MercyCorps

DETERMINED BEHAVIOR CHANGE

A comparative study of the application of Barrier Analysis methodology

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Introduction

Barrier Analysis is a methodology for better understanding the underlying determinants or factors that influence individual behavior choice. It is commonly used in the field of development work to conduct formative research to more appropriately plan interventions by identifying which of these underlying determinants play the most prominent role in decision making. It has also been used to respond to underperforming indicators revealed by program monitoring, specifically to troubleshoot gaps between knowledge improvement and the adoption of new behaviors.

Mercy Corps believes that even in the world's most challenging places, people have the power to transform their own lives when they have the right resources. To leverage their local knowledge and develop innovative and sustainable solutions, it is essential that those delivering programs have a comprehensive understanding of their beneficiaries' perceptions, including the underlying motivators and barriers they face in practicing behaviors that improve their lives. The best way to accomplish this is to talk to them and include them in the conversation. Barrier Analysis provides a guide to this conversation that ensures a solid understanding of why people make the choices they do about their behaviors. Through this responsible, participatory

An interview with a beneficiary mother in Maradi, Niger – Mathias Pollock/Mercy Corps

formative research, implementers are able to design more efficient, more effective, and more sustainable programs that ultimately improve quality of life in some of the most vulnerable communities in the world.

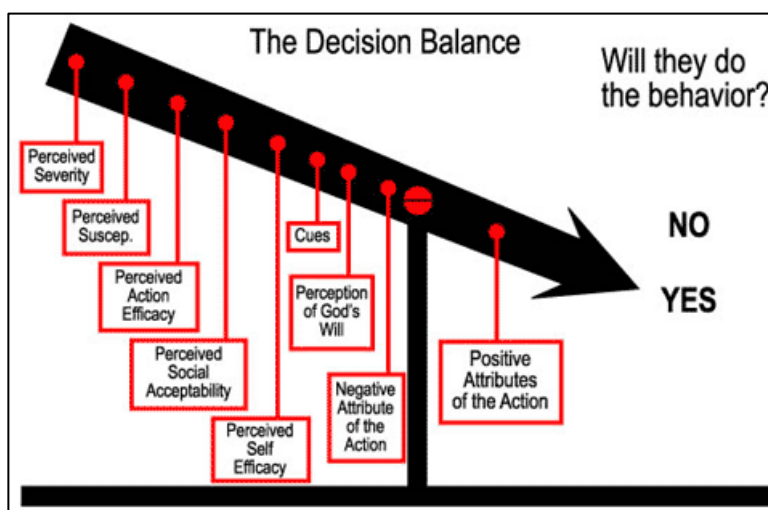*Barrier Analysis identifies the most significant determinants of behavior. Behavioral determinants can be described as the reasons why someone does or does not do something.*

This review examined 29 Barrier Analysis studies conducted to support Mercy Corps program activities across 7 countries. The behaviors investigated include a range- from health and sanitation (ie- hand-washing), to agriculture (post-harvest maize storage), to community response in emergencies (household reporting of suspected Ebola cases). This paper will correlate findings, identify subsequent program impacts, and ultimately analyze the effectiveness of Barrier Analysis as a research tool to advise social and behavior change components of development programming.

Background

Barrier Analysis is a rapid assessment tool that can help community organizations pinpoint why recommended behaviors are reluctantly adopted or not adopted at all. It can also provide insight for implementers about how to better promote behaviors to increase the likelihood of their sustainable adoption. Barrier Analysis is a mixed method survey tool that combines rigorous qualitative data with structured quantitative analysis to produce evidence-based recommendations to better inform behavior change strategies. Through a prescribed set of participant interviews with members of the target population, or priority group, it identifies the most influential determinants associated with a particular behavior. Examples of these determinants include individual issues of self-efficacy and access, interpersonal issues such as social norms and influencing groups, or community-level issues such as the role of culture and religion. Understanding the dynamic interplay of these influences allows the implementer to create more effective behavior change communication messages, strategies and supporting activities.

Drawing upon the Health Belief Model and the Theory of Reasoned Action as theories of behavior change, Barrier Analysis focuses on 12 determinants: perceived self-efficacy/skills, perceived positive consequences, perceived negative consequences, perceived social norms, access, cues for action/reminders, perceived susceptibility/risk, perceived severity, perceived action efficacy, perceived Divine will, policy, and culture. An equal number of practitioners of the behavior ("Doers") and people who have not yet adopted the desired behavior ("Non-Doers") are interviewed using a standardized questionnaire. The results of the survey are then coded, entered into a

The Decision Balance – Food for the Hungry

database, and tabulated. When the two groups are compared, answers for each determinant with a corresponding difference of 15% or greater are considered statistically significant influences on the adoption of the behavior.

