments) and systems modeling. Each engine helps us **Understand** the context in which we work and the lives of the people we serve, **Design** interventions thoughtfully with that context in mind, and Assess their impact. Ideally, one should use all of them, but at a minimum, qualitative and quantitative research are necessary to be effective in international development.

13 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Qualitative research is unique and powerful because it helps us to listen beyond our own questions. Behavioral science, along with much of quantitative research in development, tends to focus on a specific answer about a population of interest: did the experiment work? Did we move the needle? While crucial, that focus is not exhaustive. In our narrowness, we risk overlooking the lived experiences, preferences, and deeper insights of the individuals involved in the problems.

Qualitative research enriches and informs the process of applied behavioral science in three main areas:

1. Understanding. Qualitative research helps with two related but distinct forms of understanding the context in which we work:

a. Contextual exploration: Qualitative research is most often suitable in the formative phase of a study, especially where the researchers know little about the context of the study.[14] For instance, through qualitative research, we can answer questions about someone's experiences, beliefs, and attitudes toward various issues.

b. Explanation: Qualitative research is important when explaining relationships between variables and study participants. For example, a thorough analysis of qualitative data can help a researcher discover

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

important patterns, themes, and relationships that quantitative data alone cannot reveal.

2. Designing: Qualitative research helps us to understand the context and environment of a target audience[15]: this understanding guides the ideation process on intervention design and then helps us thoughtfully winnow down on ideas. It also allows us to align interventions and their goals and purposes with the target audience's expectations.

3. Assessment: Qualitative testing using in-depth interviews, focus group discussions, or observations can complement the quantitative approach in various ways. For instance, using qualitative methods can help us to probe deeper into the nuances of why an intervention is more effective than others. It might also help us to observe how the end users interact with the suggested programs and use the gathered feedback to adapt as needed.

At Busara, these neatly contribute to our AUDAS process (Align, Understand, Design, Assess, and Share), outlined in our [Groundwork](#) piece.[16] Let's now look into each part in more detail.

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15 Demuth, C., & Mey, G. (2015). Qualitative Methodology in Developmental Psychology. In J. D. Wright (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (2nd ed., Vol. 19, pp. 668–675). Oxford: Elsevier
16 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Process over tools

This write-up describes the specific ways in which thoughtful and rigorous qualitative research helps us. Before we dive in, it is useful to address a common misconception: applying qualitative research to behavioral science does not mean simply interviewing people or running interviews or focus groups. These methods come from various qualitative traditions, and qualitative researchers use them. Still, qualitative research is fundamentally about a repeatable process and contextual insights based on a mental model of social interactions rather than the tools themselves. The use of these tools, on their own, we refer to as informal qualitative research. Both informal qualitative research and design overlap with qualitative research in their use of these tools, but are distinct. Informal qualitative research uses a simplified version of the tools without the underlying theory or process. Design and its extension in design thinking share many of the same tools but with different use cases, processes, and underlying theories about people's behavior.[17]

Specifically, the use case for design is often to identify and design solutions to specific problems users face, including how to improve engagement with products and/or services.[18] Similarly, in informal qualitative research, the

17 Beyer, & Holtzblatt. (1998). *Contextual design: Defining customer-centered systems*. San Francisco: Morgan Kaufmann
18 Easterday, M.W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. *Proceedings of International Conference of the Learning Sciences*, ICLS, 1, 317–324. Retrieved from https://www.researchgate.net/publication/288434629_Design-based_research_process_Problems_phases_and_applications

practitioner often looks to identify and solve user problems. In qualitative research, the focus is on a rigorous and broader understanding of context and human experiences through research questions, without necessarily focusing on designing solutions as the only outcome.[19] In contrast, design or informal qualitative research often seeks a quick turnaround for solutions to identified problems: individual or collective.

