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Disability Differential in India: A Critical Evaluation of Caste-Wise Disability

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Abstract: ***The disabilities are deprived of all opportunities for social and economic development. The basic facilities like education, health and employment are denied to them. The State infrastructure is grossly inadequate and ill functioning where disabled are concerned. Therefore, the study have tried to see the state-wise change in disability, the prevalence of different types of disabilities and the caste-wise gap in disability by using Indian census 2001 and 2011 with the help of bi-variate and age-standardized methods. Movement, seeing and hearing impairment is more prevalent than the other disabilities. It is high in Uttar Pradesh and Maharashtra while lowest in seven sisters and the territories of India. Punjab, Jharkhand, Chhattisgarh, Maharashtra, Andhra Pradesh and Karnataka are the state where disability has increased over the period 2001 to 2011. Disabilities rate is high in the scheduled caste and males than the non-SCs/STs and females. Disability gap is increased after the age group 40-49 in both SCs/STs and rural setting. It concludes that there should be a separate policy for the 50 plus person that is mostly focused on vulnerable rural section (SCs/STs) irrespective for getting the better medical facility.***

Keywords: Disability, SCs, STs, Non-SCs/STs, males, females, rural, urban**.**

1. Introduction

Disabilities are an umbrella term, covering activity limitations, impairments, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a complexity encountered by an individual in executing an action or task; while a participation restriction is a problem practiced by an individual in involvement in life situations (World Health Organization).

Although disability can happen in any family, poverty and disability are strongly interlinked. Poverty may enhance the likelihood of disability and may also be a consequence of disability [1]. Approximately 400 million disabled people reside in the developing world. Often they are mostly from poorest. According to World Health Organization (WHO) estimates, 1.5 million blind children are primarily in Asia and Africa. In the developing countries, up to 70 % of blindness is either treatable or preventable. The WHO also estimates that approximately 50% of disabling hearing impairment is preventable. Globally, this affected a total of 120 million people in 1995. According to the National Sample Survey Organization (NSSO) 58th round survey in 2002, there are 18.49 million people in India who is disabled. This number enlarged from 13.67 million in 1981 to 16.36 million in 1991. Out of the 18.49 million disabled inhabitants, 10.89 million are males and 7.56 million are females, which constitutes around 59% and 49% males and females respectively. These people are suffering from some form of disability [2-3].

The 2001 Census covered five kinds of disabilities recorded a prevalence rate of 2.13 percent, or 21.91 million inhabitants with disabilities out of a whole population of 1028 million. The NSSO 58th round (July-December 2002) survey reported that 1.8 percent of the population (18.5 million) was a disability. As 18-22 million people with disabilities are a large number, this is still arguably a gross under estimation, particularly when one considers that WHO estimates a worldwide prevalence rate of 10 percent. The leading Indian disability NGO, National Centre for Promotion of Employment for Disabled People (NCPEDP) indicates that 5-6 percent of the population has a disability [3-4].

Disabled are not a homogenous group. There are different types of disabilities, with different requirements. The disabled are depressed of all opportunities for social and economic development. The basic facilities like education, health and employment are denied to them. The State infrastructure is grossly insufficient and ill-functioning where disabled are concerned [2]. Therefore in this paper, I begin with an overview of different types of disability and state wise disability change over the period 2001 to 2011. And the prevalence of various kinds of disabilities as well as caste-wise disability gap in the Indian context. In which study undertake brief efforts to highlight the vulnerable section that are back in getting a medical and another facility because of the existents of discrimination and stigma in the Indian society.

2. Material and Method

Data Source

The number of disabilities and population information according to sex, place of residence and caste by the five years age group has been taken from the Indian census-2001 and 2011. The total population of India in 2001 and 2011 is 1,02,86,10,328 and 1,21,08,54,977 respectively. Disability of India was 26,810,557 in 2011 whereas it was 21,906,769 in 2001. Moreover, the Indian Census is a rich tradition. In India, the first Census was conducted in the year 1872. It was conducted at different points of time in different parts of the country. In 1881, Census was taken in the whole country and after its, Census has been conducted at every 10 years, without a break. Therefore, the Census of India 2011 is the

15th in unbroken series since 1872 and the 7th after independence. Through, it is the missionary zeal and dedication of Enumerators like that the great historical custom of conducting the Census uninterruptedly has been maintained in spite of several adversities like wars, natural calamities, epidemics, political unrest, etc. Participation of the people in India Census is an accurate reflection of the national spirit of unity in diversity.

