

An experiment in Nigeria showed that psychological tools, like priming, can have powerful impacts on survey respondents.

## The Right Way to Ask

**There is no doubt that data is the new gold. Governments rely on data to determine policies and to measure the growth of the economy. But the truth is that data collection is not simple. On the contrary, everyone working on this arena knows that results often vary for many reasons.**

In 2016, the Nigerian National Bureau of Statistics, in collaboration with the World Bank, conducted a survey experiment in the latest round of the General Household Survey Panel to examine how talking about sensitive matters affects responses. If people are reminded about their recent history of adverse events such as shocks and conflicts, will they change their later answers about topics such as depressive symptoms and level of patience?

It is not often that a country decides to nationally collect data on psychological constructs, yet doing so is important to get a pulse on these issues and preferences in order to inform the development of policies and government services. As one might imagine, however, measuring depression is not an easy task. This is particularly the case in Nigeria, which has suffered in recent years from fighting and displacement, and where surveying people about sensitive topics is a challenging task.

## The Study

In this context, we decided to test how *priming* - a tool in the field of psychology in which memories or responses are influenced by a reminder, picture, or other stimulus - could impact measurements.

In this brief, we focus on two measures:

1. an indicator of depression developed from a version of the Center for Epidemiological Studies Depression scale (CESD) - a widely used, validated, and reliable population-based measure, and
2. an indicator of discounting and patience related to immediate versus late rewards developed from a set of time preference questions.

To measure priming, respondents were randomly assigned to a treatment or control group. In the priming treatment, respondents answered questions about conflicts, shocks, and deaths (which we will group into one term, "adverse events") affecting their household in the past two to six years before answering the module on behaviors, preferences, and depression, while in the control group, they answered these questions on adverse events after.

The hypothesis was that being primed on conflicts, deaths, and/or shocks cause people to reflect on their families' recent histories of these events, and consequently influence the way in which they answered the modules on behaviors, preferences, and depression.



## The Results

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### People who have been affected by adverse events are more likely to show depressive symptoms when primed.

For those who have experienced these events, answering the conflicts, shocks, and deaths module first actually increased the chance that they were classified as having depressive symptoms by 3.3 percentage points in comparison with those who answered that module later in the survey.

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### Those who have not experienced adverse events appear better off when primed.

Being primed actually made people who had not been affected both less depressed and less present-biased (the tendency to over-value immediate rewards at the expense of our long-term intentions). One explanation? Being primed served as a reminder to respondents who have not experienced these events that things in their lives could be worse, so their self-reported mental health and present-day patience measures improved.



### Priming is particularly impactful on depression and time preferences for those who have been impacted by personal shocks.

We found that those who have experienced a personal shock, such as the loss of a job, and who were primed on all adverse events had an increased chance of having depressive symptoms of 8.8 percentage points, and were 16 percentage points less present-biased.

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### Priming does not impact measures for those who have been affected by conflicts.

Being primed about conflicts did not impact depression or preferences in a significant way for these respondents. This suggests that the experience of conflict is salient enough to lead to an increased probability of depression and decreased probability of present bias without the help of reminders.



## Policy Implications

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We need to rethink how we structure surveys to minimize measurement error. Amidst the need to fill in data gaps, countries across the globe collect household-level data on a regular basis, while researchers and corporations continuously survey their target groups. However, this research shows that there is a need for better understanding how to design surveys. If priming can impact answers, especially in the context of sensitive topics, then we need to understand exactly how our

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measures are affected by the order of survey modules. To this end, we should review the reliability and validity of certain measurements, and under which circumstances they are “true.” Measuring depression and time preferences well and in a standardized and cost-effective way will allow policymakers to take the right decisions for their countries’ needs. It will also help researchers answer important questions on the correlation between investments, education, and conflicts, shocks, and deaths.

## About eMBeD

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The Mind, Behavior, and Development Unit (eMBeD), the World Bank’s behavioral science team in the Poverty and Equity Global Practice, works closely with project teams, governments, and other partners to diagnose, design, and evaluate behaviorally informed interventions. By collaborating with a worldwide network of scientists and practitioners, the eMBeD team provides answers to important economic and social questions, and contributes to the global effort to eliminate poverty and enhance equity.

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Last Update: April 5, 2018