For a qualitative researcher, the process is an essential focus, and its depth and rigor are equally important.[20],[21] Qualitative research is used to understand cultures, the nature of power dynamics in interactional contexts, and the detailed nuance of how diverse facets of a person's or group's identity are expressed and shaped over time.[22],[23] On the other hand, design has often been applied in industries that need relatively fast processes to develop solutions without necessarily digging deeper into an issue under study.[24]

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19 Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues*, 8(2), 5-21. http://www.jstor.org/stable/1511637?origin=JSTOR-pdf
20 Easterday, M.W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. *Proceedings of International Conference of the Learning Sciences*, ICLS, 1, 317–324. Retrieved from https://www.researchgate.net/publication/288434629_Design-based_research_process_Problems_phases_and_applications
21 Tenny S, Brannan JM, & Brannan GD. (2022, Sep 18). *Qualitative Study*. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing
22 Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE Handbook of Qualitative Research*. Sage Publications
23 Creswell, J. W., & Poth, C. N. (2017). *Qualitative Inquiry and Research Design: Choosing among five approaches*. Sage Publications
24 Easterday, M.W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. *Proceedings of International Conference of the Learning Sciences*, ICLS, 1, 317–324. Retrieved from https://www.researchgate.net/publication/288434629_Design-based_research_process_Problems_phases_and_applications

The process that different disciplines employ follows their use cases. The design process is nonlinear and tends to be intentionally messy and open-ended.[25] This is a wonderful part of the design process. It allows collaboration, iteration, and learning about the specific problem and solution of interest in a way that other approaches do not. However, it has its drawbacks. That approach has been criticized for being different depending on who does it.[26],[27] Qualitative research, on the other hand, embraces rigor and replicability of process: it has a fairly consistent process, especially within specific research traditions, that focuses on exploration and effective data gathering to capture the sweep of a context, rather than iteration on a specific problem.[28] In contrast, informal qualitative research lacks an underlying process altogether, and the focus is on the desired outcomes.

Finally, their underlying theory about people's behavior and interactions are different. Design wonderfully synthesizes methods and insights across fields such as psychology. As a result, it is full of lessons and meaning but does not generally have a consistent theory of behavior or society—neither

25 Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues*, 8(2), 5-21. http://www.jstor.org/stable/1511637?origin=JSTOR-pdf
26 Easterday, M.W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. *Proceedings of International Conference of the Learning Sciences*, ICLS, 1, 317–324. Retrieved from https://www.researchgate.net/publication/288434629_Design-based_research_process_Problems_phases_and_applications
27 Buchanan, R. (1992). Wicked problems in design thinking. *Design Issues*, 8(2), 5-21. http://www.jstor.org/stable/1511637?origin=JSTOR-pdf
28 Easterday, M.W., Lewis, D. R., & Gerber, E. M. (2014). Design-based research process: Problems, phases, and applications. *Proceedings of International Conference of the Learning Sciences*, ICLS, 1, 317–324. Retrieved from https://www.researchgate.net/publication/288434629_Design-based_research_process_Problems_phases_and_applications

across practitioners nor across projects by the same practitioner. On the other hand, qualitative research is rooted in social interpretivism and social constructionism paradigms. Interpretivism argues for understanding of social phenomena from the experiences and perspectives of the participants, and not the researcher, highlighting the importance of subjective meaning and context.[29] Social constructionism, on the other hand, is concerned with the processes that people use to explain their world—either the past, present, or the future.[30] In social constructionism, the experience of the world is not dependent on the terms by which the world is understood but rather as cognized by an individual.

Thus, while informal qualitative research, design, and qualitative research share methods, they share little else. Design and rigorous qualitative research have depth that makes them essential. Therefore, we use both at Busara (and avoid informal qualitative research as much as possible), honoring their specific use cases and processes.[31]

With that background in qualitative research, let us turn to the three main areas where qualitative research helps drive effective behavioral science: Understanding the context, Designing interventions, and Assessing their impact.

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29 Gioia, D. (2021). A systematic methodology for doing qualitative research. *The Journal of Applied Behavioral Science*, 57(1), 20-29. doi:10.177/0021886320982715
30 Gergen, K. J. (1985). The social constructionist movement in modern psychology. *American Psychologist*, 40, 255-265. Retrieved from http://works.swarthmore.edu/fac-psychology/328/
31 Gergen, K. J. (1985). The social constructionist movement in modern psychology. *American Psychologist*, 40, 255-265. Retrieved from http://works.swarthmore.edu/fac-psychology/328/

Using qualitative research for alignment and understanding the context

Rigorous qualitative research is process-driven, and researchers spend time conceptualizing these procedures clearly. In this section, we explain how qualitative research aids the Understand phase. For transparency, some of the parts we use in this section come from our recently published toolkit.[32]

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32 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development*. Busara Groundwork (Research Agenda). Nairobi: Busara