Methodology

Bi-variate analysis and age-standardized disability methods are used with the help of Excel 2007 software. Bi-variate is used for showing the simple contribution of different types of disabilities, the prevalence of disabilities in SCs, STs, and non-SCs/STs, and change in disability over the period 2001 to 2011. Elsewhere, age-standardized disability method has also used for comparing the disability in between the caste (SCs, STs and non-SCs/STs), place of residence (rural and urban) and sex (male and females).

Age Standardized Disability Rate

The method of standardization is simple a preferred method to measure age-adjusted disability rate for determining the relative difference in disability situation between countries and also within the same country over time. In the direct approach, the age distribution is held constant, which refers to that of the standard population. Thus, the standardized disability rate is disability rate that will be experienced by the standard population if it was exposed to the ASDR of the reference population. Thus, if ${}_nP_x$ is the number of persons between age x to x+n in the standard population and ${}_nM_x$ be age-specific disability of the study (reference) population, then Age-standardized disability rate (ASDR) is given by,

$$ASDR = \frac{1}{P}\sum_{x=1}^{n}\left(\frac{nMx * nPx}{npx}\right) \times 1000$$

Where, npx = Number of person between x to x+n of study population

And $P = \sum_{x=1}^{n} npx$ = Total standard population

3. Results

Disability in India

India has highest movement disability (20 %) followed by seeing and hearing (19 percent). However, only 3 percent of people are suffering from mental illness (Figure 1). Figure 2 shows that the Uttar Pradesh (UP), Bihar, Maharashtra, Andhra Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu, Kerala, Karnataka, West Bengal, Gujarat, Punjab, Haryana, Jharkhand, and Chhattisgarh state contributes the disabilities, while remaining states contributions are negligible. Among all these states, UP, Maharashtra, and West Bengal have highest disability contribution and followed by other contributing states. Three states Maharashtra, Andhra, and Karnataka, are the states where disability growth is positive over the year 2001 to 2011 whereas UP, Bihar, Orissa, and Haryana have no change over the period. The overall, all the states of Empowered Action Group (EAG) have a disabilities contribution while in non-EAG states only a few states have disability contribution.

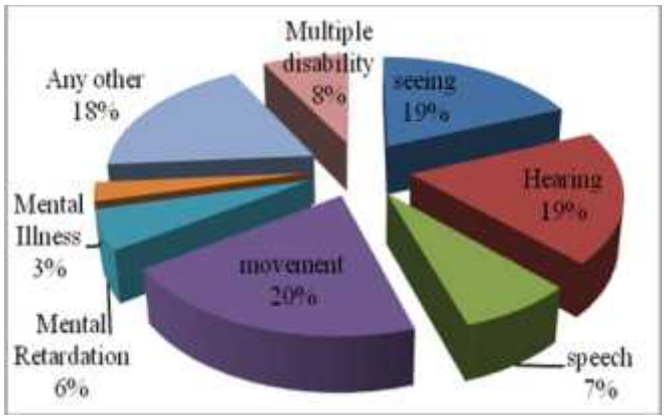

Figure 1: Distribution of different type of disabilities in India

Table 1 reveals the prevalence of different types of disabilities according to the caste in India. Within the country, the incidence of seeing, hearing and movement disability is more in scheduled castes (SCs).

Table 1: Prevalence rate (per 1, 00,000 persons) of different types of disability according to caste, India 2011

Disability	Total	SC	ST	Non-SC/ST
seeing	415.71	468.53	430.37	402.45
Hearing	418.89	427.80	415.81	417.26
speech	165.09	127.33	113.50	179.05
movement	449.09	502.75	483.24	433.53
Mental Retardation	124.37	125.39	105.69	126.19
Mental Illness	59.71	58.39	56.68	60.33
Any other	407.00	562.58	354.70	378.36
Multiple disability	174.83	179.25	192.48	171.94
Total Disabled	2214.71	2452.01	2152.46	2169.11
N	26,810,557	4,927,431	2,136,678	19,746,448

