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Economic development and health status among the poor in squatter settlements of Karachi.

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Abstract

Objective: Socioeconomic status is an important determinant of health outcome measures. This study examines and presents some of the important health outcomes amongst the higher and lower socioeconomic grou PS within the urban poor.
Setting: Data analysis is based on a Health and Demographic Survey conducted in urban squatter settlements of Karachi in 1996.
Methods: A structured questionnaire was administered to all households in the catchment area. The indicator used to assess economic status is ownership of assets.
Results: Comparison between the two economic levels shows that the lower socio-economic group was more likely to experience child mortality, (Cl; 1.02-1.29, p= 0.02) have lower contraceptive usage (CI;2.11-2.64; p<0.001) and childhood immunization rates (CI: 2.08-2.40, p< 0.001). No significant association was observed between economic levels and prevalence of diarrhea. The housing, literacy and employment status was consistently better in the higher economic stratum who were more likely to be Pushto-Punjabi speaking as compared to the Sindhi speaking population.
Conclusion: To have sustainable improvement in the health status of the poor, those who are most vulnerable need to be identified and programs aiming to improve health should also undertake broader development initiatives like raising family income (JPMA 49:117, 1999).

Introduction

Todaro, an economist defined development as raising people's living standards, creating conditions to enhance self-esteem and increasing the freedom to choose from a variety of goods and services[1]. The 1992 holistic model of Mahadevan outlines overall development indicators (ODI) as infant mortality rate (IMR), literacy pet- capita domestic product and road length per 100 square km[1].
This gap in per capita income is widening, not only among the rich compared with the poorest, but also between the rich compared with the middle income class and middle class compared with the poorest and then between the poor and the poorest[2]. Graphs comparing infant and general mortality rates among various Indian states with indicators of economic programs, economic development, health expenditures and fertility over most of the present century indicate that mortality decreased most significantly when economic growth was at its maximum[3]. Socio-economic change is therefore viewed as the basis for any effective solution to population problems and economic and social development is now being directed to elevate the quality of life[4].

Pakistan's Poverty Assessment Survey[5] carried out by the World Bank in 1995 has examined whether human capital and physical assets are determinants of a household's standard of living and whether these are associated with poor human development indicators. The assessment shows that adult literacy and school enrollment is much lower among households in the lowest quintile of per capita household expenditure. Also, IMR was much higher amongst those households in the lowest quintile of household expenditures and facing poor water and sanitation conditions. The incidence of disease especially diarrhea does not appear to be strongly correlated with household expenditures. Similar studies have been conducted in Canada, Kenya and Finland comparing mortality, disease pattern and contraceptive

usage amongst the lowest and highest quintiles of income level[6-8].
Intra- urban health differentials exist between the urban rich and those living in urban slums. The Department of Community Health Sciences (CHS), Aga Khan University (AKU) is involved in application and delivery of primary health care services in the urban squatter settlements of Karachi. This paper examines and presents some of the important health outcomes that distinguish those who are economically better off with those who are worse off within these squatter settlements and also describes common socio-economic characteristics of the two groups being compared.

Methodology

Setting of the Study

Data analysis for this paper is based on the CHS Health and Demographic Baseline Survey conducted in six urban squatter settlements of Karachi from May-July 1996. These squatter settlements' residents belong to different ethnic groups from all over Pakistan and are usually from the lower socioeconomic strata. The squatter settlements include; Hijrat Colony, Sultanabad, Moinabad, Future Colony, Khuldabad (predominantly Pushto-Punjabi speaking) and Rehri Goth, lbrahim Hyderi and Mohammadi Colony (predominantly Sindhi speaking). CHS has mobilized the communities to form Community Management Teams (CMTs) comprising of influential people, religious leaders, school teachers and represntatives of existing community-based organizations in the area. It is now working to develop the capacity of CMTs for sustainable health and development approaches to improve the health status of these communities.