Aligning on study outcomes for the qualitative research
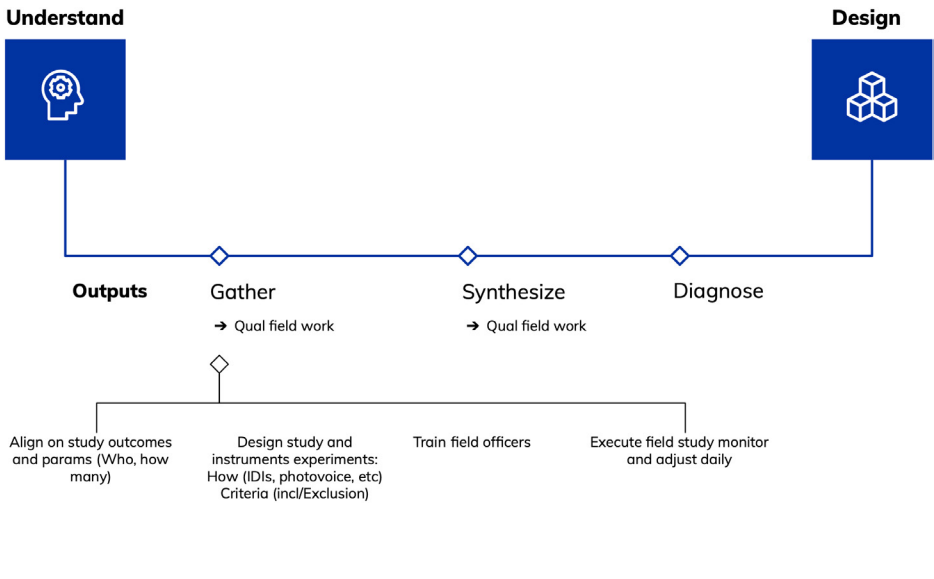
Figure 2: Detailed view of gathering data
for qualitative fieldwork (Source: Busara)[33]

Using qualitative research in behavioral science starts in the first stages of field research: crafting our specific research questions. We select among

33 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

the overall formative research questions and the contextual gaps in our knowledge to develop specific goals for qualitative research.[34] This process is primarily based on whether there is existing knowledge about the context (as evidenced by available literature and/or program initiators): we focus qualitative research on what is unknown or uncertain.[35] Rigorous qualitative research takes time and money, so we avoid duplicating what is already available and trusted.

Next, with qualitative goals in mind, we design study parameters that can meet them, then. create a qualitative analysis plan (QAP).[36] The QAP promotes transparency and integrity in research by explaining the processes followed in a study, such as in research design, data collection, and analysis.[37] This includes; (a) who is the focus of the study (e.g., target participants in the program, other stakeholders, people who are impacted by it), (b) specific direct requests from funders, (c) and, crucially, how many people will be included in the study, given the scope of questions, diverse segments we want to understand and the available budget.[38]

34 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
35 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
36 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
37 Moravcsik, A. (2019). *Transparency in qualitative research. Sage Research Methods: London.* http://dx.doi.org/10.4135/9781526421036
38 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Developing the study and the instruments

After aligning, we then select the suitable qualitative research method based on the context of the study.[39] The choice of the topic is based on factors such as the subject's sensitivity, literacy level of participants, project objectives, funding, etc.[40] In-depth-interviews and observations are common methods based on the nature of a project, while participatory action research (PAR) methods such as photovoice, vignettes, and story completion are most appropriate for sensitive topics and when dealing with underserved populations with limited literacy and agency.[41] Focus group discussions are good when looking for group similarities and differences concerning a topic. PAR method encourages the involvement of participants throughout the research process and views research as a co-learning and a shared knowledge co-creation process between researchers and participants.[42,43]

39 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

40 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

41 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

42 Israel, B. A., Schulz, A. J., Parker, E. A., Becker, A. B., Allen, A. J., III., & Guzman, J. R. (2003). Critical issues in developing and following community based participatory research principles. In M. Minkler, & N. Wallerstein (Eds.), *Community-based participatory research for health* (pp. 53–76). San Francisco: Jossey-Bass)

43 Baum, F., MacDougall, C., & Smith, D. (2006). *Participatory action research. Journal of Epidemiology and Community Health,* 60(10), 854-857. doi: 10.1136/jech.2004.028662

After choosing the appropriate method, decide on the inclusion/ exclusion criteria for participants. This is usually based on the nature of the project as well as the research goals of the study. For example, in a sex and reproductive health project, the inclusion criteria might include guidelines such as; the participants might be of the age of consent (e.g., 18 years), be drawn from a certain socio-economic status, be of a certain level of education, etc. The inclusion and exclusion criteria ensure that all participants are given an equal opportunity to participate in the study and offer plausible justification for why some groups are excluded.[44]

