Success Case Method In-Depth Specifics for Anticipatory Action Studies

(Appendix F from 'Impact Assessment on a Shoestring: Measuring the Impacts of Forecast-based Financing in Resource Limited Settings' by Selby Knudsen, 2021)

1. Component 1: Developing impact model and model of success

There are two parts of the first component that must occur prior to data collection. The first is to develop an impact model. This will vary between each anticipatory action / forecast-based financing (FbF) program, because each program has been established using different hazards and early actions. Therefore, each program will have a slightly different theory of change to base the impact model on. This paper will use Bangladesh as an example.

Developing Impact Model

Their theory of change is that by providing cash grants prior to flooding, then beneficiaries will be better able to evacuate, make fewer destitution sales, accrue fewer debts, consume more and better quality food, experience less psychological stress, suffer less disease, and resume productive activities than if they had not received the cash. Using this theory of change the impact model can be created. This can be done by the M&E team at different NS, with or without input from stakeholders. Even if stakeholders are not consulted, the draft impact model should be circulated amongst the assessment team staff and the FbF team to make sure everyone is in agreement.

- *Example of Impact Model*

The most basic form of the impact statement is the following: By providing early actions before a forecasted hazard, beneficiaries should be able to prevent or reduce negative impacts such as loss of life and livelihoods. For the Bangladesh FbF assessment, the impact model would be more specific, and would constitute the following: By providing cash grants in advance of forecasted flooding, beneficiaries will be able to evacuate the affected areas, limit the number of destitution sales, consume good quality food, and generally prevent the negative impacts of flooding.

Creating Model of Success

In most SCM cases, because it was initially designed as a way to determine whether interventions had an impact on organizational results such as ROI, the model of success is that participants that underwent training were able to apply these trainings successfully and produce better results. In a modified SCM study that assessed the impact of a nonprofit program, success cases have been participants that retained stable employment and housing. Other examples include having success be measured in high changes in psycho-social scores and having positive health and housing outcomes as judged by social care workers. This shows that the methodology can be adapted to different fields and models of success can vary greatly. All involve taking impact models and deciding which variables define a successful impact. For FbF programs the success model will vary by program, because there are different combinations of hazards, early actions, and impacts. Coryn et al. (2009) created a success model using three different variables. If a participant had a positive

outcome with all three variables, they were deemed a success. A similar technique will be used for FbF programs to define success.

- *Example of Model of Success*

To use Bangladesh as an example, the impact model involved several variables: evacuation, limiting destitution sales, consuming good quality food, experiencing no change in health, and not going into debt. Therefore a model of success will include these variables. A success for evacuation will mean that beneficiary households were able to evacuate prior to flooding with their families, livestock, and assets. A success in limiting destitution sales will mean that beneficiaries did not have to sell assets such as furniture, cookstoves, or livestock in exchange for money or food. Success in consuming good quality food will mean that the number, size, and variety of meals did not change from prior to the flooding. Success in terms of family health would mean no increase in health issues from prior to the flood. For the debt indicator, success would entail not needing to take out new loans after the floods. To be a success case, a participant will need to have had a success in at least four out of the five criteria. A participant will be classified a moderate case if they have had a success in two or three criteria. A participant will be classified a failure case if they have had a success in one or fewer of the criteria. The diagram below visualizes the breakdown
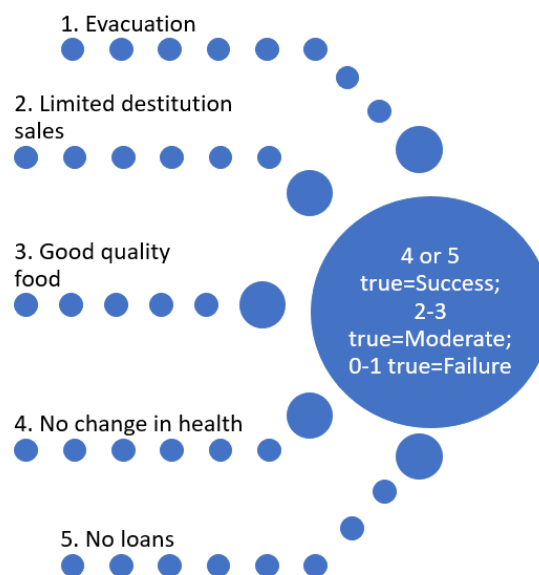
This can be adapted based on which indicators are being assessed and how many indicators are involved in the impact assessment.

