Evidence-based Malaria BCC: From Theory to Program Evaluation

Module 2: Formative Research for SBCC: Do You Know Your Audience? – Handout

Module 2 of 5

Michelle R. Kaufman, PhD
Research and Evaluation Officer
Center for Communication Programs
Johns Hopkins Bloomberg School of Public Health

Learning objectives

At the end of this presentation, participants should:

- Know the steps to conduct formative research.
- Be familiar with multiple methods of formative research data collection.
- Understand the most effective way to conduct focus group discussions.

Table of contents

Part 1: What is formative research?

Hello. My name is Michelle Kaufman, and I am a research and evaluation officer at the Center for Communication Programs housed within the Bloomberg School of Public Health at the Johns Hopkins University. This module focuses on formative research for SBCC. We are going to discuss how we make sure that we know our audience properly and use the research to design effective communication messages. The first step is to get a full picture of our target audience through the use of formative research.

I would just like to add that this eLearning series was supported with funding from the United States Agency for International Development as part of the NetWorks project.

There are three main learning objectives for this module. At the end of this presentation, you should:

1. Be able to identify the steps to conduct formative research.
2. Be familiar with multiple methods of formative research data collection
3. Understand the most effective way to conduct focus group discussions.

This lecture will consist of five parts and will then conclude with a brief summary of the key points followed by a short list of additional resources you might want to consult for more information.

Part 1: What is formative research?

Part 2: Data collection methods that are often used in formative research.

Part 3: Choosing among different qualitative methods.

Part 4: Conducting focus group discussions.

Part 5: Designing survey questionnaires also to be used in formative research.

Why don't we get started with what is formative research? Formative research is an essential step in developing an SBCC program. More specifically, it is research (either qualitative or quantitative) that is used to first identify the target population.

- If your SBCC program goal is to increase use of IPTP in order to prevent malaria in pregnant women, you would first do formative research to identify who is the target audience. Is it the pregnant women themselves, non-pregnant women, health personnel who administer IPTP, the husbands of pregnant women, or other family members?
- Second, you might want to find out what the needs and risk factors are of the target population. What is their knowledge level? What are some beliefs and myths that exist in the community? Is bed net coverage an issue or not?
- Third, you want to identify barriers and motivators to the behaviors you are trying to change. For instance, do men make most of the household decisions and, thereby, decide who sleeps under a net or how money is used in seeking treatment? Do people believe mosquito nets should only be used during the rainy seasons? These are some of the barriers or motivators that could influence behavior.
- And fourth, it is important to understand the media habits of the audience and to identify what channels they have access to, which they use most often, and which they trust. For instance, do people have radios, televisions, or cell phones, and who uses which channels?

This is a diagram of a comprehensive evaluation system that is often used for health communication interventions. There are generally three major phases to evaluations, starting in the pre-intervention period with formative research or formative evaluation. This includes reviewing existing information through literature reviews or secondary data analysis, determining your goals and objectives for the intervention, and then collecting and analyzing qualitative and/or quantitative data in order to better understand the audience and proper framing of the SBCC messaging.

Phase 2 of the evaluation happens during the intervention implementation and is commonly known as monitoring. This requires looking at the reach of the intervention, the acceptability of the messaging, and initial outcomes.

Phase 3 is the outcome evaluation which occurs after the intervention is complete. This involves impact research to look at how the intervention changed behavior. In this module, we're going to focus on the formative or pre-intervention period.

There are generally seven major steps to conducting formative research. I will go into each of these in a bit more detail individually. The seven steps are:

1. Conduct a literature review.
2. Identify your research questions.
3. Construct a conceptual framework to guide the research.
4. Decide which data collection methods to use.
5. Design the study.
6. Collect your data.
7. Analyze the data, which will then be used to design your intervention messages.

The first step in formative research is to conduct a literature review. This requires doing a keyword search of both peer-reviewed literature and what is known as gray literature or technical reports that are not published in peer-reviewed journals to look at previous research on your topic. You want to try to find out what worked or did not work in both similar context, your own, and in different contexts. You want to use the findings from your literature review to formulate your own research questions and conceptual framework. If not much literature is available—or oftentimes in addition to the literature review—some researchers like to do secondary data analysis of existing data sets such as DHS data. This is done to see if they can determine the needs that are target population without collecting new data.