*Note: **N** - Number of disabilities, SC – Schedule Castes, ST – Schedule Tribes*

However, in schedule tribes (STs), seeing, movement and multiple disabilities is more than the non-schedule caste/schedule tribe (non-SCs/STs). Moreover, speaking, and mental retardation disabilities is more in non-SCs/STs than the SCs and STs. The overall prevalence of disability is highest in SCs (2452/100,000) followed by non-SCs/STs (2169/100,000) and STs (2153/100,000) households. In India, movement, seeing and hearing disabilities are more prevalent (more than four hundred per 100,000 persons) than the others. But the above discussion is unable to explain that which group is more vulnerable. Now, for it, this paper tries

to standardized age for getting standardized disabilities rate in SCs, STs, and non-SCs/STs.

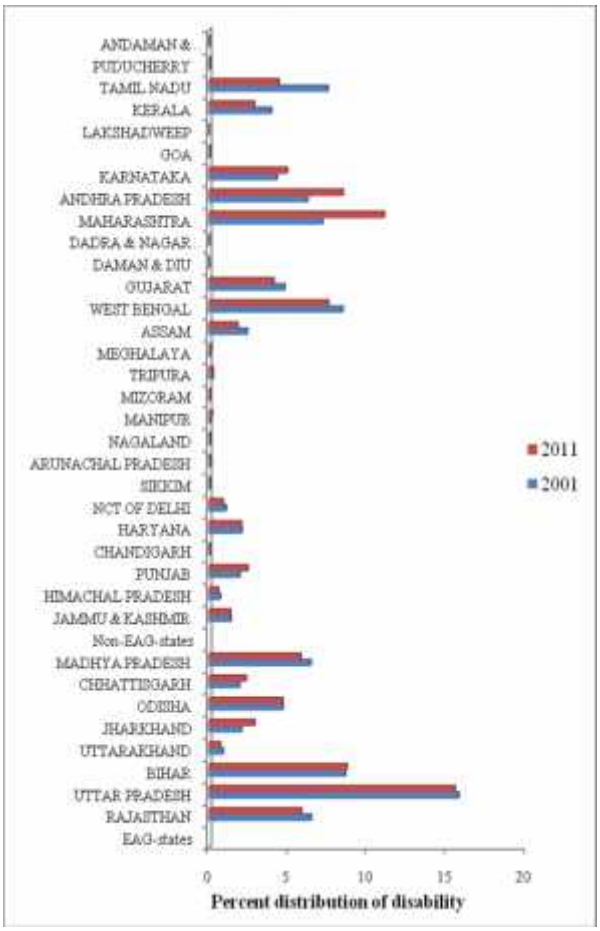

Figure 2: State-wise disability change in India

Table 2: Disability rate (per 1000) among Schedule castes (SCs), Schedule Tribes (STs) and non-SCs/STs, India 2011

Status	Population	Disability	Rate per 1000
SCs	20,13,78,086	49,27,431	24.47
STs	10,42,81,034	21,36,678	20.49
non-SCs/STs	90,51,95,857	1,97,46,448	21.81
Total	1,21,08,54,977	2,68,10,557	22.14

Though, first of all, this paper tries to find out the disabilities rate per thousands in a different caste group (table 2). Which infers to the individuals who are in SCs are at a greater risk of disability than those who are in STs and non-SCs/STs. So, the problem is to examine the validity of the statements. For this, there is need to adjust age because age is one of the most important well-known confounders. For freezing, a study has used a direct method of standardization. For it firstly, authors have calculated total expected disability in SCs, STs, and non-SCs/STs by freezing the age, which are in table 3.

