The Differently Abled Population: A spatial Analysis from socio-Regional Perspective in India

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Abstract

In India, the needs of people with disability are often neglected. They have far long remained a neglected category or at best, provided some basic welfare measures but are not looked as an inclusive population, which needs to be treated as equals. This work is indeed a small leap in this direction to understand incidence and prevalence of disability.

The paper is based on secondary data extracted from 58th round of NSSO survey on unit level data. It is an attempt to study the spatial analysis of the incidence and prevalence rate of disability in different regions of Indian states. The study looks into the condition of the differently able population. The NSSO has divided India into 78 regions.

Keywords: incidence rate, prevalence rate, disability, differently abled, regional variation,

1. Introduction

The social and economic scenario of the country has been changing rapidly due to globalization, urbanization, industrialization and commercialization. In this process, people with disability due to their inherent vulnerability have lagged behind from the rest of the society. In India, the disability issue is treated as a measure of welfare rather than human rights issue, needing equal opportunity and inclusion with rest of the society.

Natural phenomena exhibit differences or potential differences. These differences take the form of inequality when the basis of selection, evaluation and marking out become cultural instead of natural.[1] There is also evidence to indicate exclusiveness of differently abled population in several key areas like; employment, education etc. The slow progress in expanding opportunities for differently abled people in India results in their marginalization and a substantial loss to their abilities, which could have provided support to the society in developing human capital and economy.[2]

The problem of disability is gaining more and more importance all over the world. The planners of India very well understood the significance of the problem hence have taken several policy measures to provide support and other measures to mainstream them.[3]

There are several factors responsible for the problem. Heredity factor contributes a lot in producing disabled children. Other prominent factors for making people disabled are inequity in the provision of nutrition and proper healthy diet to the mother and baby, right from the time of conceiving inside mother’s womb due to poverty and cultural and religious dogmatism. Disability has also increased due to the emergence of industrialization, fast changes in communication, opportunity of mobility from one place to another, accidental illness, war and non availability of proper safety and medical facilities.[4]

After four decades of independence the issues related to persons with disabilities was addressed by the Government of India by enacting legislation for Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. The Act provides for education, employment, creation of barrier free environment, social security, and other opportunities etc. [5]

Societies are now looking disability as social issue rather than medical issue. The earlier emphasis was only to provide medical support rather than creating barrier free atmosphere for their inclusion with the society. The earlier emphasis on medical rehabilitation has now been replaced by an emphasis on social rehabilitation. [6]

For the welfare measures or policies, it is necessary to understand their spatial pattern and
specific requirement. In view of the marginalization and exclusion of disabled from the mainstream, the present study examines the spatial variation in incidence and prevalence rate of disability by social group, gender and rural urban area wise.

The paper is based on secondary data extracted from 47th (1991) and 58th (2002) round of NSSO survey on unit level data. The NSSO has divided India into 78 regions.

Methodology
(I) Prevalence Rate - of a disease can be defined as the proportion of the population having the disease at the moment or at a time. Number of disabled person per 100,000 populations is measured for NSSO region wise. \( P = \frac{\text{Number of differently abled persons prevailing in total population at a particular point of time}}{\text{Population of the area exposed to the risk of the disease}} \times 100,000 \)

Prevalence Rate in India (per 100,000 persons), 1991-2002

<table>
<thead>
<tr>
<th>Year</th>
<th>Rural Male</th>
<th>Rural Female</th>
<th>Rural Total</th>
<th>Urban Male</th>
<th>Urban Female</th>
<th>Urban Male</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>2277</td>
<td>1694</td>
<td>1995</td>
<td>1670</td>
<td>1331</td>
<td>1449</td>
<td>2000</td>
<td>1493</td>
<td>1775</td>
<td></td>
<td></td>
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<tr>
<td>2002</td>
<td>2118</td>
<td>1556</td>
<td>1846</td>
<td>1670</td>
<td>1331</td>
<td>1449</td>
<td>2000</td>
<td>1493</td>
<td>1775</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


(II) Incidence Rate – the incidence of disease can be defined as the ratio of new cases of the disease diagnosed in a particular period divided by the persons-year lived in the population during that period. \( I = \frac{\text{Number of new cases of the disability occurring in a given period of time, usually a year}}{\text{Duration of exposure of the population to the disease in the given period}} \times 100,000 \)