The next step, once you've looked at which literature data already exists, is to identify research questions for your own formative research. What do you really need to find out in order to make your own intervention effective? What other variables might be related to the behavior that you want to change with your intervention? In Nigeria, for example, when the NetWorks project wanted to create an SBCC program to promote caring for and repairing mosquito nets, they first conducted formative research. The primary research question was: what do bed net users in a targeted area know, think and feel regarding caring for and repairing their bed nets? This is a good example of a research question that can guide formative research.

Step 3 in the formative research process is to develop a conceptual framework. This is a model that explains what you think is going on around behavior or health practice. It's a visual way to map out your understanding of how something happens, and it's used to inform research, particularly to help develop the research questions. This slide shows a conceptual framework that was used in the NetWorks project when we were brainstorming what influences net care and repair behaviors. We used this model to create the questions that we eventually asked during our formative research.

This is a rather complicated and detailed conceptual framework, but you can see that in the blue there are social norms and beliefs that were thought to influence intentions which are then pictured in red. These intentions were thought to lead to actual behaviors which are pictured in purple. Those behaviors, plus some environmental factors pictured in the gray circles, were thought to lead to the belief and integrity of the net. If net integrity was high, then it was thought that this would lead to a greater impact on the lifespan of the nets, decrease malaria incidence, country and program cost savings, and household cost savings. This model was used in the formative research for this project, whereby much of the questioning of formative research participants focused on all of these different influencing variables.

Why is it important to use a conceptual framework? First, it gives you a better understanding of factors influencing the behavior you want to change. Second, it can help shape what topics should be probed or followed up on in the formative data collection. And third, conceptual models are always changing. As we learn more, we will make changes to our model, and that's okay. As discussed in Module 1, theory is very important in SBCC and can often help in developing the conceptual framework.

Oftentimes, behavior change theories will already give you an idea as to why people do the things they do. Using these already well-established theories can help you to identify new research questions that would make the theory relevant to your specific context. The use of theory can also help to inform the development of guides for in-depth interviews, focus group discussions, key informant interviews, or questionnaire development. It can also help guide the development of your codebook which we will talk about a little later for your qualitative data analysis. Finally, theory can guide the analysis of both qualitative and quantitative data.

That was Part 1, and we talked about the importance of doing formative research. We’re going to take a break here. When we come back, we'll talk about different data collection methods that are used in formative research.

Part 2: Data collection methods for formative research

Now let's move on to Part 2 which focuses on the various data collection methods that are available for conducting formative research. Formative research is often thought to be just interviews and focus group discussions, but actually formative research can include any type of data collection including extensive literature reviews, qualitative research, and quantitative or survey questionnaire forms of data collection.

Quantitative data collection can include census which captures data from everyone in a population, or it can be a sample survey that selects a representative subset of a population. This typically involves sampling using a randomized process in order to maximize representativeness of the sample and avoid any bias in the selection process. Surveys may be done at more than one point in time to examine change. For instance, they can be done at baseline or pre-test before an intervention and then later during follow-up or post-test. Panel or cohort data samples at Time 1 and then re-interviews the same individuals at Time 2 and other time periods. Exit interviews can be conducted with clients after clinic visits. These are also helpful for designing future interventions. Structured interviews are more closed-ended questions that are used, for example, with health personnel or community leaders. Also formative research could include cost-effectiveness analyses when determining what intervention delivery format to use. For example, does an SBCC message make the most sense to deliver via radio, television or text messaging given your target audience, and which format will give you the greatest reach for the lowest cost? The most common feature of most quantitative methods however, is that through proper sampling you can achieve representativeness of your target population. In other words, it's easier to sample people who will most look like your eventual target audience.

There are also multiple qualitative methods that can be used when conducting formative research. The most common ones are in-depth interviews or commonly referred to as IDIs and focus group discussions or FGDs. Focus group discussions are best used when you want to take advantage of group dynamics. For instance to explore, brainstorm, argue through opinions or choices, or have members react to each other's opinions. FGDs require greater skills in group management which we will talk about in a little bit. Key informant interviews are interviews conducted with key people in the community that have their pulse on what is going on and can speak to the behavior of the community in general. Ethnographies may be group or individual exercises that try to explore the sociocultural basis for individual or group behaviors. These can be done with participant observations where someone who's actually a part of the community does an observation study. Or they can be non-participant observations where someone who's outside of the community can look at steps in a process, use of resources, or patterns of interaction. You can also conduct historical research or oral history interviews to look at the history of why people behave the way they do currently. Qualitative methods could also include projective techniques. Some examples are pile sorting, free listing, ordering, photo elicitation, or drawing pictures. And we'll talk about some of those in a little bit.