To design the instrument itself, we draw on the existing literature review, the needs of the stakeholders involved in the study, and the program needs. When designing the instrument, it is important to ensure the questions are valid and align with the project's objectives. In qualitative research, it is advisable to follow a funnel approach in which the researcher asks more broad questions and then keeps narrowing down to more specific questions.[45] This enables the researcher to build rapport with the participants at the start and make them comfortable responding to more specific and potentially sensitive questions.[46]

44 Patino C.M,, & Ferreira J.C. (2018). Inclusion and exclusion criteria in research studies: definitions and why they matter. *The Brazilian Journal of Pulmonology and International* Databases, 44(2), 84. https://doi.org/10.1590/s1806-37562018000000088
45 Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage
46 Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage

A key insight from behavioral science is that people won't be able to answer some questions honestly. It is not that they lie to us (not necessarily); rather they may not have valid answers.[47] In particular, we avoid asking about what they might want or how they might behave in the future, especially in very hypothetical situations. Instead, we focus on their lives and direct experiences: what have you done, what have you seen, what have your neighbors and others experienced, and why?

Unlike standard qualitative research and most design practices, in qualitative behavioral science, we have specific questions that will help us create a behavioral map, which is a detailed analysis of the specific behaviors and experiences of people concerning our target activity. We seek to capture both the status quo path that the target audience currently follows to perform a behavior and the ideal path that makes them more successful.[48]

We can ask about the status quo path, showcasing a scenario that depicts how a particular behavior is performed in the context of your target audience.

47 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
48 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Example 1:

"Across the world, data has become increasingly important in helping organizations to make more informed decisions such as how to best plan for the future or even the areas to improve on to remain competitive".

1. How do you currently store data at your facility?
2. Is this data useful in making decisions at your facility? If yes, how so?
3. Which is the least useful data collected in your department?
4. Why do you feel this way?

We then ask about one or more ideal paths which could lead to the desired outcome. This might involve adding new nuances to the status quo question. If the target audience/ participants provide information that shows deviation from the status quo, this might indicate areas within the process that need intervention.

Example 2:

Ideal/desired path

1. Suppose you were to **create a plan to improve quality of service and the coverage of the service you or your team provides.** Could you describe what this process would look like?
   a. When would you usually do that?
   b. What steps do you take?
   c. Would you use any data to make this decision?
   d. Which of these steps presents a challenge?
   e. Which is the biggest challenge? How would you overcome this challenge?

Data collection using the instruments

After the instrument is designed and the research team has reviewed it for improvement, the next step is deploying it in the field. Before deployment, the research team must ensure that the instrument is translated into the language the data collection team and the participants understand. It is also important to ensure the data collection team is well-trained and the instruments are pilot-tested with a smaller sample size of participants. Training the data collection team ensures that the data collected is valid and rich and the team upholds the highest ethical considerations while in the field.[49]
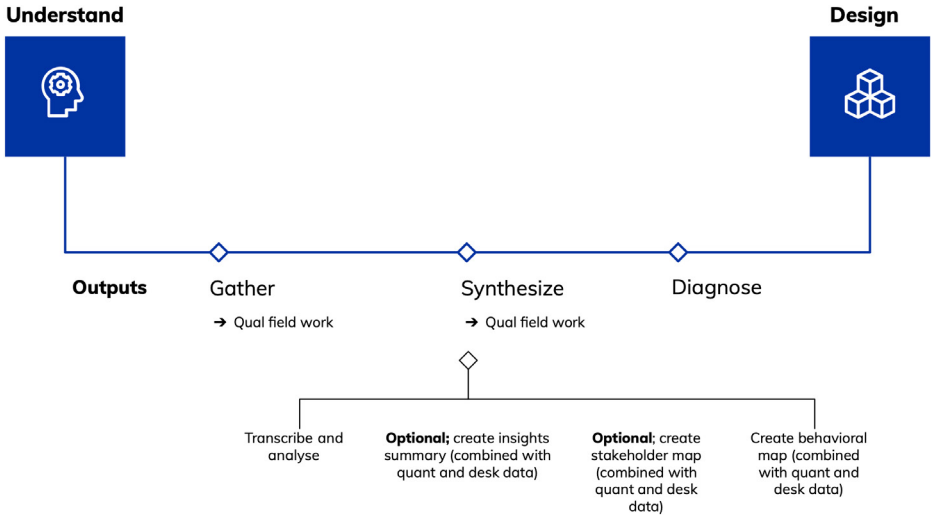
Synthesizing insights

After data is collected, the next step is analyzing it to see the emerging patterns and themes. Some of the most commonly used methods to analyze qualitative data include: thematic analysis, content analysis, grounded theory approach, narrative analysis, etc.[50] Next is a brief description of the process we follow at Busara to move from the Understand phase to design phase, by collecting and analyzing qualitative data.

