Poverty and health: evidence of inequalities in access to health services in a rural community of Kerala, India.

Background: Inadequate access to health goods and services is a barrier to population health in poor countries. In India, the state of Kerala has managed to achieve superior quality of life indicators despite low levels of income. While the Kerala government has developed and implemented health care access policies, problems of inequality in access and exclusions to health care services still persist.

Objective: This paper examines how poverty acts as a constraint to achieving and maintaining good health for households. Specifically, we are interested in investigating the relationship between poverty and inequality in accessing health services and households' capacity to seek treatment when faced with illness. Furthermore, we seek to determine whether these financial constraints generate further inequalities within the household by creating age and gender discrimination in the intra-household allocation of resources for health between these different groups.

Method: Using longitudinal data collected on 2925 individuals (making up a total of 543 households) living in rural community of Kerala (India), we obtain annual consumption of outpatient visits and health expenditures. The data on individuals is then aggregated to obtain household-level data.

To assess inequality in access to health services, two indicators are used: households' annual number of outpatient visits and households' annual expenditures on health goods and services. We distinguish between two types of outpatient visits: outpatient visits for the purpose of treating an episode of symptomatic illness and outpatient visits for the purpose of health maintenance (where no symptoms are present. Examples are treatment of a chronic condition or a routine medical check-up). Each of these types of outpatient visits represents two different yet important needs: treatment for symptomatic episodes of illness may be necessary to alleviate discomfort but are also necessary in order for a household member to perform his or her daily tasks. As such, treatment of a symptomatic episode of illness may be considered as a priority and more urgent than the consumption of outpatient visits for the purpose of health maintenance, especially in a context where resources are very limited. Finally, our analysis on expenditures on health goods and services includes all direct expenses incurred in order to obtain medical treatment, such as hospital fees, doctor (or other health care provider) fees, fees for medical tests, prescription drug costs, transportation costs, etc.

For comparability purposes, analysis are controlled for households' level of need for health services, with "high need household" being defined as a household that includes at least one family member who is either afflicted with a chronic illness or is elderly (60 years old and over). Age-stratified analyses are also conducted in order to determine whether there is a presence of age discrimination. Five age categories are used: less than 15 years old; 16-30 years old; 31-59

years old; females of reproductive age; and 60 years old and over. Each of these age categories represents a different segment of the life cycle with different health needs.

Two indicators for poverty are used to estimate gaps in consumption of outpatient visits and health expenditures on health. The first uses a government –based classification of households. Using various criteria such as education, type of housing, land ownership, etc., households are either classified as being "above the poverty line" (APL) or "below the poverty line" (BPL). Finally, social class (caste group) is closely linked to poverty status and is therefore a good proxy for socio economic condition and is therefore included as our second indicator of poverty in our analysis.

Results: The results provide convincing evidence on inequalities in consumption of outpatient visits and health expenditures across socioeconomic groups. Our data indicates that, on average, APL households consume more outpatient visits than BPL households, regardless of their level of need. Using social class as a poverty proxy, a wide gap is present, with the lowest caste, the Paniyas, consuming half as many outpatient visits as the highest caste group, the Forward Caste (FC) for both high and low need households.

Greater disparities appear when we consider types of outpatient visits separately. When considering only outpatient visits for treatment of symptomatic episodes of illness, differences in consumption of outpatient visits between the high and low need households are not significant between social groups (see figures 1 and 2) with a ratio between the worst-off group (the Paniyas) and the best-off group (the FC) of approximately 2. An analysis of consumption of outpatient visits for health maintenance purposes, however, shows a wide gap between Paniya households and FC households. In fact, the FC consumption of outpatient visits to Paniya consumption of outpatient visits ratio is of almost 4, representing twice the ratio obtained for treatment of episodes of illness (see figures 3 and 4). These results indicate that a) the poor consume less health services (in the form of outpatient visits) than the better-off when faced with a symptomatic illness and b) the poor are not as able to care for existing but asymptomatic medical conditions (such as a chronic illness) or find the necessary financial resources to afford routine medical check-ups.

An analysis of annual household health expenses further confirms these disparities. Figures 5 and 6 illustrate the average household expenditure on health care per capita for all episodes combined. BPL households with low need for health care spend slightly less than half of what is spent by low need APL households. When we consider high need households however, we find that BPL households spend approximately a third of APL household expenditure on health care goods and services per family member. A breakdown of households by social groups reveals even wider inequalities: for low need households, Paniyas spend about 1/7 of what the richest caste group, the FC, spends on health care. The gap between both groups widens when we consider high need households: here, Paniya households spend about 1/17 of what FC households spend. Equally alarming is the fact that Paniya households spend as much for health care regardless of whether or not there is a family member with higher needs. This implies that poorer households face severe budget constraints when it comes to health care consumption: Paniya households simply cannot afford to spend more on health care even when if its family members require more health care goods and services.