This slide shows some of the most commonly cited distinctions between qualitative and quantitative research. Which method you use depends on the research questions you're asking in your formative work. For qualitative methodologies, this would include a more exploratory approach where you are asking why a behavior occurs. It is relatively subjective. In other words, you have to be able to interpret the data that you collect from participants. Qualitative research also enables discovery, it allows for insights into processes, tendencies, motivations and meanings behind behavior, and it requires an interpretive process. Quantitative methodology often asks how many or how often. It is relatively objective. It provides evidence, and it allows you to measure level or frequency of behavior, trends or correlations between two different types of behavior. It allows you to describe and predict behavior.

The next couple of slides go through issues you may have to consider when determining which types of methodology to use. For instance, what is the purpose of your research? If you seek a richer, more personal picture of individual motives and decisions, or you need high internal, or what could be called local validity, then you probably want to use qualitative methods. However, if you need to calculate numerical indicators, parameter estimates of the population you're targeting, or you need high external or generalized validity, then you probably want to use quantitative methods. If you want to understand the categories and themes around which people think and talk about things, it would probably make more sense to use qualitative methods. However, if you already know the themes around peoples' thoughts and behaviors, quantitative methods would make more sense if you want to determine how common those themes are. For instance, if you want to determine why people do not seek treatment for malaria at health facilities, you might use qualitative methods to determine what the factors are. However, if you already know some of those factors such as belief in traditional medicine, lack of accessibility to the clinics, costs associated with going to a clinic, or discomfort with the clinic process, then you might use quantitative methods to see how common each of those factors are in your target population.

Another big issue to consider is your sample size. You can use qualitative methods when you want to answer your questions with a relatively small number of participants or if you want to know more about a small group of people. But you'd probably want to use quantitative methods when you have the ability to sample systematically so that the sample is statistically representative of your population, or if you want to know more about an entire population.

Another important factor to consider when deciding between qualitative or quantitative methods is, of course, analytic capabilities. Many people do not feel confident in their quantitative analysis and statistical skills, so they will often use qualitative methods. However, good qualitative analysis requires insight and discipline and is much harder to do well than many people realize. It is often a very long and tedious process that requires long stretches of concentration.

Time burden is another issue to consider. This depends partly on the scale of the techniques used, the complexity of the concepts being examined, and the diversity of the audience being studied. But there are ways to make formative research more sensitive to time constraints. For instance, with qualitative methods, you can conduct focus group discussions very quickly and more quickly than a large representative survey. However, with quantitative methods, service statistics, which when systematically collected, can provide a ready source of information. So it's important to be pragmatic and use available data if it is accessible and relevant.

All research methods have some utility and can be used for different purposes depending on the needs of the program and the nature of the audience. Most programs use multiple methods at different stages of the project. This is helpful because no one source of data tells the whole story.

It's important to ask yourself a series of questions when you are selecting the most appropriate method. Are the methods consistent with your theory? Do you need to generate hypotheses or test hypotheses? And how strong is the need to generalize your data to a population? Will the chosen methods generate the type of information you need, and if you're using more than one method, how will they complement each other?

Integrating qualitative and quantitative approaches can be helpful particularly using qualitative methods to generate hypotheses that can then be tested in a quantitative survey. You can also develop questionnaires that are informed by your qualitative findings. Or you can turn to qualitative findings to help interpret, reinforce or reconsider your quantitative findings. Finally you can rely on qualitative findings to provide contextual understanding of the community of interest.

I hope running through some of these issues to consider when choosing between qualitative and quantitative methods has been helpful for you. Let's take a break here, and when we come back we'll move on to Part 3 and delve more into the different types of qualitative methods.

Part 3: Choosing among qualitative methods for your formative research

Welcome back. In the last part we talked about the advantages of using either qualitative or quantitative methods. Now, we are going to talk in a little more detail about qualitative methods and there are multiple approaches that you can use, but how do you choose among them? We will talk about determining which qualitative method is best when designing your formative research.

One of the less commonly used but often one of the most powerful qualitative methods is the projective technique. This technique allows participants to project their opinions on the subjects or situations. They are often able to enrich group discussion by improving group dynamics compared to traditional focus group discussions. They also reduce the potential for providing socially acceptable answers or from participants withholding information.

