ANALYSIS PLAN FOR THE END-OF-PROGRAM FOLLOW-UP SURVEY OF THE COHORT 2 GROUP THERAPY TRIAL

Graduating To Resilience in Kamwenge, Uganda, Cohort 2 ("Trial B")
Pre-Analysis Plan
10/22/2024

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Introduction

This document outlines the plan for analysis of an end-of-program *follow-up survey* for an experiment with Cohort 2 of the project "Graduating To Resilience in Kamwenge, Uganda." The survey follows up with a sample of study participants of the "Group Therapy Trial" for which Cohort 2 program participants were randomly assigned to additional Interpersonal Therapy inspired Group Therapy programming (= "Treatment").

Empirical analysis

The analysis will be based on OLS regressions of outcomes of interest on a treatment indicator, controls for stratification controls and baseline values of outcomes where available or their closest proxies. The analysis will be carried out separately for host and refugee communities and with the pooled sample of respondents from both communities. In addition we'll analyze heterogeneity of treatments effects using the ML techniques described in Chernozhukov et al (2020)[1] with a set of baseline variables that will include baseline mental health (Kessler 6, number of mentally unhealthy days), household wealth (measured as the sum of value of land owned, livestock and durable assets), and others. Outcomes will be winsorized at the top and bottom 1% if the standard deviation of the unwinsorized outcome exceeds the winsorized version of the outcome by more than 50%.

Indices

For the construction of outcome group summary measures based on components with different scales, we will use the methodology detailed in by Kling, Liebman, and Katz (2007), unless the index is a specific index in the academic literature, in which case we will use the method employed in that literature to compute the index. For those concepts without a preconceived index formula, our methodology consists in first signing all variables consistently such that

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[1] Chernozhukov, Demirer, Duflo, Fernandez-Val (2020): "Generic machine learning inference on heterogenous treatment effects in randomized experiments," ArXiv: 1712.04802.

higher is telling a consistent story for the index. Then, we standardize the individual components of the index, by subtracting the comparison group mean and dividing by its standard deviation. Then, we take the average of the now-standardized components into a single measure, and then again finally standardize the average (again to the comparison group mean and standard deviation). We will use the follow-up survey control group values for the standardization.

Primary outcomes of interest

We have two types of primary outcomes – psychological and economic ones. We list the outcomes and their components below.

1. **Psychological distress index (z-score)**
   - Kessler-10 score (10-50)
   - PHQ-9 score (0-27)
   - GAD-7 score (0-21)

2. **BRFSS Health-Related Quality of Life (z-score)**
   - Healthy Days Index := 30 - (sum of 2 items: physically unhealthy and mentally unhealthy days) (0 - 30)
   - Subjective health and mental health (average of 2 items)
   - Days of good functioning (0-30) (1 item)

3. **Economic activity index (z-score)**
   - Primary participant labor supply index (z-score)
   - Investments (5th root of total)
   - Expansion intentions index (0 - 4)
   - For additional details on construction of outcomes in the economic activity index, see analysis plan for the short-term follow-up survey

4. **Food Consumption Score***

Secondary outcomes

All outcomes that are not listed as primary outcomes are considered secondary outcomes. These variables will be derived from the attached survey instrument and include economic outcomes (e.g., wage income, business income, productive asset values, savings, loans), psychological composite outcomes (e.g., psychological well-being, optimism, self-efficacy, self-esteem), and social composite outcomes (e.g., social status, social worth, social capital) but are not comprehensively listed here. We will construct two indices of particular interest: psychological well-being (comprising life satisfaction, peacefulness, and positive affect) and social standing (comprising social status and social worth/relational esteem). In an exploratory analysis, we plan to examine descriptive statistics on the quality of IPT group dynamics.

Data collection and timing of analysis

While data collection was completed at the time of submission of this analysis plan, the researchers have been blind to the treatment effect estimates, with the exception of analysis of survey attrition which was conducted during data collection and included comparisons of attrition rates by treatment status for the purpose of management of potential differential attrition.

* A previously uploaded version of this document erroneously listed consumption as the fourth primary outcome. However, a full consumption module was not collected for this trial; instead the survey has a shorter Food Consumption Score module. The replacement of the fourth primary outcome was done after looking at impacts on the first three indicators (when the error was discovered) but before looking at the impacts on the Food Consumption Score.