Methodology

This study focused on applications of Barrier Analysis across Mercy Corps' global portfolio over the past 5 years. A review of country programs identified seven countries that had used the methodology to conduct studies. Data from the rapid research investigations of 29 behaviors were tabulated, analyzed and compared. Additionally, key informant interviews were conducted with a representative staff member (Social and Behavior Change Advisor and/or Monitoring and Evaluation Specialist) who played a principle role in designing and implementing the studies from each of the seven country programs. This qualitative data provided a more rich understanding of program impacts as well as a reflection on the Barrier Analysis process.

Results

The results of this review are divided into three sections: individual program learning, cross-program process learning, and general institutional learning. Program learning examined the results of the individual Barrier Analysis studies and how they were used to advise programming. Process learning focused on the complete data set to identify themes and trends across the Barrier Analyses. While Barrier Analyses are by definition not generalizable to disparate cultures and populations, there is value in comparing a substantial set of behaviors to identify the most commonly cited determinants. Institutional learning examined the perspectives of interviewed field staff and their reflections on Barrier Analysis as a research tool.

Summary of Key Results

Country	Program	Behavior	Key Finding
Guatemala	PROCOMIDA	Initiation of complementary feeding	**Mothers in rural Guatemala** have trouble remembering to initiate complementary feeding when their babies reach six months of age because they often do not have birth certificates and do not know how old their children are.
Uganda	GHG	Latrine use	**Adult caregivers in Uganda** face strong culture taboos and social influences that discourage regular latrine use.
Niger	Sawki	Antenatal care visits	**Expecting mothers in Niger** cited the support of their parents and their in-laws as a critical factor in their ability to attend the recommended antenatal care visits during their pregnancy.
Liberia	E-CAP	Ebola case reporting	**Heads of household in Liberia** who reported suspected Ebola cases within the first 48 hours of noticing symptoms (in line with government recommendations) said that prioritizing the wellbeing of their community over the individual was a motivating factor.
Timor Leste	COMPAC	Household fish consumption	**Wives of fish farmers in Timor Leste** expressed uncertainty as to the appropriate time to harvest fish and the best way to cook them to encourage consumption by their spouse and children.
DRC	IMAGINE	Hand washing, use of ORS	**Mothers in the Democratic Republic of the Congo** perceive that their husbands and mothers-in-law do not approve of many of the health behaviors promoted by the IMAGINE program, including the use of ORS and handwashing.
Tajikistan	MCH Expansion	Infant feeding practices	**Mothers in Tajikistan** mentioned a number of factors that make it difficult to practice optimal infant feeding practices (breastfeeding, introduction of complementary foods, feeding frequency), including painful breasts and lack of time to prepare food.

PROGRAM LEARNING

The above examples provided program teams with a deeper understanding of some of the most interesting and influential determinants and people that impact the ability of the beneficiary population to adopt recommended behaviors. The next step in the process is translating this evidence into strategic and programmatic change that will maximize the impact of the motivators and minimize the impact of the barriers faced by our beneficiaries. Sometimes these changes can come about easily, as in the case of Guatemala's PROCOMIDA program. To help mothers remember to initiate complementary feeding when their babies turned six months old, health outreach

workers simply needed to consult their carnets (official documents maintained by the program to track infant growth progress) before each monthly food distribution and education session. They would then take a minute before each session with the mothers in each community to "celebrate" the babies who were turning six months that month, and remind the group that it was the appropriate time to begin introducing complementary foods. This is an example of a pragmatic solution to one of the most significant barriers identified in the formative research to timely adoption of complementary feeding, one that came at no cost to the program and required minimal effort on behalf of the community health workers.

Guatemalan mothers attend a Behavior Change Communication session – Mathias Pollock/Mercy Corps

Unfortunately, not all solutions to overcoming key barriers identified by the research studies are that simple. To address these more difficult determinants, the Barrier Analysis process is often followed up with the construction of a behavior change framework. The result is a list of detailed activities that country staff plan and implement to better focus program efforts to directly target the specific obstacles that participants are struggling to overcome. These activities must be feasible, they must directly address the identified behavioral determinant(s), and they must be appropriately tailored so that the beneficiary population can receive and understand them. An example of this is the production of theatre skits in Niger that incorporate messages about how parents and in-laws support antenatal care visits. These were specifically designed to capitalize on the key role of social support in decision-making, by encouraging parents and in-laws to express validation of optimal antenatal care seeking behavior. Another example is the inclusion of women in aquaculture trainings as part of the Combatting Malnutrition and Poverty through Aquaculture (COMPAC) program in Timor Leste. Originally, trainings targeted men according to traditional gender roles in the community, but by incorporating women, Mercy Corps was able to ensure that the primary meal preparers were also aware of when and how to harvest the fish they were preparing.