Projective techniques also have the ability to provide more meaningful information on sociocultural factors. For instance, if a cultural factor is deeply ingrained or more subconscious, projective techniques can bring those issues to the surface. When discussing sensitive matters, such as gender dynamics, it can also be easier to discuss by referring to third-person context, and projective techniques allow you to do that. Finally, the unstructured and open-ended nature of projective techniques allows for more ambiguity and a wider discussion within a group. One limitation of the technique, however, is that interpretation is time-consuming and requires the analyzer to approach analysis from multiple angles or in a holistic way.

This slide shows five photos that were used in a photo elicitation projective technique in Indonesia for a study that was focused on smoking behavior in public places. The next slide shows the questions that were asked of the participants for each photo. The participants were brought into a focus group discussion and the first thing they did was to look at each of these photos and answer each of these five questions:

1. What comes to mind when you first see this photo?
2. Can you describe what is happening on the photo?
3. What emotions does this photo create for you and why?
4. Does the photo represent something that happens in your community? Why or why not?
5. And what would you do if you saw this situation occurring in a public place such as a mall or a restaurant?

This technique allowed for the researchers to get a real sense of what community norms are like around smoking in Indonesia.

There are also other ways to use projective techniques. One is having a discussion of rules in general such as in describing what is a “good man” or a “good woman,” “good community leader” or “good caregiver.” Another technique is sentence completion. This requires starting a sentence and then letting the participant complete it. For example, “it is important that people sleep under a mosquito net but many people do not do it because…” and then the participant completes the sentence, or “it is good to test children for malaria when they have a fever but hardly anyone does it because…” and the participant completes the sentence. This is a great technique because it is a creative way to portray exactly what a participant thinks about social norms or behaviors.

The most commonly used data collection methods for formative research are focus groups or in-depth interviews with individuals. Many people use both methods together but which one is most appropriate? One issue to consider is whether or not the data you seek would benefit from group interaction or would be hindered by it. For instance, you might want to use focus groups when the interaction of respondents may stimulate a richer response or new and valuable thoughts, but it might be better to use in-depth interviews when group interaction is likely to be limited or non-productive.

Another issue to consider is whether group or peer pressure will be valuable in challenging the thinking of a respondent. If so, it is best to use focus group discussions. For instance, if you are finding out why people do not seek treatment right away for malaria, having group members challenge each other’s reasons might be productive. However, if a group or peer pressure would make people embarrassed and force them to speak less or to not voice their true opinions, then in-depth interviews are more appropriate.

A third issue to consider is sensitivity of the subject you wish to discuss. If the subject matter is not so sensitive that participants will temper their responses or withhold information, then focus group discussions are fine. However, if the subject matter is so sensitive that participants will be unwilling to talk openly in a group, then it's more appropriate to use in-depth interviews.

Finally, it is important to determine how much depth you want from individual responses. You can use focus groups when the topic is such that most participants can say all that is relevant or all that they know in 20 minutes, which is approximately how much time they'll have to talk within a group discussion. However, if the topic is such that it requires greater depth of a response, such as with complex subject matter, or you have very knowledgeable respondents, then individual in-depth interviews would be more appropriate.

Analyzing qualitative data as I mentioned earlier is a very long and labor-intensive process if done correctly. It requires developing a coding system, and in developing a coding system, you want to create a codebook which identifies themes that you feel have emerged as important. It's also good to have at least two independent coders who code the data based on the codebook and then compare their coding and talk about any discrepancies. This creates what we call “interrater reliability.”

Software such as ATLAS.ti and NVivo are also available to help organize the coding system. After the coding is complete, then decoders often need another meeting to talk about the analysis and interpretation of the data.

There are several common issues that often arise in qualitative formative research, including asking too many questions in the interview guide, using survey questions instead of open-ended questions, asking for confidential information in a group setting, having the inability to ask good follow-up questions or using a sample that is too large to analyze. But if you keep these issues in mind when designing your research, you should be able to avoid many of these common problems.

That's the end of Part 3. We talked about different options for qualitative data collection. Focus group discussions are the most common form of formative research and we will talk about those in more detail in Part 4.

Part 4: Conducting focus group discussions in formative research

Welcome back. This is Part 4. Now, we are going to talk about some ways to make your focus group discussion successful. The role of the moderator in a focus group discussion is very important. This person guides the discussion, stimulates the interaction among participants, he or she exerts subtle control over the group, encourages different opinions, encourages shy respondents, discourages dominant respondents and also must remain neutral during the discussion. The moderator is not a teacher. He or she is not supposed to provide instruction. The moderator is also not a judge. He or she does not look down on participants, does not agree or disagree with them or put words in the mouths of the participants. He or she must remain neutral during the whole discussion and the moderator is an active listener meaning that they show interest in what each participant is saying and makes sure that they are correctly understanding what is trying to be conveyed.

