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HEALTH TRANSITION IN HARYANA: A SPATIAL ANALYSIS

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The present study is an attempt to study the spatial variations in health transition in the state of Haryana. Health transition refers to the change in health status of population due to changes in demographic characteristics and changes in life style which affect pattern of diseases, changes in access to resources, affecting nutritional status of population and changes in access to health care infrastructure. Hence, health transition encompasses a whole gamut of interaction due to changes in economy.

Haryana makes an interesting study area as economically, it has earned a distinct place and contributes close to 3 per cent of India's national income. With green revolution, the state has attained distinction in food production and with mounting food stocks; one expects that the dietary intake of population has improved over a period of time. It may also be noted that the state has shown above average performance in all sectors which is reflected in its high per capita income, availability of various infrastructural facilities, and decline in crude death rate and increase in life expectancy. Hence, in this background, this study attempts to study the health status and health transition of population by taking four broad aspects; i) demographic transition; ii) health care transition in terms of availability of health care

infrastructure, its access and health status of population in preventive and curative aspects; iii) nutritional transition with special reference to women and children nutrition; iv) disease transition, in terms of pattern (type of diseases), levels and socio-economic correlates of ailment and its prevalence.

The study is largely based on primary data, which have been generated through field survey of 1440 households by canvassing a semi-structured questionnaire during the period starting from July 2009 to December 2009. The sample households were located in 16 villages across 8 districts in Haryana namely, Yamunanagar, Kurukshetra, Kaithal, Fatehabad, Bhiwani, Jhajjar, Rewari and Gurgaon districts. The sample districts were selected through a multi stage sample design. At first stage, all the districts in the state were ranked on the basis of four broad indicators of health status. These were; longevity of life; Infant Mortality Rate (IMR); Total Fertility Rate (TFR); and Crude Birth Rate (CBR). On the basis of these indicators, 20 districts of state were ranked and grouped into quartiles. These quartiles were named as Health Indicator Zones (HIZ). Ironically, the districts in each quartile were not forming any contiguity, rather in each zone; there were districts of high and low agricultural productivity. Hence, from these

four zones, two districts from each zone were selected in a way that represents high and low agricultural productivity areas but both having similar health characteristics. Hence, 8 districts were selected and from each district 2 villages were selected. In all, 16 villages were selected, and out of these eight villages were having Primary Health Centre (PHC) and other eight were not having PHCs. This was to study the access and intervention of existing health care facility in ailments. The selection of households was representative of the social and economic structure of respective villages. The disease transition in the state has been studied by making use of National Sample Survey Organization (NSSO) unit level data of 60th round and with the help of primary data collected from 1440 households as described above. Determinants of health, nutrition and ailment have been extracted using Principal Component Analysis.

Chapter II presents spatial variations in the demographic transition and health. The health transition is imbedded within the demographic model describing the shift from high to low levels of mortality and fertility. There are spatial variations in the stages of demography across districts. The districts of southern Haryana namely Gurgaon (now Mewat), Faridabad (now Palwal), and Panipat are still having high population growth with high fertility and high child mortality. In northern Haryana districts namely Ambala and Yamunagar however are at the beginning of fourth stage with low mortality and fertility, and the proportion of aged population is also relatively higher. The fertility, IMR and age structure of population in sample study area also confirm to the pattern obtained from secondary data.

The districts which are demographically more vulnerable have consequences on mother and child health. It is rather shocking to find

that in districts which are demographically progressive, with decline in fertility, the population is becoming more masculine. These districts have contained their population growth by curbing the birth of girl child, which has been obtained by sex ratio at birth. In the sample study area, the births during last one year reveal that sex ratio was adverse to females and it was all pervasive irrespective of socio-economic characteristics of households. All these point towards son preference, role of patriarchy and low status of women in the state which manifest in inequitable pattern of health status in society.

Chapter III studies the organized social response to the health needs of population, which is seen in terms of availability and accessibility of health care infrastructure and its quality. The PHC which is considered to be the first contact point between doctors and village community and is envisaged to provide an integrated curative and preventive health care is supposed to have a medical officer and 14 paramedical staff. The study however shows that in general there is deficiency of doctors and paramedical staff. This is more pronounced in the districts of southern Haryana. In two sub centers (out of 6 surveyed) located in Khatwar (Kaithal district) and Papra (Mewat) villages, there was not even a single paramedical staff. This has a telling impact on the health status of population measured in terms of preventive care taken, i.e. immunization of infants and children, ante natal care, care during child birth or say institutional deliveries. It may be noted that large majority of child deaths are from vaccine preventable diseases.