2. **Component 2: Quantitative Survey**

The quantitative survey will gather basic information on the intervention and impact to find success and failure cases. Using the Bangladesh example, the survey will therefore need to ask questions about conditions prior to receiving the grant, what was done with the grant, and conditions after the flood in relation to health, livelihoods, and assets. This will help establish a baseline and then look at what changed. In the example of Bangladesh, questions need to provide enough information to assess whether a case was a success in any of the five categories. Previous uses of this methodology

have used very simplistic surveys just to determine the success cases, which is one of the reasons that it has been described as a simplistic methodology. For FbF studies, the survey will be a bit more detailed, so that aside from determining success cases some quantitative data can be gathered from beneficiaries.

Sampling and Sample Size

Many of the studies that have previously used this methodology have administered the survey to all participants, because they have had a small number of participants (Coryn et al., 2009; Clinton et al., 2007). The FbF programs have much larger number of participants, for example 1059 people were given the cash grants in Bangladesh (Gros et al., 2019). Therefore, a sample of participants needs to be taken. Sampling can be done in several ways, depending on the geographical area where the trigger occurs. If the area is small, one stage random sampling can occur. If the geographical area is larger, it may be better to do two-stage cluster sampling, where districts are first randomly sampled, and then individual beneficiaries are randomly selected from the sampled districts (USAID, 2021). In previous studies used to assess WFP interventions on nutrition, they have found that if there is limited data on the variables that are being assessed, a sample size of 150 to 250 beneficiaries should be sufficient. If the sampling design involves clustering, then 10 households per cluster should be sufficient, so between 15-25 clusters should be randomly selected (WFP, 2009). According to Israel (1992), with a population size of 1000 (which is similar to the Bangladesh intervention population) a sample size of 91 would result in an error of ±10% and a sample size of 286 would result in an error of ±5%. The error would be approximately ±5% if the upper bounds of the WFP sample size is used. If the site has the capacity to conduct sample size calculations, that can be done in leu of using the 150-250 sample.

Administration of Surveys

Interviewees all mentioned that volunteers had a lot of experience in administering surveys, so they should be used. Administration of this survey will require the day long training, similar to previous surveys. In past IAs, there have been issues of not being able to find beneficiaries, so backups will need to be identified in advance.

Analysis

After the surveys are administered, the data will need to be analyzed to find the success and failure cases. This will require someone with basic knowledge of statistics to look at the data. In prior studies, there have been specific cut offs for numbers that have been considered a success and failure, and all other cases are classified as moderate (Coryn et al., 2009). For the example of Bangladesh, analysis will need to be done on whether a beneficiary was a success in the five variables that were established in the model of success. This survey data should also be used to provide quantitative data on the intervention, as well as demographic characteristics. This survey can provide information on what beneficiaries experienced before, during, and after the flooding as well as how they used the grants.

3. **Component 3: Qualitative Survey**

The next step of this methodology is to sample a few of the successes and failures to interview to determine what factors led to the success and what led to the failures. Different studies have done

this differently, with some choosing to only look at successes, but for FbF it is important to have a comparison with failures and to see why things didn't go well (Brinkerhoff, 2005).

Sampling and Sample Size

The number of successes and failures has varied, but there are usually between 2 and 6 people from both success and failure groups interviewed (Coryn et al., 2009; Clinton et al., 2007). As FbF studies have larger beneficiary numbers than previous studies done, the sample size should be a bit larger to help understand different reasons for success and failure, between 6 and 10 in each group. Literature on qualitative sample sizes has suggested that a sample of 10 participants is sufficient if participants hold a large amount of information relevant to the study. All participants will be able to provide large amounts of information, therefore the sample size of 10 seems sufficient (Multerud et al., 2015). Other research has suggested that 15-30 is the optimal sample size for single case interview studies (Marshal et al., 2013). The upper range of the sample size proposed here fits these requirements.

Questionnaire Development and Administration

Qualitative questionnaires will be developed differently for successes and failures. The goal of these questions will be to allow an open-ended conversation about why successes were successful and why failures failed. In the example of Bangladesh, this would include questions on how the grant money was spent, what challenges occurred when preparing for floods, and what occurred to the beneficiary after the flooding (Gros et al., 2019). These questions should be developed to probe for specific information on successes and failures so that FbF staff can get a strong understanding of which actions worked, why they worked, and if there are specific characteristics or actions that were taken that have led to successes. For failures, information needs to be collected to determine if some actions didn't work and why they didn't work. If actions didn't work, the interviewee should be probed to determine why they didn't work. If some actions that were taken with the cash were not successful, this information needs to be determined in the interviews so that recommendations for actions can be given prior to cash transfers. Questionnaires will be administered as semi-structured interviews. Staff members or volunteers that are trained in qualitative interviews can conduct the interviews.