A good moderator is able to question, probe for more information, and ask for clarification if a response is not well understood. He or she is also responsible for building rapport within the group and this sometimes requires conducting an ice-breaker activity in the beginning of a focus group discussion. A good moderator is able to handle group influences, to be a good active listener, to control the group dynamics and to read body language to know if a participant is bored or uncomfortable. In asking questions during a focus group discussion, it's important to use open-ended questions. You want to avoid questions that require a simple yes/no response. Sometimes it's helpful to start with questions that ask what or how, rather than why. It's important to remain focused during your questioning and to pilot test your guide which is a series of questions that you are going to use to guide the discussion.

Your focus group guide is created based on the list of what you want to learn during the discussion, so it's important to think of six to eight major issues you want to cover. Some researchers even suggest that you have no more than ten main questions during a focus group discussion. You want to write open-ended questions that are grouped around each of the issues that you identify as important. You want to make sure that the questions progress in a logical fashion and that you move from general to more specific topics. It's also a good idea to list possible probes under each discussion question that would help you to clarify or deepen your responses, especially if you are new to facilitating a focus group.

When moderating a focus group, it's important to keep to the discussion questions. Listen carefully to what the participants say and respond to unexpected, but relevant information with more probes. To help you decide when to probe with more questions, always keep in mind what it is you ultimately need to know. Be careful not to probe too much early in the discussion as your participants will feel like you're interrogating them. Also wait to see if the group introduces a concept themselves before you introduce it as a moderator. A good moderator also allows participants to complete sentences or thoughts without interruption. Sometimes silence is important to allow participants time to think before they complete their thoughts. You also do not want to probe one person too aggressively or too long and you want to address the whole group with your probes looking around at each participant. It's okay to re-order your questions as needed to match the flow of the group discussion. In other words, let the group guide the discussion. It's also very important to save time at the end of the discussion to ask if there's anything else the group thinks you should know or would like to add to what was already said.

So now that we've talked about using a focus group guide and what makes for a good focus group facilitator, let's talk about the actual stages of the focus group discussion.

1. The first stage is the introduction. This is where the moderator explains what will happen during the focus group and both the moderator and the participants introduce themselves.

2. The next step is setting the stage for the focus group discussion. It's important to use a tone that is both inviting and serious to explain the general purpose of the study and

your role in it. You want to explain the reasons for using audio or visual recording if you choose to do so and if you have an observer or note taker in the room, you also want to explain their roles. It's important to lay down some ground rules including the importance of speaking one person at a time and express your interest in hearing different points of view. Explain to the participants that there is no right or wrong answer.

3. Stage 3 is building rapport with your participants. This helps put the participants at ease and initiates the conversation. You can use an ice-breaker here if desired or you can just use one or more open-ended questions that everyone can answer comfortably, but that will spark their involvement. Encourage everyone to contribute to the discussion by waiting for someone to speak and you can glance at specific individuals, but it's important to ask a general question, such as: "does anyone use a mosquito net every night when they go to sleep?"

4. The next stage of the focus group discussion is the actual in-depth discussion. This is where participants share their thoughts on the discussion topic. This is where you will follow your focus group discussion guide and remember to use open-ended questions, probe to clarify or deepen responses you receive, avoid closed-ended questions, leading questions, or asking two questions at once. Be sure to ask questions in a logical order progressing from general to specific, but it's okay to allow the group to guide the discussion.

5. The final stage is closure. This is where the moderator summarizes the discussion and thanks the participants. Also plan one or two questions to obtain any final information, such as asking: "Is there anything we did not discuss that seems relevant or is there anything else that you think I should know about this topic?" And if participants tried asking you questions during the discussion, they can be answered at this time. So in this part we discussed the importance of the role of the moderator in a focus group discussion and ways to make your discussion successful. When we come back we'll look at designing survey questionnaires.

Part 5: Designing survey questionnaires for formative research

Sometimes formative research requires looking at numbers to determine what the base line level is for knowledge, attitudes and behaviors. In this section, we will talk about designing survey questionnaires to address those base line levels. Once you know where your targeted audience is for these variables, you can design an intervention to meet them where they are; that way you ensure the intervention is not too elementary or too complicated.

Questionnaires, if not done well, can result in data that is often misleading or difficult to interpret. With survey questions, the burden is on the respondent to interpret the question, to generate an opinion or representation of their relevant behavior to format their response to fit the response choices they are given, and sometimes to edit their answer if they want to present themselves in a positive light. As the researcher, you have the responsibility to minimize that burden and this will give you better results.