Discussion and Results
Spatial Distribution of Prevalence Rate of Disability - The Prevalence rates (number of disabled persons per 100,000 persons) recorded for disabled persons were 1886 and 1775 respectively in 1991 and 2002, depicting a significant decline from 1991 to 2002. The prevalence rates have recorded a significant decline for both gender groups in case of both rural and urban areas during 1991-2002.
development and higher poverty incidence, the level of prevalence rate of disability in Bihar was very low compared to other state as well as lowers the national average. If we see the pattern within state, the central Bihar region, (1654) have high prevalence rate compare to northern region (1154). Due to low level of awareness and less reporting of female disability the data appears skeptical and ambiguous. In case of West Bengal, the western plain region of Bengal have recorded high disability prevalence rate, while lowest prevalence rate was in Himalayan region of Bengal. In case of Orissa all the three regions of coastal, southern and northern showed higher than the national average disability prevalence rates. There is not much variation in the disability prevalence rate within the state. Food inaccessibility and inaccessibility of several tribal regions of Orissa have caused high prevalence rate of disability where both communicable and non-communicable diseases are regular, which leads to higher disability prevalence rate in the state. In central part of the country, Madhya Pradesh has divided in six major regions by NSSO. Out of six region only vindhyan region (2229) have higher prevalence rate compare to national average followed by southern region, Malwa region, central , south western and northern region. Chhattisgarh, which was once part of it also recorded high disability prevalence rate compared to the national average. Rajasthan state recorded below the national average of disability prevalence but within the state, several regions depicted high level of variation for disability prevalence rate. The western and eastern region of the state, which is part of the desert, has high concentration of person with disability. The reason may be the inaccessibility of infrastructure i.e. medical facility, roads, mode of communication is very less in this region. The physiographic condition of the region is considered very harsh and because of this region is backward. The lowest concentration of the disability is found in the southeastern region of Rajasthan (951). The problem might be again under reporting of disability cases. Gujarat and Maharashtra states having better industrialization and economic development have recorded high disability prevalence rate in a number of regions. In Maharashtra except for coastal and inland northern Maharashtra, other region has low concentration of prevalence rate. At the same time other four regions inland western, inland central, inland eastern Maharashtra regions have above 2000 prevalence rate. In Gujarat, only northern plain region and dry areas of Gujarat region have high prevalence rate. The southern states of India as compared to the northern and central states have recorded higher disability prevalence rates. This is contrary to the expectations as these states have better education awareness and human development index. Perhaps better awareness and more educational level has lead to accurate reporting of disability cases. Secondly, due to high quality of medical care, the aging of the population has been witnessed in case of Kerala, Tamilnadu and Karnataka. The higher proportion of older population in these states could also lead to higher disability prevalence rates. Kerala has been divided into two major regions- northern and southern. In northern region prevalence rate is very low (1574) compared to southern region (2468). In Tamilnadu, southern region recorded high disability prevalence rate of 2386 followed by inland (1928), coastal (1810) and coastal northern (1641). In case of Karnataka, the prevalence rate is high mainly in two regions of inland eastern and northern, which recorded prevalence rates of 1944 and 1455 respectively.

Thus, the regional distribution of disability prevalence rates point towards high prevalence rates in those areas where inaccessibility, lack of medical services and lack of food security is high. Other areas with high prevalence rates are regions with better educational awareness, higher human development that leads to better and accurate reporting of disability prevalence cases. Thus, the disability prevalence cases seem to be highly under reported in the northern and central states.

Regional Variation of Prevalence Rate by Male- Female and Rural- Urban - The gender wise disability prevalence rates among the rural areas shows almost uniform pattern in most of the states. The general distribution shows that the prevalence rate of female is lower than the male. This could be due to under reporting of female disability cases due to the prevailing socio-cultural milieu, where such reporting may lead to non-availability of marriage proposal for females. Similarly rural area recorded higher disability prevalence rates as compared to urban areas due to higher level of inaccessibility, lack of medical care and less immunization rates.
Prevalence Rate Of Disability In Scheduled Caste-The social group wise pattern of prevalence rate of disability shows that in dry areas and northern plains of Gujarat, coastal and inland central maharastra, mountainious jammu and Kashmir region, southern uttar Pradesh, southern kerala, coastal orissa, central Madhya Pradesh, southern Punjab etc where prevalence rate of disability in scheduled caste is above 2501.
Scheduled caste in terms of socio-economic development are very backward group in India, due to their backwardness they are more prone to risk of disability. It consist a large part of Indian society.

**Prevalence Rate of Disability in Scheduled Tribe**
Scheduled Tribe is less backward compare to scheduled caste. The reason behind is that the level of literacy and education is comparatively high. The highest prevalence rate in scheduled tribe noticed in western and southern uttar Pradesh, inland karnatak, inland southern Andhra Pradesh, saurashtra, southern kerala, hills of Assam, inland central maharashtra, coastal Anadhra Pradesh in all these regions the rate of incidence is above 2501. Although the maximum concentration of tribal population, exist in northeastern states of India but still the prevalence rate is not very high.