Sampling Strategy, Sample Size and Interview Charachteristics

All persons in the catchment areas were surveyed; this came to 18,569 households and 109,165 people. The refusal rate was 3%. Trained female interviewers collected the information on pretested, structured questionnaires.

Study Variables

The questionnaire gathered information on socio demographic characteristics, health seeking practices and health status. Some of the socio-demographic variables utilized for this analysis were; total households, language spoken, literacy level, employment status, household construction and water supply. Amongst the socio-economic variables, information was also collected on ownership of household assets. The assets considered for this analysis were television (Rs.10,000), videocassette recorder (Rs.8,000), semi-automatic washing machine (Rs.4,000), car (Rs.150,000), dish antenna (Rs.5,000), motorcycle (Rs. 40,000), refrigerator (Rs. 10,000) and radio (Rs.l,000). The numbers in parenthesis indicate the market value of each item in local currency at the time of data collection. After determining the market value of each asset, the total household assets were calculated by adding together the value of each asset the household possessed. This was our indicator for economic status. The lower economic group comprised of households that did not possess any asset; these were approximately 40% of the total population. The higher economic group comprised of households that were approximately amongst the top 40% of total household assets.

Data Entry and Analysis

Data entry and basic frequencies were generated on a computer software package (Epi Info, 6.04). Chi square was used to detect significant differences between the two economic groups for various health outcomes studied and p values, odds ratios and confidence intervals were generated. We compared the association of economic status with immunization in children, contraceptive use, child deaths and diarrhea in children less than five years of age. The socio-demographic variables listed above were also compared across the two economic levels.

Results

Approximately fifty three percent of the households did not have any assets. The heads of suc!: households were more likely to be daily wage earners, Sindhi speaking and illiterate as compared to heads of households with assets. Their houses were less likely to be "pucca" and have piped water supply (Table 1)

Table 1. Comparison of some socioeconomic characteristics among the two economic levels (n=15035 households).

	Households with no assets (n=8015)		Households with assets (n=7018)		Odds ratio	95% CI	p-value
	n	%	n	%			
Household construction							
Kutcha*	1679	20.9	311	4.4	5.78	5.08-6.56	<0.001
Pucca**	6336	79.1	6707	95.6			
Water supply							
Others	5888	73.5	2899	41.3	3.93	3.67-4.22	<0.001
Piped	2127	26.5	4119	58.7			
Language							
Others (Ref.)	2353	29.4	2592	36.9	1.0		
Sindhi	2937	36.7	1460	20.8	2.22	2.04-2.41	<0.001
Pushto	2725	34.0	2966	42.3	1.01	0.94-1.09	0.758
Literacy							
Illiterate	5892	73.5	3653	52.1	2.56	2.39-2.74	<0.001
Literate***	2123	26.5	3365	47.9			
Employment							
Permanent (Ref)	4028	50.2	4825	68.7	1.0		
Unemployed	768	9.5	759	10.8	1.17	1.04-1.32	0.009
Daily wages	3219	40.1	1434	20.4	2.86	2.64-3.09	<0.001

Source: CHS Health and Demographic Baseline Survey of Urban Squatter Settlements: Urban Health Project (UHP), 1996.
* Kutcha = signifies houses built with mud, unplastered without a cemented roof.
** Pucca = signifies houses whose walls and roof are built with cement.
*** Literate = read and write and simple letter in Urdu.

as compared to the households with assets.

Households having no assets were 15% more likely to report a child death in the last five years than those in the higher economic group (17.7% vs 15.8%; OR 1.15; CI: 1.02-1.29; p=O.O2). On further analysis, comparing households in the top 7% of households assets with the lower economic group the likelihood of child mortality in the lower economic group increased further (OR 1.6; Cl: 1.34-2.04; p

Table 2. Comparison of various health outcomes among the two economic levels (n= 18569 Households).