Table 3: Calculation of expected disabilities in SCs, STs and non-SCs/STs by applying direct method of standardization, India 2011

All ages	Total Population	Scheduled Caste (SCs)		Expected disability
		Population	Disability	
0-9	240627140	42683458	630856	3556440
10-19.	254178143	44519640	882533	5038687
20-29	213630320	35737596	791522	4731519
30-39	174382237	28056035	668903	4157564
40-49	135257970	21222571	561118	3576178
50-59	88543625	13377170	441557	2922672
60-69	64357324	10116354	495193	3150274
70-79	28547197	4120925	307287	2128696
80+	11331020	1544623	148462	1089081
Total	1210854977	201378372	4927431	30351111

Table 3: Continue…

Scheduled tribes (STs)		*Expected disability*	*Non-SCs/STs*		*Expected disability*
Population	*Disability*		*Population*	*Disability*	
24363784	285089	2815661	173579898	2347699	3254524
23335380	382818	4169809	186323123	3374545	4603484
17813878	306755	3678717	160078846	3113206	4154673
14083769	257261	3185347	132242433	2728341	3597742
10961944	234594	2894624	103073455	2336034	3065457
6773427	199433	2607031	68393028	1864314	2413596
4711385	241536	3299372	49529586	1934680	2513867
1857943	156871	2410309	22568329	1314352	1662554
644205	72321	1272061	9142191	733277	908839
104545716	2136678	26332932	904930889	19746448	26174737

Then age-adjusted disability rate for

Schedule castes (SCs) [(30351111/1210854977)*1000] = 25.07

Schedule tribes (STs) [(26332932/1210854977)*1000] = 21.75

non-SCs/STs [(26174737/1210854977)*1000] = 21.62

However, after controlling the effect of age, the study gets adjusted disability rate for the individuals. Now, the individuals who are SCs have higher disability rate (25.1 per 1000) than the STs (21.8 per 1000) and non-SCs/STs (21.6 per 1000). One of the most important things is that STs is also having higher disability rate than the non-SCs/STs. However, Table 4 depicts that males are at a greater risk of disability as compared to the females in India. But the concert is that how much statement is valid. For it, there is a need to calculate standardized disability rate. Therefore, for calculation of the age-adjusted disability rate for both males and females, firstly this study tried to estimate expected disability which is in the table 5 and later on, age-adjusted disability rate, which are just below the table 5. After freezing the effect of age, it is clear that, the individual, who are males (24.2 per 1000), is at a greater risk of disability than those who are females (20 per 1000) i.e. men are more disabled than the females.

Table 4: Disabilities rate (per 1000) among Males and Females, India 2011

Status	Population	Disability	Rate per 1000
Males	623270258	14,986,202	24.04
Females	587584719	11,824,355	20.12
Total	1210854977	26810557	22.14

Table 5: Calculation of expected disabilities in males and females by applying direct method of standardization, India 2011

All ages	Total Population	Males		Expected disability
		Population	Disability	
00-09	240627140	125409994	1780999	3417246
10-19.	254178143	133911050	2623506	4979707
20-29	213630320	109345194	2431329	4750146
30-39	174382237	87914759	2123582	4212206
40-49	135257970	69949809	1861097	3598698
50-59	88543625	45472398	1438070	2800202
60-69	64357324	31767017	1401428	2839175
70-79	28547197	14196149	889391.6	1788488
80+	11331020	5303888	436799	933160
Total	1210854977	623270258	14986202	29319028

Table 5: Continue…

Females		*Expected disability*
Population	*Disability*	
115217464	1482650	3096457
120267725	2016387	4261504
104284999	1780144	3646668
86467099	1530911	3087460
65308228	1270634	2631574
43071206	1067230	2193958
32590029	1269993	2507925
14350946	889133	1768681
6027024	517273	972492.3
587584719	11824355	24166718

Hence, the age standardized disability rate for males and females is

Males [(29319028/1210854977)*1000] = 24.21

Females [(24166718/1210854977)*1000] = 19.96

Table 6 shows the disability rate, which is higher in rural (22.4 per 1000) than the urban settings (21.7 per 1000). But how much is it valid. For it, this paper have calculated the standardize disability rate. For it firstly, expected disability rate have been calculated for both rural and urban settings that are in Table 7. Moreover, just below the table 7, the age-standardized disability rate has been computed for the individuals who are living either in rural and urban settings. It concludes that those who are living in rural settings are at higher risk of disability (22.4 per 1000) than those who are in urban contexts.