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49 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
50 Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage

Figure 3: Detailed overview of the process of using generated insights to inform design synthesis (Source: Busara)[51]

Transcribing and analyzing qualitative data

Each qualitative interview is transcribed into a transcript that clearly shows the input of the interviewer and the respondent and is organized for analysis.[52]

51 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara
52 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

This analysis is guided by the methods identified in the QAP.[53] In most cases, data from interviews is analyzed using the thematic analysis technique, which involves analyzing and reporting patterns within data.[54],[55],[56]

The codes and themes identified in the findings are then interpreted and used to address the research questions under study.[57] Besides addressing the research questions, the data interpretation process often involves linking insights from the analysis to the broader research and program implications. This, for instance, might include an explanation of what the findings mean to different audiences, e.g., funders, policymakers, academics, etc. From our experience doing research in the international sphere, this is usually the weak link in most qualitative studies, as most researchers stop at addressing the research questions and/or goals.

53 Denzin, N. K., & Lincoln, Y. S. (Eds.). (2018). *The SAGE Handbook of Qualitative Research*. Sage Publications
54 Rubin, H. J., & Rubin, I. S. (2012). *Qualitative interviewing: The art of hearing data* (3rd ed.). Thousand Oaks, CA: Sage
55 Braun V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. https://doi.org/10.1191/1478088706qp063oa
56 Lune, H. & Berg, B. (2017). *Qualitative Research Methods for the Social Sciences* (9 ed). UK: Pearson Education
57 Braun V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101. https://doi.org/10.1191/1478088706qp063oa

Building a behavioral map

Qualitative insights from the analysis can help us to visualize details about the behavior of the target audiences by capturing certain details in a specific moment in a specific context; the decision-making environment can strongly affect what a person chooses and does.[58]

A behavioral map is a visual representation of the "micro-steps" that lead up to the big behavior and outcome of interest.[59],[60] Behavior maps are important in showcasing the barriers and enablers to the performance of a behavior and where these are most experienced by the target audiences.[61],[62]

Generally, when thinking about doing behavioral diagnosis, you can follow the steps below (The content in this section is borrowed from our recently published Groundwork toolkit)[63]:

58 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

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

60 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

61 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

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

63 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

Step 1: Behavioral Map

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 of the micro-behavior (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 the hand-washing station, walk up to the station, use soap, turn on the water, wash hands for [30] seconds, and turn off.

    b. Micro-behaviors are not mental states: we don't include things like "person DECIDES to wash hands". Why? Conscious decision-making 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: is there anything else? Is there something in between this step and the next?

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

Step 2: Identify Steps that are Obstacles

Using the steps above, identify where the obstacles happen along the process based on your contextual knowledge that people aren't/won't take that micro-behavior.

Step 3: Barriers - Diagnosis

For each micro-behavior with an obstacle, mark down whether there are:

1. Structural barriers, such as lack of infrastructure, lack of money and voting rights?
2. Psychological barriers, such as fear, procrastination (lack of urgency or self-confidence), or specific decision-making biases.

Step 4: Levers - "proto-intervention ideas"

Where there are barriers, what has our research taught us about this situation that can help?

1. Have other researchers addressed this situation before and tried a particular technique?
2. Did participants tell you what they really cared about at this moment?