	Households with no assets (n=8015)		Households with assets (n=7018)		Odds ratio	95% CI	P value
	n	%	n	%			
Child death							
Yes	1419	17.7	1109	15.8	1.15	1.02-1.29	0.02
No	6596	82.3	5909	84.2			
Immunization status							
Incomplete	4998	62.3	2982	42.5	2.24	2.08-2.40	<0.001
Complete*	3017	37.6	4036	57.5			
Contraceptive use							
No	7365	91.9	5803	82.7	2.36	2.11-2.64	<0.001
Yes**	650	8.1	1215	17.3			
Diarrhea							
Yes	1275	15.9	1151	16.4	0.9	0.85-1.09	0.540
No	6740	84.1	5867	83.6			

Source: CHS Health and Demographic Baseline Survey of Urban Squatter Settlements: Urban Health Project (UHP), 1996.
* Complete = complete immunization at nine months and appropriate for age.
** Contraceptive use = Current users at the time of survey.

No significant association was seen between the two socioeconomic groups under comparison with respect to prevalence of diarrhea (period prevalence, two weeks recall at the time of survey).

Discussion

Findings from this study suggest that for the health outcome variables considered, there exist differentials in terms of socio-economic status amongst the poor residing in squatter settlements that can possibly help identify households which are poorest of the poor and hence most vulnerable to an undesirable outcome. These households experience greater childhood mortality and under-utilize preventive services like immunization and family planning.

The profile of a vulnerable household (in terms of adverse health effects) within the urban squatter settlements of Karachi is that of a poor household with no assets, living in a poorly constructed house with no piped water supply and having uneducated, unemployed, Sindhi speaking residents. The CHS Health and Demographic Baseline Survey of 1996 has also observed that Sindhi families have higher crude birth rates, infant mortality rates, average family size, maternal anemia and childhood malnutrition as compared to Pushto speaking and other linguistic counterparts. In another analysis it was shown that a household was more likely to experience a child death if it was poor or headed by a Sindhi speaking member or an illiterate person or a person not permanently employed[9]. Households with similar characteristics have also been documented to be at risk in urban slums of India[10].

It is underscored that the poor are poor, not only because they do not earn sufficiently, but mainly because they do not own much. The ownership of farmland is well known to be highly concentrated in the hands of fortunate few in various countries of Latin America". In the absence of valid and practical socioeconomic indicators available for assessing the economic status at community level we feel that ownership of assets is a useful measure of socioeconomic status in our population. Ownership of assets, however, did not have a significant effect on prevalnce of diarrhea. This is consistent with the earlier

reported World Bank Poverty Assessment data[5]. Diarrhoea has probably to do more with general environmental sanitation and provision of safe water supply which tend to be uniformly poor irrespective of economic level of households in Karachi.

Studies in China, Costa Rica, Kerala and Sri Lanka recommend linkage between social and economic development and intersectoral policies for economic gains for sustained improvement in health[12].

World Bank in its Poverty Assessment Report outlines poverty alleviation strategies. One of them is developing long term strategies for financing of basic social services with the involvement of non-govermental organizations (NGOs) and community organizations. The Aga Khan Rural Support Program's (AKRSP) participatory approach is very applicable to communities where CHS is working. In this scheme village or community organizations receive grants for income-generating infra structure projects that are selected, implemented and maintained by the organization themselves. In the process of completing the project communities develop the capacity to manage issues collectively. This initiative is being tried and tested in the CHS field sites with the CMTS. CMT are being linked with the NGOs working in the field of development. The Orangi Pilot Project (OPP) with whom UHP and CMTs are in close collaboration is one such example. The OPP offers microentrenepuer credit schemes for home schools and provides management skills to women for organizing work centers for embroidery and garment stitching.

In order to reduce morbidity and mortality from different causes it is essential that risk factors and determinants be identified to initiate appropriate interventions. Based on our analysis we feel that health promotion efforts have to be combined with socio-econornic measures in order to have greater improvement in the health status of communities directed towards the most vulnerable or those greatest at risk.

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