4. Component 4: Analysis and Reporting

Qualitative analysis will focus on the reasons that success cases became successes and why failures failed. This will help determine if there is a pattern to success and failure, and what some of those conditions are (Piggot-Irvine et al., 2009). All of the results are then written up into a report. Most of these reports are typically written as "success stories," but in the case of FbF, the descriptive statistics and the failure stories should also be included to provide context and detailed analysis of failures (Brinkerhoff, 2005). Looking at failures will hopefully provide evidence of changes that can be made to improve the interventions. The final report should include quantitative data on the intervention and participant characteristics as well as in-depth success and failure stories.

5. Modifications

Depending on the capacity and funding available at different National Societies, there are several modifications that can be made.

Adding non-beneficiary groups

First, many interviewees mentioned the desire to look at non-beneficiaries in addition to beneficiaries. If the capacity and funding is available, non-beneficiaries could be sampled to take the survey and several success and failure cases should be interviewed. This will give a brief picture of the characteristics of the non-beneficiaries and some of their success and failure factors. There are several different sampling techniques and sample sizes that could be used depending on the capacity of the NS and the funding that is available.

1. *Include non-beneficiary success and failure interviews*

This modification would include purposive sampling of a small sample of non-beneficiary failure and success cases. This will involve using the same variables to determine the beneficiary success model, and sampling people that have had a successful preparation for the flood based on those variables and those that have not been successful. Information for sampling can come from either stakeholder knowledge or post-disaster surveys done by NS. The sample size should be similar to the beneficiary interviews, between 6-8 participants in each group. Previous research on sample sizes for qualitative research has been inconclusive, but a meta-analysis suggested that a sample size between 15 and 30 should be sufficient, so combined with beneficiaries this sample size is sufficient (Marshal et al., 2013). They will be asked similar questions to the beneficiaries. The data collected from the interviews will be able to establish how people that did not receive funds responded to the flood, and different reasons that they had successes or failures in response. While it does not provide a representative sample of the non-beneficiary population, if the NS does not have greater capacity it will at least provide non-beneficiary information to draw some conclusions about the program impact. The figure below provides an overview of how this modification would work.
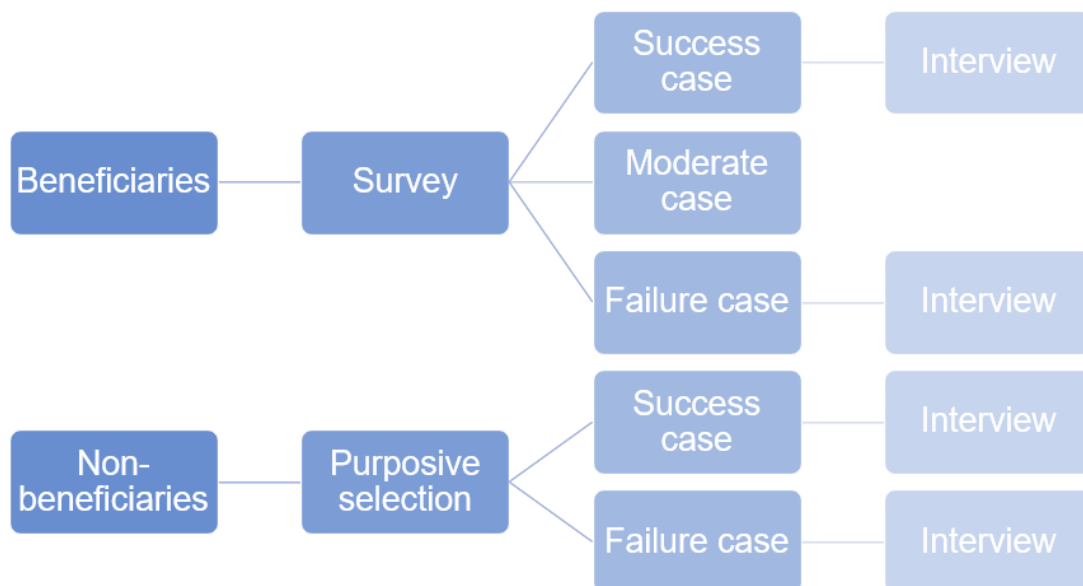

