Premchand Dommaraju
Victor Agadjanian
Scott Yabiku

Caste Differentials in Child Mortality in India

(extended abstract)

Introduction

The enduring and deep impact that the caste system has on various aspects of life is well recognized. The Indian constitution prohibits discrimination based on caste and has mandatory quotas set aside for members of the schedule caste and tribe in municipal, state and federal elections, educational institutions and in government jobs. Even if caste discrimination has subsided to a certain extent, especially in the urban areas, the evidence of continuing de facto discrimination are not hard to find.

Given the persistence of caste-based discrimination, it is not surprising that child mortality rates of lower castes are higher than that of the population in general. Individual socioeconomic characteristics have been typically used to explain this differential. However, recent research on child mortality in other settings has underscored the importance of the community-level effects beyond that of individual characteristics.

This study uses both the individual and community-level approaches to explain caste differentials in child mortality in India. We posit that at the individual level, Caste may have both a direct and indirect effect on child mortality. The ascribed status of belonging to a particular caste affects the individual's life chances in areas like education, employment, occupation, and ultimately wealth. The caste membership may also influence child mortality through caste-based social capital or caste-based discrimination by health care providers, among other factors. We thus expect that the disadvantage of lower castes in child mortality will persist even after controlling for conventional socioeconomic characteristics.

At the community level, this study focuses on community caste composition. Specifically, it looks at how the relative size of a particular caste within the community affects child mortality. Our hypothesis is that lower caste members living in communities with a high proportion of the population that belongs to their own caste will have lower child mortality than those members of lower castes who live in communities where this proportion is low. The rationale for this hypothesis is based on the connection between the numeric presence of a group in a community and that group's political power. As the proportion of lower caste member's increases, their access to political power; political power offers greater control over resources (including access to health services), which should in turn lead to lower child mortality. This line of argument draws from Laveist's (1993) study of African American communities in the U.S. Besides political power, there are other reasons why the proportion of lower caste in the community may influence child mortality. Thus as the proportion of people with same caste affiliation increases, the inter-caste conflict decreases thereby enabling community participation in crucial decision-making on health-related issues. Also, provider's discrimination in such communities may be less pronounced.

Data and methods

Data for this study comes from India's Demographic National Family Health Survey (NFHS -2) conducted in 1998-99. The survey included a sample of responses from 89199 women covering 99 percent of the population. The survey had a clustered sample design. Within each state, a number of census enumeration areas ("primary sampling units"; PSUs) were selected on the basis of certain criteria. In total, there were 3215 such areas in the survey, each typically spanning one or a few villages, or part of a town or city. On average, about 30 households in each area were randomly chosen, and all women of reproductive age in these households were selected for interview. Weights specific to a small group of PSUs were defined to make the survey nationally representative.

Discreet-time hazard models for mortality of children born within the five years before interview are estimated. The dependent variable is the probability of a child surviving longer than five years. Caste membership and the proportion of lower caste in the community's population are the main individual-level and community-level predictors, respectively. Individual and household covariates that are used in the analysis include maternal age (and a squared age variable to account for a possible nonlinear relationship between age and child mortality), child's sex, mother's education, type of sanitation, type of household water supply, access to electricity, wealth status (measured by index constructed based on ownership of radio, TV, bicycle, motorcycle, and car), area of residence (rural/urban), and access to drinking water and flush toilets. Adjustments are made to account for clustering of deaths. The SAS statistical software package is used to carry out the analyses.

Preliminary results

Preliminary analysis of the data shows that the level of mortality is nearly double for scheduled caste when compared to forward caste at the child mortality stage ($4q_1$) stage. Also, under-five mortality rate of scheduled castes is 50% higher than that of forward castes. Under-five mortality rates are also higher for backward castes than for the general population. Analysis of data from Andhra Pradesh, the second largest state in India, show that the caste differential in under-five mortality rates persists even after controlling for key socioeconomic factors. We are currently replicating these analyses for the rest of the country. Preliminary community-level tests reveal a more complex picture that will be further refined and clarified as our analyses proceed.

Reference:

Laveist, Thomas A (1993). Segregation, Poverty, and Empowerment: Health Consequence for African American. *The Milbank Quarterly*. Vol. 71, No.1, 1993.