**Incidence Rate of Disability**
The disability incidence rates (The number of persons whose onset of disability by birth or after birth has been during the specified period of 365 days preceding the data of the survey collected by the NSSO enumerators, per 100,000 persons) were 90, and 69 respectively in 1991 and 2002, according to the (NSSO rounds 47th and 58th in 1991 and 2002). Incidence rates have also decreased for both gender groups in rural and urban areas during 1991 to 2002. The incidence rates of disabled persons have declined from 90 to 69 in the rural areas and from 83 to 67 in the urban areas between 1991-2002. There by it is showing a decline in the overall incidence rate. Declining incidence rates give a picture of significant healthcare measures are in place especially among infants and children for control of polio and other communicable diseases, which were responsible for disabilities in later stages. Similarly, community awareness has helped in achieving better immunization coverage, healthcare and other preventive measures for preventing disability among children and old people.

### Incidence Rate India (per 100,000 persons), 1991-2001

<table>
<thead>
<tr>
<th>Year</th>
<th>Rural</th>
<th>Urban</th>
<th>Both R+U</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
<td>Total</td>
</tr>
<tr>
<td>2002</td>
<td>77</td>
<td>61</td>
<td>69</td>
</tr>
<tr>
<td>1991</td>
<td>99</td>
<td>81</td>
<td>90</td>
</tr>
</tbody>
</table>


**Regional Analysis of Incidence Rate**
The high level of incidence rate of disability pattern we found out in mountainous hill region of J&K, southern U.P, Eastern Maharashtra, coastal and inland southern Andhra Pradesh in all these regions incidence rate of disability is above 150. These regions are more prone to new cases of disability due to several factors. These regions also have high prevalence rate of disability. The another set of regions where incidence rate is between the 100 to 150 persons per million population are southern Punjab, northern plains of Gujarat, inland western Maharashtra, inland northern, south western and inland southern Andhra Pradesh region, southern Kerala and southern Tamilnadu. The trend shows that with in these states there exists divergence in occurrences of disability. In Kerala, southern region is more prone to disability compared to north region. In southern
states the major causes of disability is old age because southern state has low mortality rate, which leads to old age disability.

Jhelum valley and outer hills region of J&K, western and south eastern Rajasthan, northern and central Bihar, vindhya and northern region of M.P, eastern and saurastashtra region of Gujarat, inland and coastal region of Karnataka, most of north eastern states of India etc.in all these regions incidences rate was below 50. The regional pattern shows that most of the tribal areas of northeastern region have very low level of incidences of disability. This is result of high level of literacy and successful implementation of immunization programme. On the other hand if we see the northern states pattern, Rajasthan, Bihar, Madhya Pradesh etc all these regions also noticed very low incidence rate of disability. This is the good sign for the planners that these socio- economically backward states performing well in case of incidences of disability. However the mountainous jammu and Kashmir, southern U.P, eastern mahatrastra, coastal and inland Andhra pradesh these are the regions which required an attention of concerning agencies to reduce the incidences of disability.

The Rural–Urban Pattern of Incidence

The pattern of incidence of disability shows that rural areas have high rate of incidences compared to urban areas. The highest incidence in rural areas occurs in mountainous region of J&K where rate of incidence is above 250 persons per million populations. Another highest incidences rate between 150- 200 persons per million occurs in Himachal Pradesh southern Punjab, southern U.P. northern plains of Gujarat, inland western and eastern Maharashtra, inland northern, south western and inland southern region of Andhra Pradesh, northern and southern region of Kerala, inland region of Tamilnadu. So the overall trend shows that southern states have high incidences of disability compared to northern and north eastern states. There are few regions where incidences of disability is very high. The highest incidences of disability in India found in inland southern Andhra Pradesh and southern U.P region these are the two regions shows very high incidence rate of disability 304 and 291 respectively. The pattern of incidence in case of rural–urban comparision shows that in northern states urban area are less affected compare to southern. The male- female distribution of incidences of disability shows that male prevalence rate is high compare to female. The pattern does not show much variation. In southern U.P, mountainous region of J&K, inland Andhra Pradesh etc these entire region have both male–female incidences rate high.
The above analysis reveals that there exist variations in prevalence rate of disability by rural-urban, male-female and in all type of disability. The spatial analysis has shown that the disability incidence and prevalence rate is high in rural areas, in case of gender male are more prone to risk of disability compared to female. The pattern shows that southern states has higher rate of disability compared to northern states. The regional pattern shows that there are few pockets which have exceptionally high rate of disability i.e. southern U.P. mountainous region of J&K, coastal Andhra Pradesh, northern Gujarat etc. Resurgence of polio in India is a very critical issue in the global fight against the disease. No matter how much government proclaims or plans to eliminate the disease it is far from over. Unless we will give attention to basic amenities and education of society, the problem will never be eliminated. Over the years, if we look at the records, it is evident that disability is less a medical problem and more a social one. The solution lies in garnering the support of intellectuals belonging to the reluctant communities, by helping them to understand that disability eradication programmes are for their benefit. The gradual awareness will one day attain the ultimate dream of India becoming a disability free country.

References:
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