Figure: Modification with non-beneficiary interviews

2. *Include non-beneficiary survey and interviews*

This modification is most appropriate for NS that have a strong statistical and M&E capacity. It involves surveying both beneficiaries and non-beneficiaries, and then finding successes and failures from both groups and interviewing them to get in-depth information on both groups. There are different sampling techniques that can be used to determine sample size for this modification. If the data is available, and the NS has the capacity to do so, the traditional sample size calculation to compare groups should be used. If those sampling techniques are too difficult for NS to do, or the NS is not able to conduct a survey with the large sample sizes that will result from sample size calculations, then the WFP sampling technique can be used. To determine the impact of nutrition programs, they use the sample size of 150 to 250 per group as a rule of thumb if not enough data is available to calculate sample sizes. Using that rule of thumb, 150 to 250 beneficiaries and non-beneficiaries should be surveyed (WFP, 2009). Fewer participants could be surveyed, but that would limit the representativeness and increase sampling error. It has been suggested a minimum of 100 participants per group should be sampled (Singh & Masuku, 2014). The downside to this sample size is that it does not have the same rigor as determining the sample size statistically. If the capacity and resources are available, sample size calculations could be done. Sampling technique will be the same as the SCM detailed above, with either simple random sampling or cluster random sampling used.

Once the beneficiaries and non-beneficiaries are surveyed, that information will be used to determine who in both groups is a success and failure. A sample of the successes and failures will be interviewed to determine what factors led to these successes and failures. This modification allows for the comparison between both the beneficiary and non-beneficiary survey and the success and failure interviews. This should give the best overview of what happened during the intervention and what the impact was. It should also provide evidence on why and how people successfully used the intervention, along with factors that can lead to success even without the intervention. Below is a diagram that explains the events in the assessment.
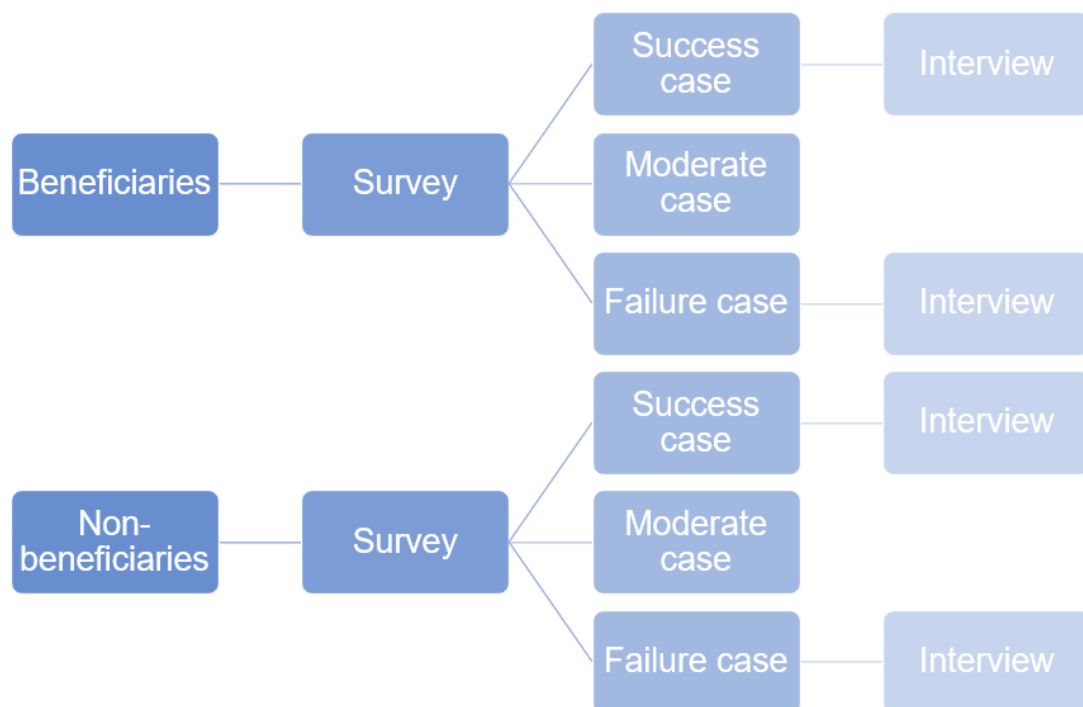
Figure: Modification with non-beneficiary survey and interviews

Adding longitudinal data

One study that used a modified version of SCM decided to include a time series element to the design, re-surveying participants to see if participants moved categories at three different time points (Coryn et al., 2009). This could be a modification to FbF impact assessments if a program had the capacity and wanted more long-term data on impacts.

At each time point, the survey and interviews will need to be conducted, greatly increasing cost and capacity required. Despite this, this modification provides information on long term impacts, as well as robust data on participants that change groups (success to moderate/failure or failure to moderate/success).