Another way that barrier analysis can guide program strategy to increase efficacy and reach a larger swath of the population is through targeted messaging. By interviewing both people who are doing the desired behavior and people who have not yet adopted the behavior, a program planner can identify key differences in motivators among current "Doers" of the behavior, and work to replicate and scale up messages to highlight these advantages for current "Non-Doers". This is similar to positive deviance modeling as it provides a mechanism to identify and expand certain enabling factors that help a segment of the population practice the desired behavior. An example of this is the impact of preventive altruism on heads of households in Liberia who successfully reported a suspected Ebola case in their house within 48 hours of noticing symptoms. While a high percentage of both Doers and Non-Doers associated early reporting with improved chances of individual survival, there was not a statistically significant difference in answer frequency between the two groups. However, significantly more Doers cited the welfare of those around them as a motivation to report. This suggests that Doers are further motivated by a degree of preventive altruism, placing potential benefits to those

around them above self-protective measures. In future outbreak emergencies in Liberia, public awareness campaigns would do well to emphasize the benefits to neighbors, community members, and society at large as well as the potential benefits to the individual.

PROCESS LEARNING

Aside from highlighting some of the key program knowledge that Barrier Analysis has provided Mercy Corps programming, this comparative study also identified some important insight into the Barrier Analysis process itself. A cross-sectional comparison of the 29 studies revealed some interesting trends, particularly regarding the most frequently cited influential determinants. For example, perceived self-efficacy was found to be significant in 80% of the studies (Does the individual have the skills, knowledge, and ability to do the recommended behavior?). It is important to note however, that in the majority of these cases survey respondents did not cite a lack of knowledge about the behavior as the issue. The follow up questions about facilitators and barriers provided insight for how managers could more appropriately approach their interventions, rather than simply relying, as often happens, on intensifying training activities to lead directly to sustained behavior change.

For example, mothers in the Democratic Republic of Congo (DRC) indicated high levels of initial knowledge regarding many of the health behaviors the program intended to promote (hand washing, use of Oral Rehydration Solution to mitigate effects of diarrhea, storage of drinking water in closed containers). Some mothers in fact were already practicing the behaviors in spite of resource and access challenges. The evidence gained from the Barrier Analyses included in the formative research contributed to program staff identifying the Care Group (CG) approach as the primary behavior change strategy. The CG approach prioritizes behavior change over raising awareness and employs a participatory problem-solving method that empowers women. This model has been shown to be appropriate for addressing needs of a population with individuals in varying stages of change, while placing less emphasis on top-down knowledge transfer as an effective solution.

Another determinant that was repeatedly identified as significant across geographic and program areas was the influence of important stakeholders on decision-making. In Barrier Analysis terminology these influences are termed social norms, and they are defined by the questions "who approves?" and "who does not approve?" of the specified behavior. Social norms were found to be significant determinants of behavior in almost 60% of the Barrier Analyses included in this study. While it is well accepted that individuals do not make decisions in a bubble and rather they are often affected by the opinions of those around them, these studies help to identify exactly who are the most important influencers so that they can be included as targets of intervention activities. An example of this is the GHG program in Uganda, where Doers identified husbands as approving of certain health behaviors (such as exclusive breastfeeding, dietary supplementation of lactating women, facility-based delivery, and attendance at antenatal care visits), while Non-Doers perceived that their spouses would not approve. This finding encouraged program staff to establish an engagement strategy for male change agents, to draw on the positive influences of those supportive husbands and develop them as peer educators to pass the message along to others.

A young girl weaves palm fronds for her mother in in Maradi, Niger – Mathias Pollock/Mercy Corps

Similarly in Niger after a Barrier Analysis identified significant differences in spousal support for attendance at antenatal care visits, the Sawki program began to target husband schools to perpetuate positive messages and garner support among men for prenatal care.

INSTITUTIONAL LEARNING

This study's sample size shows that barrier analysis methodology has been used to advise behavior change activities in almost 20% of the countries in which Mercy Corps operates. This prevalence demonstrates two things: 1) that a significant demand exists, both among field staff and the greater donor community for this and similar evidence-based approaches to guide formative research and 2) that Mercy Corps has the internal capability to offer Barrier Analysis training and support as a technical service offering to build staff capacity to design more targeted behavior change programming. In addition to its value as a formative research and troubleshooting tool, Barrier Analysis is an excellent option for the professional development of local personnel. Trainers offer substantial anecdotal evidence that country staff embrace tangible skills that can be applied to other programs and replicated in other environments. This point is reinforced by the fact that five of the seven programs went on to implement subsequent Barrier Analysis investigations after the initial training and primary study(s) were complete.