Further the analysis on disability also shows that most common disability among children is of polio. Hence the availability of these facilities at the doorstep can make a difference. In the present study, 952 children were studied for immunization in the age group

of 1 to 5 years. Immunisation pattern shows geographical location bias. It reveals that among first three HIZs, 90 to 95 percent children were fully immunized. It was only in HIZ4, where a whopping 43 per cent children were not vaccinated at all. It may be noted that zone 4 comprises of the villages of Mewat and Fatehabad districts. It is largely due to Mewat villages where 72 per cent children are not vaccinated for any preventive disease while another 26 per cent were also partly immunized. Child health in terms of childhood diseases and infant health transition has also been studied. It has been observed that health transition in any society can be seen through the health status of mothers and children as they are the first one to be affected.

Chapter IV presents nutritional status of children, adolescent girls and married women in 15 to 49 years of age. The analysis on nutritional status of children shows that in all sample villages more than half of children are suffering from low height vis-à-vis age and low weight vis-à-vis age. As far as weight for height (wasting) is concerned, about 40 per cent were malnourished. The spatial distribution of nutrition levels show that incidence of under nutrition is widespread. In the present study, all castes have been grouped into 4 major caste groups applying local social hierarchy of these castes. Child malnourishment in relation to caste status does not show any correspondence. However, it shows correspondence with educational status and occupational status of the head of the household, meaning thereby that wealthier households have better levels of children health. The analysis on gender differentiation in child nutrition, however, reveals that girl's malnutrition is much more and all pervasive irrespective of wealth categories. It may also be noted that reductions in proportion of malnourished children in the wealthiest occupational categories indicates

growing health disparity between children of low and high economic status.

Chapter V presents the pattern and level of diseases in the population. In this chapter the frequency of illnesses prevailing during the reference period (meaning thereby that one person can have repeated ailments) is studied. It has been found that reporting of ailments depends on the levels of awareness of individuals and hence subjectivity influences the measurement of morbidity. Despite these problems and difficulties of measurements, an attempt has been made to record the medically diagnosed ailment and self-reported ailments. An exhaustive list of diseases with symptoms was prepared and the data collecting persons were trained to collect the data in accordance with that. A total of 46 diseases were specified. For this primary survey, a number of diseases with their easily explained symptoms and the one which are considered to be more prevalent were taken. Since age has particular marked effect on the pattern and extent of ill health in population, the sample population has been categorized in six age groups: 0 to 5 years (pre school children), 6 to 14 (school going children); 15 to 29 (adults and youth); 30 to 44 (prime working age); 45 to 59 (as late working age) and 60 and more (as elderly population). The analysis reveals that the overall prevalence of diseases is higher in the state. The age-wise distribution reveals that their prevalence is higher among children in 0 to 5 years of age and again among aged population. Disease prevalence is lower in school going children (6 to 14 years) and among youth of 15 to 29 years of age. Their prevalence is 331 per '000 persons in 15 to 29 years of age. The findings are contrary to NSSO data on morbidity in Haryana which shows that disease prevalence increases with age (NSSO, 2007). However, in old age population it shows correspondence with national level data. The analysis further reveals

that in all age groups, the disease prevalence for females is much higher than their male counterparts. Hence it suggests disease control priorities need to be more focused for children and also to older age groups and catering to women in particular.

The analysis suggests that the infectious communicable diseases still account for majority of disease burden. The emerging health risks are high for non-communicable diseases in all population groups and in all the areas as a large proportion of young population

is exposed to smoking. Further, malnutrition of children and women is all pervasive. It is very important that efforts should be made to change consumption pattern of population by making them aware towards healthy life styles i.e. by lowering the prevalence of smoking, preventing under- nutrition etc. There is also a need of reorienting and strengthening of the existing health care infrastructure so that it can tackle both the preventable infectious and non-communicable diseases at early stages by providing better diagnostic facilities.