Using qualitative research in intervention design

At Busara, we employ the insights gathered during the Understand stage through qualitative, quantitative, and computational research to design interventions that achieve desired behavioral change. In particular, we think of the intervention design stage in **four phases: ideate, review, prototype and refine.** Qualitative Research helps power each of these phases.
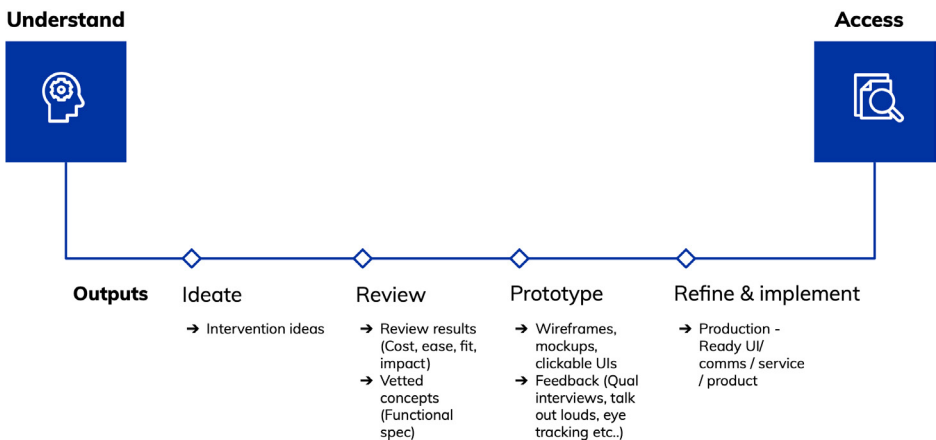

Understand

Access

Outputs

Ideate
➔ Intervention ideas

Review
➔ Review results (Cost, ease, fit, impact)
➔ Vetted concepts (Functional spec)

Prototype
➔ Wireframes, mockups, clickable UIs
➔ Feedback (Qual interviews, talk out louds, eye tracking etc..)

Refine & implement
➔ Production - Ready UI/ comms / service / product

Figure 4: An overview of the steps of design synthesis from ideation to refinement/implementation (Source: Busara)[64]

64 Jang, C., Koki, E., Nyaga, R., Okafor, A., Singh, J., Vang, A., & Wendel, S. (2024). *The Busara Toolkit: Leveraging Behavioral Science for Development.* Busara Groundwork (Research Agenda). Nairobi: Busara

1. Ideation

In the ideation phase, some of the initial concepts for interventions come straight from qualitative research, building on the proto-ideas from the Understand stage. Ideas for intervention come from the participant's lives and preferences:

1. **Listening to their voices.** What do the participants want to change? What ideas do they have for improving the situation?
2. **Learning from successes.** For people who are already taking the target action, what do they do differently than others? How do their local physical context and circumstances differ from others? Or does their success appear part of their historical and cultural background? How can those mental models and experiences, or physical context, be replicated or applied to others?
3. **Looking beyond the behavior.** Qualitative research focuses on the broader context— looking beyond what we want to know about the target behavior and taking in the embedded reality of people's lives. This broader understanding helps us see when the target behavior is the wrong focus - when there are other structural, psychological, or cultural issues that we should address instead of the project's official target behavior.

In addition to these three sources of ideas, qualitative research plays a vital role here in raising the warning flag. During ideation, qualitative research helps us ask: should we be doing this at all? Given our understanding of the local context and people's preferences, would intervening in the target behavior directly contradict their wishes and agency? Or is the behavioral target explicitly not something they want to prioritize? If so, are there still types of interventions to achieve a meaningful outcome that respects their wishes and don't burden their time and resources? If not, one of the most valuable aspects of qualitative research is that it can help us stop the process altogether: providing detailed examples and understanding to convince project stakeholders that we should not proceed.

2. Review

After the end users have come up with several ideas, we then winnow these ideas down to the most pertinent one. We do so by rating each intervention according to a range of criteria, from **cost** to **viability,** to **impact of success.** Our contextual understanding, built on qualitative research, helps us answer those questions. It is beneficial because it encourages us to look beyond the behavior and see the broader implications and limitations of an intervention. It creates a model—specifically a qualitative model of the system in which the behavior and intervention are embedded, to forecast the ramifications of potential intervention and rate ideas appropriately.

As noted above, qualitative research is one of the three "engines" that can power the process of applied behavioral science. Ideally, we combine this qualitative model of the system used for reviewing intervention ideas with a computational model, as described in our Groundwork piece on Behavioral Systems.[65] However, it provides a powerful tool for narrowing down the list of potential interventions to the most promising one(s) to prototype. It offers a way of testing the interventions.

3. Prototyping and refining

Our qualitative research from the Understand stage shapes the prototyping process. This phase of design is mostly concerned with prototyping: piloting what works and does not before rolling out the interventions.[66] Qualitative research powers this process in two key ways: by providing raw materials for the creative process and targeting the prototype testing process.