But perhaps the most telling indicator of Barrier Analysis' value to programming is the opinion of those field staff who have implemented the tool. A full 100% of those interviewed indicated that they would use Barrier Analysis again, and many have already identified new behaviors and designed questionnaires for follow up studies. "Barrier analysis has been very helpful for developing tools and messaging," says Nicole Weber, the WASH Health and Behavior Change Manager in the DRC where the staff used the results of formative research studies on four behaviors to advise their Behavior Change Communication (BCC) strategy. Her sentiments are echoed by Margaret McLoughlin, the MCH/Nutrition Advisor in the Uganda program that is working to set up a male change agent training component. "It's essential to have evidence from the field to justify male engagement," she notes, indicating that BA methodology serves both to advise program staff as well as justify programmatic changes to donors.

> *It's essential to have evidence from the field to justify male engagement. Barrier analysis provides both the guidance and the justification.*
> — Margaret McLoughlin, MCH Advisor - Uganda

Mercy Corps programs are not merely satisfied with traditional applications of Barrier Analysis methodology; they are using it to expand and innovate. What was developed as a tool used to study health behaviors is now being applied to other sectors, including livelihood, gender, and agriculture behaviors. After successful experiences conducting more traditional studies on infant care practices, the Guatemala team decided to employ Barrier Analysis to look into pre- and post-harvest practices to reduce aflatoxin (a carcinogen produced by the parasitic mold of the Aspergillus family linked to stunting) contamination in maize. The results point to some interesting determining factors that should be considered by future projects, including the lack of awareness of positive consequences, the difficulty in accessing materials, and the perception of God's will regarding the promoted practices. It should also be noted that the questionnaires used in these studies were subsequently shared with the team in Timor Leste, where country staff were able to translate them into local language and conduct studies on the same behaviors. In this way, the promotion of barrier analysis as a standard within the organization can produce significant knowledge sharing opportunities across country programs.

Limitations

While this review has shown how Barrier Analysis investigations can provide valuable insight into the most influential determinants of behavior change, it should be noted that this methodology has some important limitations. Barrier Analyses can have a short turnaround time (as little as 1-2 weeks depending on the geographic distribution of the target population, the complexity of the behavior, and the availability of trained staff to serve as enumerators), but the process itself is time intensive, requiring a significant amount of logistical coordination. It also explores only one behavior at a time, challenging program planners to prioritize the most critical or problematic behaviors to pursue in depth. And while the results of Barrier Analysis studies provide recommendations for activities to address the most significant determinants identified, country staff still face the challenge of implementing these programmatic adjustments. Lastly, due to the relatively small sample size and attention to unique cultural perspectives the results are difficult to generalize beyond the target population of the individual program. Interviews with other groups in other locations will often identify different, context-specific barriers to behavior change.

Recommendations

From a programmatic standpoint, Barrier Analysis provides a concrete tool to identify the most critical determinants of behavior change faced by a target population. This review highlighted some of the valuable learning that these studies provided to program teams. **Development programs benefit significantly from an increased understanding of the specific motivators and barriers faced by their beneficiaries.** These investments in formative research have the potential to pay big dividends in terms of program impact, saving implementers time and money by focusing their activities on the social and cultural factors that most closely affect the adoption of new behaviors.

There were also a number of recommendations produced by this review that apply to the Barrier Analysis process. A few suggestions in particular emerged from key informant interviews with staff that had conducted Barrier Analysis investigations. The first of these was that study managers need to allow sufficient time to sensitize staff to the questionnaire and translate it into the local language, preferably by a highly skilled translator who is fluent in both the international language and the local dialect. There was also feedback on the interview process itself, specifically that enumerators should be given flexibility to probe deeper into answers to closed-ended questions (ie- Yes/No or Very/Somewhat/Not Likely). The local perspective provided would be extremely valuable when designing appropriate and realistic program activities.

This review provides further evidence for the critical role of formative research in the design and implementation of effective development programming as it relates to behavior change. The more that is known about beneficiary populations- their interpersonal relationships, social norms, community structure and culture- the more programs can specifically target the most critical issues they face. Barrier Analysis presents a tangible, relatively simple and inexpensive option to identify some of these issues, but it is one tool in what should be a larger toolbox. As Judiann McNulty, the consultant author of the Tajikistan research and co-author of the Designing for Behavior Change curriculum (which uses Barrier Analysis as the research methodology) stated in her interview, "Barrier Analysis [and other Doer/Non-Doer studies] function best as part of a larger formative research package." When combined with other survey tools, such as transect walks, focus group interviews, and community mapping, a much more rich picture emerges of the target population and their perceived challenges. This complete picture is what allows implementers to spend their limited funding overcoming community-identified barriers, increasing local buy-in and ultimately improving the impact of behavior change interventions.

ABOUT MERCY CORPS

Mercy Corps is a leading global humanitarian agency saving and improving lives in the world's toughest places. With a network of experienced professionals in more than 40 countries, we partner with local communities to put bold ideas into action to help people recover, overcome hardship and build better lives. Now, and for the future.

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