Table 6: Disabilities rate (per 1000) among Rural and Urban, India 2011

Status	*Population*	*Disability*	*Rate per 1000*
Rural	833748852	18,631,921	22.35
Urban	377106125	8,178,636	21.69
Total	1210854977	26,810,557	22.14

Table 7: Calculation of expected disabilities in rural and urban settings by applying direct method of standardization, India 2011

All age	*Total Population*	*Rural*		*Expected disability*
		Population	*Disability*	
0-9	240627139	177414228	2337005	3169683
10-19.	254178143	181340643	3279516	4596770
20-29	213630319	140393908	2748780	4182680
30-39	174382237	114374155	2388827	3642161
40-49	135257970	88578766	2066100	3154893
50-59	88543625	58096314	1693979	2581765
60-69	64357324	45366042	1999327	2836292
70-79	28547197	20262121	1380167	1944510
80+	11331019	7922675	738219	1055802
Total	1210854977	833748852	18631921	27164556

Table 7: Continue…

Urban		**Expected disability**
Population	**Disability**	
63204836	926525	3527375
72833147	1360289	4747232
73241028	1462997	4267289
60012007	1265926	3678514
46682341	1065828	3088144
30449289	811404	2359484
18990558	671845	2276824
8284659	398105	1371787
3408262	215716	717163
377106125	8178636	26033811

Hence age adjusted disability rate for individuals who are living in

Rural [(27164556/1210854977)*1000] = 22.43

Urban [(26033811/1210854977)*1000] = 21.50

Though, from above discussion it has been cleared that SCs/STs, males, and rural people are more disabled (vulnerable) than the non-SCs/STs, females and urban people respectively. Moreover, the above discussion does not sure that within the cohort which age group is more disabled. For that figure 3, 4 and 5 tried to shows the disability gap within the cohort accordance with caste, gender and place of residence in India. From the figure 3, it is cleared that disability between SCs/STs and non-SCs/STs are approximately same till the age 40-49 and after that disability gap is continuously increasing. It is also cleared that after the age group of 30-39 disabilities rate increases in both SCs/STs and non-SCs/STs.

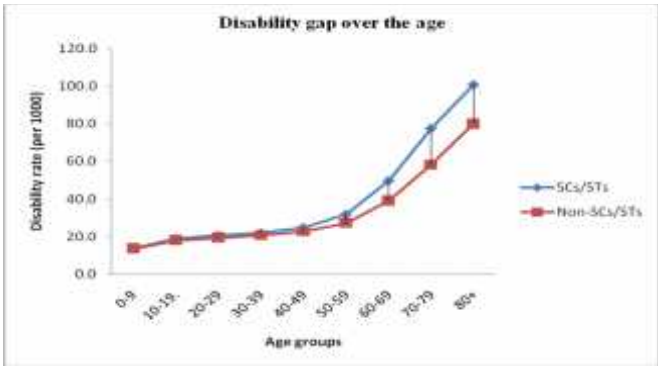

Figure 3: Disability gap between SCs/STs and non-SCs/STs over the ages in India, 2011

However, the disability gap between males and females are continuously steadily increasing from the 0-9 age group to till the age group of 50-59 and after this, it has decreased. But disability in both males and females is highly increased up to the age group 70-79. Though the disability gap between rural and urban settings are nearly 30 percent at the age group of 80+, while in the age group 70-79, it is almost 20 percent. Moreover, disability is constant from the age group 10-19 to 30-39 and after the age group 40-49, it is highly increases up to the age 80+ in both rural and urban settings.