There are two types of survey questions: open-ended questions and closed-ended questions. Open-ended questions can be used in surveys, such as: “What did you think of the service you received today?” But the difficult part is how you will process and code the data. If you ask open-ended questions, it may provide for more subjectivity but then you've sacrificed reliability of the data. Closed-ended questions, on the other hand, are items that require a “yes” or a “no” response. They can be answered using categories or frequencies or Likert-type scales which I would describe in a minute.

These are a few examples of open-ended questions: “Do you have any comments about the service you received today? What was the best thing about our service? Or do you have any other comments?” It is often important to decide on how you will code responses to open-ended questions in advance. You also need to leave enough space for your answers, as the amount of space provided can signal what sort of answer you expect.

Often a question can be asked both in an open-ended or a closed-ended way. This slide on the left shows a closed-ended question: “How many nights do you typically sleep under a net per month?” And the respondent is given an answer set where they must choose one. Whereas, on the right side of the slide, the same question is asked in an open-ended format: “How many nights do you typically sleep under a net per month?” And then the participant simply writes in the response. It's important to think about how people would react to each of these types of formats and what seems best. You get more information with the second option but the first option heads off bad data.

Likert scales are answer sets that list numbered points and then contain semantic anchors on either end. This slide shows one survey item: “How confident do you feel that you can sleep under a bed net every night?” And then it has a Likert scale response with the semantic anchors being “not at all confident” and “extremely confident.” There are seven numbered points in between those anchors and the respondent must choose one number to represent their response.

In designing survey items, it's important to have consistency in the way you format responses. For example, on this slide, the first item asking: “How is the service you received at the clinic?” The respondent chooses a number between 1 and 5 ranging from poor to good. But in the next item: “How were you treated by the clinician?,” they have seven-point scale to choose from. It's important to match the different response sets for each item as much as possible.

And finally, the most important thing to do when using a quantitative survey is to pre-test to make sure that the participants understand the question and the answer format, and then you can make adjustments to the questionnaire as needed. Pre-testing will be covered in much more detail in the next module. We covered a lot of information about formative research processes today.

As we discussed, there are many options to formative research methodology and they can be combined depending on the research objectives. But in summary, it is important to remember that good formative research will help to focus an intervention and ensure greater likelihood that will have an impact on behavior change. Also, the research and program teams together along with the stakeholders can use the research to make decisions about the message appeal, what the actual message conveys, channels by which is it delivered and the audiences targets.

Effective SBCC materials are not developed quickly or easily. Success requires strong formative research and a participatory strategy process. Finally, here are some resources that may help guide you in your formative research.

Thank you for spending some time listening to the talk and I wish you the best of luck in your formative research activities.

Resources

- Hesse-Biber, S.N., & Leavy, P. (2004). *Approaches to Qualitative Research: A Reader on Theory and Practice.* New York: Oxford University Press.

- Warren, C.A.B., & Karner, T.X. (2010). *Discovering Qualitative Methods: Field Research, Interviews, and Analysis* (2nd Ed.). New York: Oxford University Press.

- Atlas.ti Qualitative Analysis Software: http://www.atlasti.com/index.html

- Myers, J.L., & Well, A.D. (2003). *Research Design and Statistical Analysis* (2nd Ed.). Mahwah, New Jersey: Lawrence Erlbaum Associates.

Speaker biography

Dr. Kaufman is an applied social and health psychologist. In her 10 years of international research and evaluation experience she has worked in the US, Nepal, South Africa, Tanzania, Ethiopia and Indonesia on topics including HIV prevention, family planning, malaria treatment and prevention, tobacco control and child survival. She has presented her work at several international research conferences and has published widely in international peer-reviewed journals. She also teaches courses on health communication programs, the psychology of gender, global gender issues and sex trafficking of girls and women.

Questions? Contact gabrielle.hunter@jhu.edu

To access the full course content, including slides and videos, go to SBC Learning Central. Getting Started (PDF).

Acknowledgments

This presentation is made possible by the generous support of the American people through the U.S. Agency for International Development. The contents are the responsibility of the presenter and do not necessarily reflect the views of USAID or the U.S. government.

JOHNS HOPKINS BLOOMBERG SCHOOL of PUBLIC HEALTH | Center for Communication Programs™ | CDC USAID FROM THE AMERICAN PEOPLE President's Malaria Initiative | NetWorks