Can I interview her? Gatekeeping in a telephone survey of female migrants in India.

A. Motivation

Many Low-and-Middle-Income Countries (LMICs) have seen a massive growth in the penetration of cell phones. For example, in India, the penetration of cell phones has increased from under 10% in 2009 to more than 90%. This expanded coverage offers an alternative to expensive in-person data collection (Dabalen et al 2016), allowing social researchers to study the country's large and socio-culturally diverse population efficiently. The recent COVID-19 pandemic has only accelerated the use of cellphone surveys (Arita et al 2023).

However, phone surveys suffer from issues such as higher non-response than in-person surveys. In this paper, we focus on the issue of "gatekeepers" in phone surveys. We define a gatekeeper as the person in a sample unit through whom alone the selected respondent can be accessed. By 'gatekeeping' we mean the act of preventing access to the selected survey respondent.

Gatekeepers pose a problem in at least three major ways. First, they can reduce response rates by refusing to allow anyone in the sample unit to be interviewed. If such sample units differ systematically from those who accepted the survey invitation, this would lead to non-response bias. Second, some gatekeepers can refuse access to the selected respondent but agree to act as a proxy respondent which can lead to biased estimates (Badoe and Steuart 2002; Davin and Joutard 2019). Gatekeeping is of special concern in the context of conservative cultures like India where male household members may don the gatekeeping role on behalf of female respondents potentially leading to large biases in responses to sensitive questions.

Literature on gatekeeping is sparse despite its importance. Brubaker et al (2021) examine biases from respondent selection in telephone surveys but do not explicitly mention gatekeeping. The closest to our paper is the contribution by Hersh et al (2021) who conduct a descriptive analysis of gatekeeping and offer advice based on their fieldwork experience. We build on this initial work and contribute to the literature in the following ways. We study the prevalence of gatekeeping using data from a large-scale telephone survey in India. We analyze the determinants of gatekeeping by using multilevel regression models with sample cases clustered by interviewers. In this manner, we can not only study geographic, household, and individual factors associated with gatekeeping but can also study interviewer effects. Since we collect background information on all our interviewers, we can examine interviewer-level variables that explain these effects. Next, we study the impact of gatekeeping on measurement error by comparing responses from gatekept (and proxy) cases with non-gatekept cases on select variables after adjusting for selection bias. Finally, we make recommendations for survey practice using interviewer observations on gatekeepers and call notes.

B. Survey

The India Human Development Survey (IHDS) is a large-scale pan-India panel survey designed and implemented by the University of Maryland, College Park, USA, and the National Council of Applied Economic Research (NCAER) New Delhi, India. The third wave of IHDS interviewed 47,842 households between April 2022 to June 2024 using the Computer Assisted Personal Interview (CAPI) mode. A special feature of this wave was the effort to track and interview IHDS sample members from previous waves who had moved out to other places for reasons such as marriage, work, studies, etc. During the CAPI interview, the interviewer obtained migrants' contact information from the root household and called the migrant telephone number to let them know that they can expect a call in the next few weeks for a telephone survey.

A total of 46,147 migrants were identified by the above tracking process which makes the IHDS telephonic surveys one of the largest such surveys in India. An external field agency was assigned to interview 40,353 (88%) of these cases while the remaining 5,612 cases (12%) were completed by internal IHDS staff. This design allows us to study house effects (Smith 1978). Interviews were conducted using Computer-Assisted Telephone Interviewing (CATI) in 8 different languages and all interviewers underwent a structured training program. The median interview length was 28 minutes. Since gatekeeping has a strong gender angle, we focus on the 16,452 female married-out migrants cases.
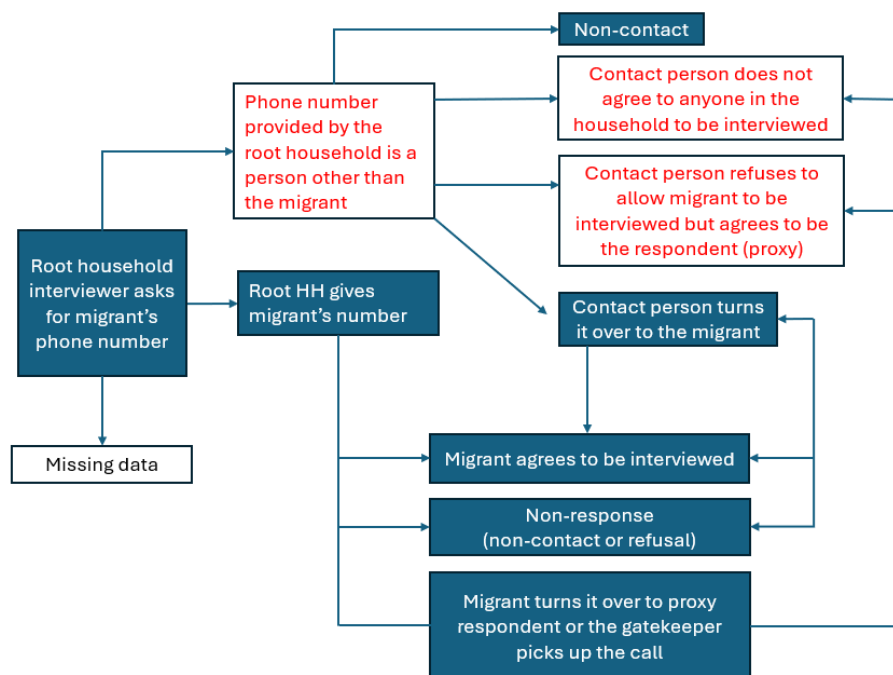
C. Gatekeeping in the IHDS survey