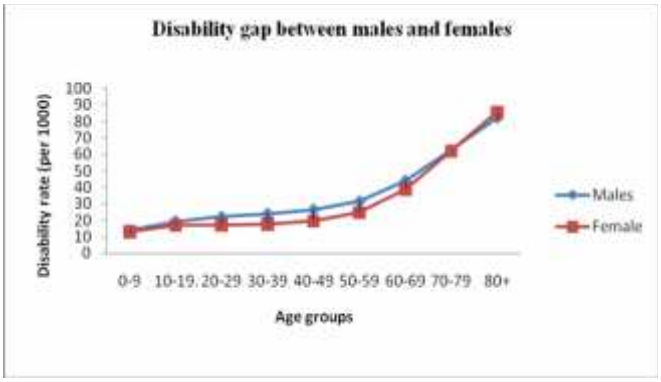

Figure 4: Disability gap between males and females over the ages in India, 2011

4. Discussion

Increasing the risk of disabilities shows the increasing the health issues for the nation. In India, some of the states like Maharashtra, Andhra Pradesh, Karnataka, Punjab, Chhattisgarh, and Jharkhand, which increase the disability over the years 2001 to 2011. The reason behind the enhancing the disability is poverty in the particular states. Since, India is still the home of villages. Currently, about 70 percent population is living in the rural areas [5]. Unsafe working environments, poor living conditions, poor nutrition, basic sanitation and nutritious food, lack of access to clean water, health care, and education, all disproportionately impact the poor and can outcome in disability. An individual who is born with a disability or who becomes disabled are often faces social marginalization. They have a significantly less chance of accessing health care, education, or employment leading to poverty, which in turn results in limited access to safe housing and food, health care and so forth [6-7].

However, the movement, seeing, and hearing disability problem is more in the country. According to WHO estimates 50 percent hearing disability are preventable. Moreover, the disability is highest in scheduled caste followed by scheduled tribes. Why is it high in a vulnerable section (SCs and STs). It may be because of discrimination and stigma. Since, the SCs and STs, or *Adivasis* are economically and socially deprive group in India. They comprise around 24% of India's population. OBCs and upper castes together consist of 76% of India's total population [8]. The deprivation of SCs and STs Groups are associated with the historical processes of economic and social exclusion, and discrimination based on caste starts from Zamindari Pratha [9]. Still in many parts of the country, these groups are suffering from economic discrimination and society violence problems. It informs of marginal farmers or landless labours by landlords by paying minimum wages in cash or food or nothing. Which frequently met by violence, sometimes resulting in deaths or injury of the victim and sexual harassment also exist against the SCs/STs women [10-11].

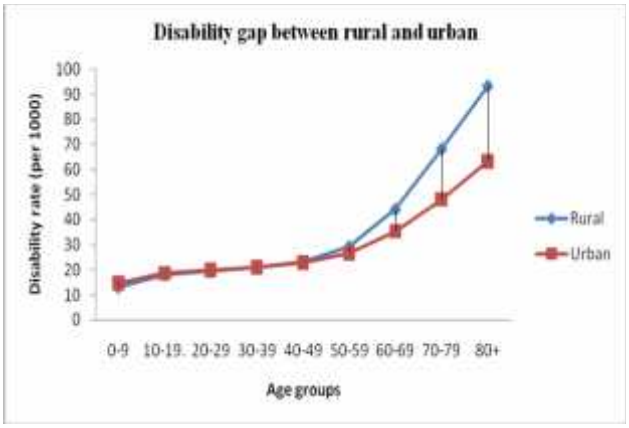

Figure 5: Disability gap between rural and urban over the ages in India, 2011

Though, the disability among male is high during the period 2001 to 2011. It is fast paced in both males and females almost after the age of 50 years. The gap and speed of enhancement of disability in between SCs/STs and non-SCs/STs is highly increases after the age 40-49. Mostly it does exist in rural settings. It shows that there is still casteism in the society. Which is somewhere on the paper has been reduced and somewhere it is not but it exist in the real situation. It is not only in the health system but also everywhere either that may be government sector or private sector. The gap between the caste groups will exist till the existence of caste system in the Indian society.

5. Conclusion

The study demonstrates that movement, seeing and hearing disabilities are more prevalent than the others. It is high in states of Uttar Pradesh while lowest in the states of seven sisters as well as the territory of India. Punjab, Jharkhand, Chhattisgarh, Maharashtra, Andhra Pradesh and Karnataka are the states where disability has increased over the period 2001 to 2011. But in EAG states, almost all the states (except Jharkhand and Chhattisgarh) have no change over the period. Disabilities rate are highest in the scheduled caste and males whereas there are slightly high in the rural areas of India. Disability gap is increased after the age group 40-49 in both SCs/STs and rural setting. While it is slightly high in males over the age 0-9 to 70-79 but overall disability in both males and females are highly increased after the age group of 50-59. It concludes that there is a need to be a separate policy for the 50 plus person that might be mostly focused to vulnerable rural section (rural-SCs/STs) irrespective for the getting better medical facility.

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