In addition to providing intervention ideas in the prior step, we often learn about particular cultural stories and visual elements that can guide and enrich the design of the prototype itself. These are raw materials. After the

65 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
66 Interaction Design Foundation - IxDF. (2019, October 17). *What is Prototyping? Interaction Design Foundation - IxDF.* Retrieved from https://www.interaction-design.org/literature/topics/prototyping

prototype is ready, our qualitative research helps us know **who** to gather feedback from and **what** to look for. We always want to know how people feel about the prototype; we should also look out for how it would interact with their current practices and expectations. What are the diverse groups of people and experiences that guide how people may interact with the prototype, and thus, we need to include it in the testing process? Who will get upset? Who will benefit or lose out if this prototype turns into a full intervention?

Using qualitative research in assessment: Unintended consequences and backfires

In our applied behavioral science process, we heavily emphasized various forms of quantitative assessment, from randomized control trials to impact estimation with diff-in-diff models, and from field surveys to lab studies. These are essential to assess the effectiveness of an intervention at its stated goal. These tools are often remarkably limited in helping us understand the broader implications of an intervention and the project that surrounds it.

We can think about these implications in four domains:
- Spillover
- Ripple effects
- Intervention feedback
- Project effects

Spillover refers to the effect of the intervention on the target behavior of other people. For example, if an intervention targets handwashing among doctors, do nurses (or patients!) change their handwashing behavior? Same behavior, different people.

Ripple effects refer to the impact of the intervention on other behaviors and outcomes. For example, a program to increase the utility of government

services through mobile phones in rural areas may have ripple effects on (a) local gender dynamics if one gender has greater access to mobile phones than another or (b) political alliances, tribalism and the threat of political violence if it empowers underrepresented groups.

In both cases, the vital role of qualitative research is to listen and observe without constraints. If we knew the unexpected spillovers and ripple effects, we could develop quantitative tools for them. We don't know them however, and thus should be humble and open to learning what our intervention does, beyond what we intended or expected. We re-use the tools and approaches from our qualitative research in the Understand stage to gather this insight. We observe, ask, and look for themes and patterns; and compare them to our understanding before the intervention. We effectively do comparative mental models of the system surrounding the intervention. Where possible, we can buttress this qualitative process with a formal systems analysis; qualitative research alone, however, can take us quite far.

Participants and other community members not directly involved in the project can also provide valuable **feedback on the intervention**—to improve later iterations and scale-ups. As with all qualitative research, there is an "informal qualitative research". This approach is commonly used in the field that entails asking people questions without a particular theoretical basis or guidelines. We endeavor, where possible, to dig deeper. This involves ensuring that our processes are replicable and informed by theoretical considerations and evidence from extant research.

Finally, post-intervention qualitative research helps us understand the broader **effects of a project,** separate from the intervention. Quantitative impact measures are usually extractive: they help us extract local information for our studies to measure and report the effect to funders. We may report back to the community (good), but we rarely look at what the project does to and with the community.

Thoughtful qualitative research can help us understand how a particular project and projects like it can lessen (or potentially boost) a community's sense of agency. How the execution of international development projects affects the dignity and self-perception of participants. And how they shape cultural expectations and roles of individuals in society, both towards each other and toward the international development community. These are uncomfortable issues to examine, but qualitative research helps us take them seriously and understand our true role in the communities we intend to serve.

Conclusion

Qualitative research is invaluable in behavioral science, and the two approaches are intricately interlinked, especially in advancing our understanding of human behavior. Through its emphasis on in-depth exploration of personal and interpersonal relationships, qualitative research advances our comprehension of human complexity. When done rigorously, qualitative research contributes to theory development and the generation of evidence. Furthermore, it shapes how we approach behavioral science as a whole. However, we are cognizant of the fact that while qualitative research is invaluable, other approaches exist to understanding human behavior, such as design research and informal qualitative research. These methods are also important, not any less, but context matters. Thus, if there is any insight that you can take home from this read is this— a qualitative researcher, and by extension a behavioral researcher doing qualitative research, focuses on the consistency of the research process and the rigor of the processes. It is important, however, to consider the context that one is faced with and the desired outcomes of a project when choosing the right approach to a qualitative inquiry. Doing so meaningfully and intentionally can help us contribute to knowledge creation and sharing in a dignified manner that upholds the respect of participants and research processes.

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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.

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