Figure 1 shows the process by which gatekeeping arises: first at the CAPI stage when the root household fails to provide the telephone number of the migrant and then compounded at the CATI stage when the gatekeeper does not allow access to the female respondent.

Figure 1. Gatekeeping in the IHDS survey process. Text in red font represent gatekept steps.

D. Analysis and Results

Root households provided phone numbers of someone other than the female married migrant in 59% of the 16,452 cases. This represents a baseline gatekeeping rate and is in stark contrast to the 32% baseline gatekeeping rate for work migrants. To understand the predictors of gatekeeping, we fit the following model:

$$\log\left(\frac{p_{ij}}{1 - p_{ij}}\right) = \beta_0 + u_{0j} + \boldsymbol{R}_{ij}^T \boldsymbol{\beta}_R + \boldsymbol{Z}_j^T \boldsymbol{\beta}_Z; \ u_{oj} \sim N(0, \sigma_{iwer}^2)$$

The outcome variable is a Bernoulli variable, $y_{ij} \sim BER(p_{ij})$ set equal to one for a gatekept case and zero otherwise. The female married migrant cases, i, are clustered by interviewers j. We explain gatekeeping by a vector of geographic, household, and individual variables ($\boldsymbol{R}$) such as state of origin, urbanicity, household size, occupation of the head of the household, age of the migrant, etc. Interviewer effects are explained by introducing a vector of interviewer-level variables (collected from each interviewer), ($\boldsymbol{Z}$) such as the interviewer's sex, age, workload, etc.
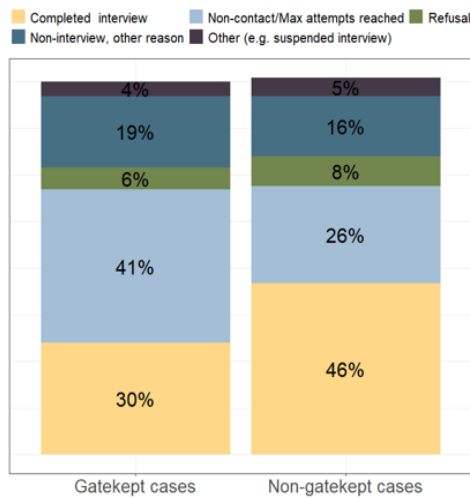

Figure 2. Call attempt outcomes by gatekept and non-gatekept cases.

Turning to non-response, we find a large difference in response rates among the gatekept and non-gatekept cases (Figure 2). The AAPOR RR1 response rate for the non-gatekept cases was 46% compared to only 30% for the gatekept cases. While the refusal rates are approximately (and surprisingly) the same, the difference almost entirely lies in the fact that gatekept cases are either non-contactable or interviewers exhaust attempts (e.g. gatekeepers pick up the phone initially, ask the interviewer to call back later but then never pick up subsequent calls). We will conduct formal analysis by modeling a binary non-response indicator by a function of a range of household and individual variables; the panel nature of IHDS means that we have rich data on responders and non-responders. This will allow us to study if gatekeeping patterns differ across different cultural settings.

We will include analyses of two substantive variables (veiling practices and safety of women) to study whether gatekept interviews register different responses compared to non-gatekept interviews. We will adjust for possible selection bias using propensity score weighting. In preliminary analyses of interviewer observations, we find that gatekeepers are not clear about why the survey is being done and how the data will be used (voiced in 17% of gatekept cases). Training interviewers on how to communicate this aspect will reduce gatekeeping.

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