Results show no significant differences in consumption of outpatient visits by age or gender, and this for both high need and low need individuals. The data does, however, indicate the presence of gender-differences in health expenditures. Females with high need for health care spend less on health care than their male counterparts (Figure 7).

Conclusions: The research presented provides a comprehensive outlook of health care consumption patterns, and explores the main determinants of health seeking behaviour. Results provide consistent evidence of inequalities in health care utilisation across socio-economic groups. Scheduled Castes and Tribes lie at the bottom end of the consumption scale and, among them, Paniyas look especially disadvantaged. The gap in health care utilisation between Paniyas and FC households is even wider in presence of chronically ill or elderly members. In fact, lower castes cannot afford maintenance or preventive care that the chronically ill or elderly need.

Inequalities in access to health care are not as well depicted when they are stratified by BPL/APL status, as when they are stratified by caste. This is relevant to the extent that eligibility to social policies is designed around this last criterion. Our data indicate that large disparities exist even among groups below the poverty line, with Paniyas showing a consistently higher level of deprivation and exclusion.

Figure 1:

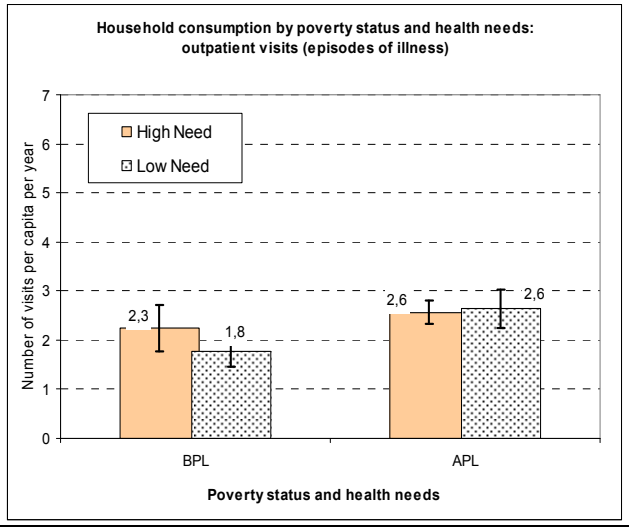

Figure 2:

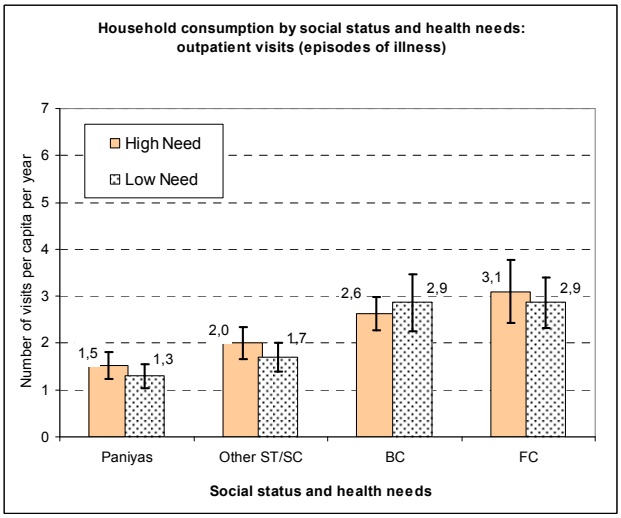

Figure 3:

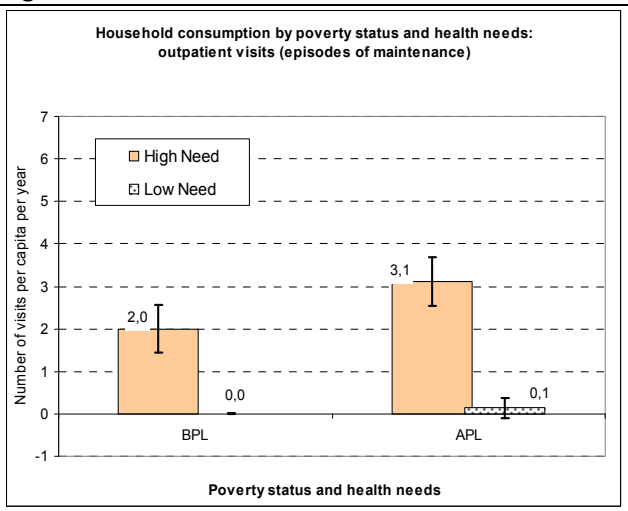

Figure 4:

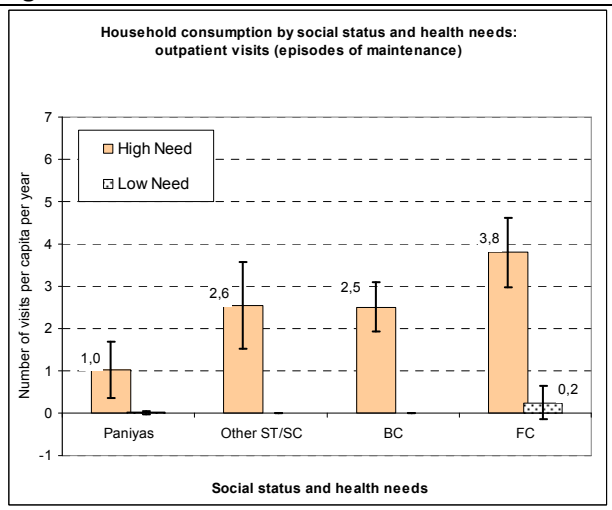

Figure 5:

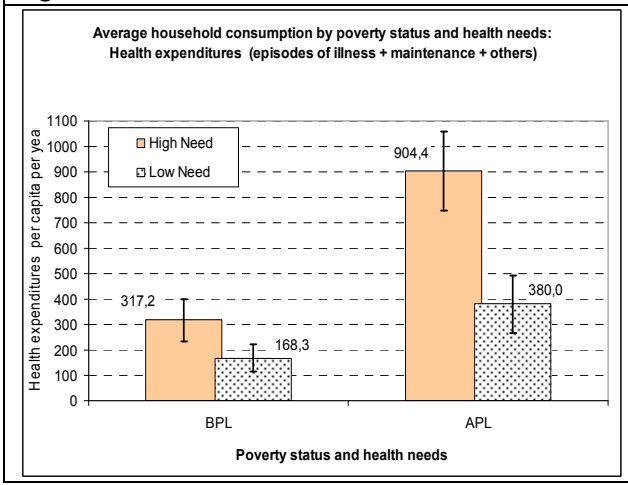

Figure 6:

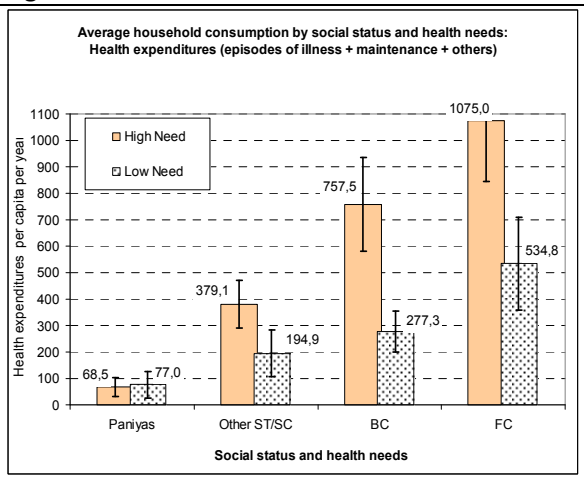
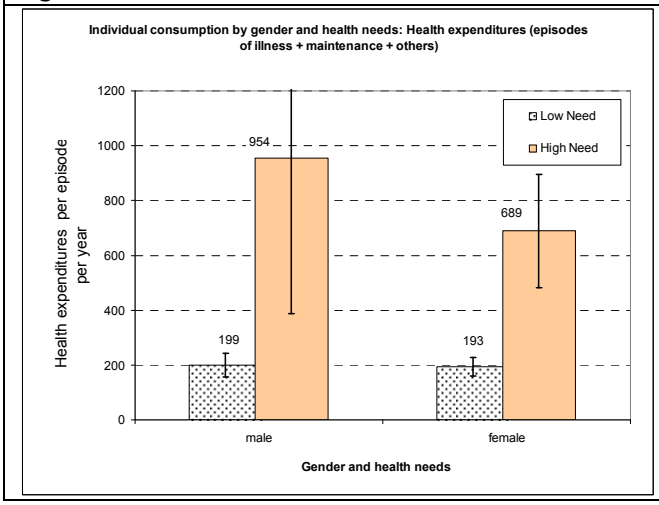
Figure 7: