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Burden of disease among differently-abled persons in Uttar Pradesh

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Abstract

Communicable and non-communicable diseases are held responsible for various kinds of morbidity and disability. About one third of total differently-abled population has acquired disability since birth. Age-group wise distribution of differently-abled persons have revealed that more than 50 percent population suffering from disability were found to be in 0-4 age group, about 13 percent were belong to 60 and above age group. The most probable cause of locomotor incidence was polio, injury other than burns, and other illnesses. The cataract was found to be around 22 percent of total blindness followed by other eye diseases. The most probable cause of speech disability was other illnesses and paralysis and followed by voice disorder. The most probable cause of hearing disability was ear discharge, old age and other illness. Chronic under nutrition in the first two to three years of life can also lead to long term, developmental defects.

Keywords: Morbidity, Differently-abled, Communicable and Non-communicable diseases

1. Introduction

Differently-abled persons are generally amongst the poorest of the poor. It has increased the vulnerability and exclusion. As per the NSSO reports the Prevalence rate were recorded at 1886 and 1868 persons per lakh in 1991 and 2002. The incidence rate of disability had been found to be 90 and 73 in 1991 and 2002 respectively. Morbidity leads to disability. It has been documented in several research studies that living in poverty increases the likelihood of suffering from physical or health impairment; differently-abled persons generally experience higher rates of poverty than the able-bodied (Yeo, 2001) ^[14]. Poverty is both a cause and consequence of disability. Poverty and disability reinforce each other. It increases the vulnerability among them (DFID, 2000) ^[2]. Differently-abled persons are the most oppressed and marginalized section in every country. They are deprived of all opportunities of socio-economic and political development mainly because they have minimal share in access to basic facilities like health, education and employment. It is noted that around seventy percent of the differently-abled persons are unemployed and the rate of their employment is falling down radically in India (Chaudhary, 2006) ^[11].

The objectives for this paper are to analyse the intra-state variations and magnitude by types of disabilities in Uttar Pradesh and to explain the causes of disability in Uttar Pradesh to understand the nature and extent of burden of disease among differently-abled persons. The paper is based on secondary data extracted and analysed from NSSO 58th round (2002) "Differently-abled Person in India"

2. Methodology

The spatial variation of prevalence and incidence rate has been measured by taking into consideration the age groups, gender, NSSO region and rural-urban pattern by each type of disability. The estimated NSSO population has been obtained for 1st October, 2002, by applying decennial (exponential) growth rate of census population for 1991-2001.

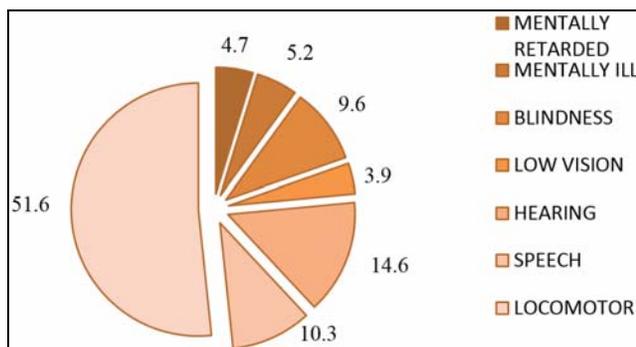
3. Discussion and Findings

As per the NSSO reports the Prevalence rate were recorded at 1886 and 1868 persons per lakh in 1991 and 2002 respectively and depicting a steady trend during the reference period. The prevalence rate for males registered notable steady trends in 2002 in the most of states in comparison to 1991. On the other hand, the prevalence rate was found to be more prominent in

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urban India in contrast to the rural India. The incidence rate of disability had been found to be 90 and 73 in 1991 and 2002 respectively.

Fig. 1.1: Percentage Distribution of Differently Abled Persons by Types of Disability



Source: NSSO 58th Rounds in 2002.

NSSO 58th round 2002 depicted 51.60 percent differently-abled were having locomotor disability, however, 9.6 percent were blind, 3.9 percent were having low vision, 14.6 percent suffered with hearing disability, 10.3 percent had speech disability and 4.7 percent and 5.2 percent had been found to be mentally retarded and mentally ill respectively in India. India's differently abled population is unevenly distributed over space some states have high concentration of differently abled population while others depict low concentration of differently-abled population.

3.1 Magnitude of Differently-Abled Persons in India

The NSSO surveys estimated that there were about 13.67 million differently-abled persons in 1981 and 16.36 million differently-abled persons in 1991 who were having at least one or more of the four types of disabilities i.e. visual, hearing, speech, and locomotor. The NSSO survey 58th round in 2002 has incorporated mental disability along with other mentioned four disabilities and the magnitude of the five disabilities was found to be around 19.77 million in 2002 (as shown in Table 1.1).

Table 1.1: Differently Abled Population (In Millions) 1991 and 2002

Year	Rural			Urban			Total		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1991	7.44	5.21	12.65	2.07	1.42	3.50	9.51	6.63	16.36
2002	8.94	6.35	15.30	2.61	1.88	4.40	11.54	8.22	19.77

Source: NSSO Rounds 47th and 58th in 1991 and 2002.

3.2 Magnitude of Differently Abled Persons in Uttar Pradesh

On the first instance the NSSO 58th round has conducted the comprehensive sample survey on the questions of disability in India. On the basis of the NSSO 58th round of Uttar Pradesh, an estimated 3545801 (2.1 percent differently-abled of total population) persons were found to be differently-abled and they were having at least single type of disability such as

speech, hearing, mental, vision and locomotor disability. The gender wise distribution shows that 2160359 males and 1385441 females are differently abled in Uttar Pradesh that constituted about 60.9 and 39.1 percent of males and females respectively. The rural-urban distribution shows that the share of rural areas was significantly higher than urban areas which were about 82.4 and 17.6 percent respectively (as shown in Table 1.2).

Table 1.2: Percentage Share of Differently Abled Population of Uttar Pradesh in 2002

Uttar Pradesh	Male	Female	Rural	Urban	Total
Total population in Uttar Pradesh	90432474	81499827	135924729	36018301	171930392
Differently Abled Population	2160359	1385441	2920454	625347	3545801
Percentage of Differently Abled Population to total Population	2.4	1.7	2.1	1.7	2.1
Percent Distribution of disabled population	60.9	39.1	82.4	17.6	100.0

Source: NSSO 58th Round 2002

In Uttar Pradesh, the regional pattern of disability revealed that the intensity of disability was found to be highest in Uttar Pradesh southern (4.3 percent) followed by Uttar Pradesh Western (2.3 percent), Uttar Pradesh Central (2.0 percent) and Uttar Pradesh Eastern (1.7 percent). However, percentage

distribution of disabled population was found to be highest in Uttar Pradesh Western (40.2 percent) followed by Uttar Pradesh Eastern (33.1 percent), Uttar Pradesh Central (19.3 percent) and Uttar Pradesh southern (7.4 percent).

Table 1.3: Percentage Share of Differently Abled Population of at regional level in Uttar Pradesh in 2002

U.P. Region	U.P. Western	U.P. Central	U.P. Eastern	U.P. Southern	Uttar Pradesh
Total population at regional level in Uttar Pradesh	63344290	33534031	68947305	6104766	171930392
Differently abled Population at regional level	1425318	685030	1172164	263288	3545801
Percentage of Differently abled Population to total Population	2.3	2.0	1.7	4.3	2.1
Percent Distribution of disabled population	40.2	19.3	33.1	7.4	100.0

Source: NSSO 58th Round 2002

3.3 Types of Disability

In Uttar Pradesh, the percentage share of locomotor disability was found to be highest that accounted about 56.5 percent of total disability that was followed by hearing impairment (11.7 percent), blindness (11.3 percent), speech impaired (8.6

percent), mentally ill (4.6 percent), mentally retarded (4.4 percent), and low vision (3.0 percent). The disability type distribution for both gender groups depicts similar magnitude in case of speech disability and Mental illness; however, females had registered the higher cases of blindness (15.9,

Hearing (13.8) and low vision (4.1). On the other hand, the males' percentage share was slightly higher in locomotor disability. The percentage share of urban areas was slightly higher than rural areas for locomotor, speech, and mentally

retarded and mentally ill, however, the share of blindness, low vision, and hearing disability was slightly higher in rural areas compare to urban Uttar Pradesh.

Table 1.4: Percentage share of disabled population by Types of Disability in Uttar Pradesh

Types of Disability	Mentally retarded	Mentally ill	Blindness	Low vision	Hearing	Speech	Locomotor	Proportional share of Population
Male	5	4.8	8.4	2.3	10.3	8.6	60.5	60.9
Female	3.3	4.2	15.9	4.1	13.8	8.6	50.1	39.1
Rural	4.1	4.5	12.3	3.2	12	8.4	55.6	82.4
Urban	5.5	5	6.8	2.3	10.2	9.9	60.4	17.6
Total	4.4	4.6	11.3	3	11.7	8.6	56.5	100

Source: NSSO 58th Round 2002

It shows that the prevalence of disability amongst the males is found to be more as compared to that among the females. The reason being men are more likely to engage in activities that make them more vulnerable to agricultural injuries, road accidents, factory and mines injuries etc than their female counterparts. Females are more prone to injury/burns in household related activities than males where they constitute 67.7 percent and 26.6 percent respectively.

The share of male population in burns/injury was fairly higher than females where they comprise 77.6 and 26.4 percentage correspondingly. The unit level data have revealed that disability caused due to burns/injury, was found to be 12 percentages to total differently abled population. The sex ratio of differently-abled population was 641 (per thousand male populations) but the sex ratio of disability due to burns/injury was 358 that were significantly lower than the previous one (as shown in Table 1.5). "Although the farm mechanization is more in the northern India, the accidents were found to be more in the villages in southern India. The tractor incidents were found to be highest (27.7percent), followed by thresher (14.6percent), sprayer/duster (12.2percent), sugarcane crusher (8.1percent) and chaff cutter (7.8percent) accidents" (Nag *et al.*, 2004, p. 149).

Table 1.5: Percentage share of Burn Injury Place of Incidence in Uttar Pradesh

Burns/ injury	Male	Female	Rural	Urban	Total
Agricultural field	19.3	7.4	19.5	5.4	16.1
Mines	0.5	0.0	0.3	0.5	0.3
Factory	3.4	2.6	3.5	2.2	3.2
Other work sites	12.1	1.2	8.7	11.0	9.2
Transport accident	25.1	13.0	19.3	30.3	21.9
Home	26.6	67.7	37.2	38.4	37.5
Others	13.0	8.2	11.6	12.2	11.7
Total	100	100	100	100	100

Source: NSSO 58th Round 2002

The rural differently-abled population percentage share in burns/injury was fairly higher than urban sector (76.4 percent and 23.6 percent respectively) mainly because they are located on periphery of development and do not have better access of education, health and other services. They were more likely to engage in activities with less safety measures that make them vulnerable to agricultural injuries, road accidents, factory and mines injuries etc than their urban counter parts (as shown in Table 1.5).

3.4 Onset of Disability among Differently-Abled persons in Uttar Pradesh

NSSO 58th round estimated the differently abled persons who have acquired disability during infancy (below one year of

age) without known reasons, have been considered to have disability from birth. About one third of total differently abled population has acquired disability since birth. It has shown that children were suffering the most from disability due to inappropriate services available at the delivery time and low level of nutrition and health services provided to the expecting mothers during their pregnancy period. Both the rural and urban areas have reported around 33.1 and 30.8 percent respectively, however, there were slight differences between male (33.1 percent) and female (32.2 percent) share of disability since birth.

A very high rate of infection and morbidity among infants and even among neonates indicates a poor health condition in U.P. especially in rural areas. This indicates that most of them belonged to poor socioeconomic background. Also, they were brought up in the conditions of poor sanitation and inappropriate and insufficient feeding practices (as shown in Table 1.6). "The study was undertaken in northern part of Karnataka state in India. They were assessed at the time of enrollment and monthly follow up was done till they attained one year of age. Out of the 194 newborns, 46.4percent were boys and 53.6percent were girls. 24.8percent of newborns were of low birth weight and 5.1percent were preterm. Four (2.1percent) had congenital anomalies and 2.5 percent developed birth asphyxia. Diarrhea (10.8percent) and skin diseases (8.2percent) were the commonest morbidities in the neonatal period. The incidence of morbidity was 3.28 per infant per year. It was more among boys and in the second half of infancy. Commonest morbidities during infancy were respiratory tract infection 62.4percent), diarrhea 42.8percent and skin diseases (21.6percent). Incidence of disease in infancy highlights the need to improve and plan health programmes" (Joseph, *et al.* 2010, p.456) [5].

Table 1.6: Onset of Disability among Differently-Abled persons in Uttar Pradesh

Disability since birth	Male	Female	Rural	Urban	Total
Yes	33.1	32.2	33.1	30.8	32.7

Source: NSSO 58th Round 2002

Some Children are born with disability and the incidence varies over the types of disability. It has observed that about 80 percent of the mentally retarded and 82.5 percent of the persons having speech disability were born with disability. Disability since birth is not as significant for other types of disabilities because most of them become differently abled during the course of life. Occurrence for some of these disabilities is mainly related to the old age.

Table 1.7: Onset of Disability among Differently-abled persons by types of disability in Uttar Pradesh

Disability since birth	Mentally retarded	Mentally ill	Blindness	Low vision	Hearing	Speech	Locomotor
Yes	79.8	27.2	12.4	6.4	41.6	82.5	25.6

Source: NSSO 58th Round 2002

A number of cases of inappropriate methods adopted at the time of delivery were also reported through several sample surveys i.e. NFHS-1 and 2 as one of the major causes of disability since birth. Therefore, various measures have been taken for universal immunization coverage, institutional delivery, and nutritional food for the pregnant mothers through numerous central and state sponsored schemes to reduce mortality and disability at the time of birth. "Birth defects are

the leading cause of death in children during the first year of life and vary widely. Although the causes of 60 to 70 percent of birth defects are unknown, genetic and environmental factors are likely to affect incidence and severity. Many birth defects fall somewhere in the middle, causing a range of disabilities, both mental and physical, that can affect children and their families for life" (Trust for America's Health, 2005 p5) [11].

Table 1.8: Onset of Disability among Differently-abled persons in the regions of Uttar Pradesh

Disability Since Birth	U.P. Western	U.P. Central	U.P. Eastern	U.P. Southern	U.P
Yes	31.7	30.9	36.3	27.1	32.7

Source: NSSO 58th Round 2002

The regional exploration reveals that highest percentage share was found to be Eastern U.P (36.3 percent) followed by Western U.P (31.7 percent). However, lowest share of disability since birth was found in southern part of U.P. There could be many causes of disability among the neonatal but some of major reasons of disability includes brain injury, infection before or after the birth, abnormalities of chromosomes and genes, growth and nutrition problems, offspring born prior than the anticipated delivery date i.e. severe prematurity, un-nourished diet, health care. Even factors like drug abuse during pregnancy, child abuse and smoking could have a harsher consequence on the growth of a child. These factors particularly hamper the socio emotional maturity of the children.

0-4 age group, about 13 percent were belong to 60 and above age group and age-group of 0-14 years, have accounted more than 60 percent in the total disability. Among the mentally retarded persons more than 90 percent were found between age group of 0-4 years. However, major percentage share of mental illness were mainly found within 30 years age groups. More than half of the cases of blindness and low vision cases found to be were related to age group of 50 years and above. The communication disability related cases were primarily related to childhood where about 90 percent cases of speech disability and 47 percent of hearing disability were found to be within 0-4 age group. The occurrence of locomotor disabilities mainly has followed the same trends where about 57 percent were found to be within 0-4 age group. According to an ICMR Task Force study carried out at three centers (Delhi, Jaipur, and Lucknow), "the prevalence of disability among children below six years of age was found to be 8.8 per thousand in Delhi, 6.5 per thousand in Jaipur and 12.6 per thousand in Lucknow" (ICMR Bulletin 2007, p. 9-10).

3.5 Age Groups wise Distribution in Uttar Pradesh

In Uttar Pradesh, age-group wise distribution of differently abled persons have revealed that more than 50 percent population suffering due to disability were found to be within

Table: 1.9: Distribution of Differently Aabled persons by Types of Disability in Uttar Pradesh

Age at on set group	Mentally retarded	Mentally ill	Blindness	Low vision	Hearing	Speech	Locomotor	Total
0-4	92.2	33.5	17.7	9.2	47.3	89.6	57.2	53.4
5-9	3.7	6.0	3.4	4.2	4.5	2.4	6.7	5.5
10-14	1.7	6.3	2.5	0.7	3.1	0.8	4.5	3.7
15-19	1.9	9.0	1.2	2.0	1.8	0.2	3.5	2.9
20-24		12.1	1.5	0.9	3.4	0.7	2.9	2.8
25-29		7.7	1.5	0.9	2.4	0.3	2.6	2.3
30-34		5.9	1.8	0.8	1.3	0.3	2.7	2.2
35-39		5.0	2.3	0.7	1.8	0.4	2.3	2.0
40-44		3.0	3.9	2.7	2.5	0.5	2.1	2.2
45-49		2.8	5.5	5.7	3.2	0.1	2.1	2.5
50-54		4.8	7.6	7.4	5.9	1.6	3.2	4.0
54-59		1.2	8.4	12.3	4.3	0.6	3.4	3.8
60-64		2.1	42.7	51.4	18.5	1.9	6.3	12.4
65& above	0.6	0.7	0.1	1.0	0.2	0.5	0.5	0.5
Total	100	100	100	100	100	100	100	100.0

Source: NSSO 58th Round 2002

3.6 Causes of locomotor disability

The causes of disability have been explored and assessed to understand the nature and magnitude of the differently abled persons so that better preventive and curative methods can be devised for the purpose of rehabilitation. The prevalence rate of locomotor disability have depicted that Uttar Pradesh recorded the (1165) prevalence rate. On the basis of NSS

regions, the prevalence rate of locomotor disability was analysed in which highest prevalence rate was recorded (at national level) for U.P Southern (2208) and followed by U.P Western (1355). The highest incidence rate in Uttar Pradesh was recorded for U. P Southern (87). The most probable cause of locomotor incidence were polio, injury other than burns, and other illnesses of which share in burden of diseases

ranging from 41.8 percent, 25.3 percent, and 11.3 percent respectively in Uttar Pradesh and at aggregate level these diseases were accountable for more than 75 percent locomotor disability.

The incidence of locomotor disability due to stroke, arthritis, cardio respiratory diseases etc were higher usually at the old age rather than at the young age (NSSO 58th round 2002, p 44). The Polio was found to be most important probable cause of locomotor disability; its share in total locomotor disability was about 42 percent. The U.P Southern have recorded the highest locomotor prevalence rate in India and most probable

cause of locomotor disability was polio accounting 41.8 percent of total locomotor disability in the region. However, highest cases of polio among differently abled were found in western U.P. which accounted about 47.3 percent and lowest belongs to eastern UP that accounted 36.6 percent. The children were suffering the most from burden of diseases where about 57 percent locomotor disabled were found to be within 0-4 age group and of them about 80 percent were suffering from the Polio. The burden of disease linked to locomotor disability reveals no striking difference among all the social groups.

Table 1.10: Percentage distribution of Burden of disease among Locomotor Differently Abled in Uttar Pradesh

Causes of Locomotor disability	Male	Female	Rural	Urban	Total
Cerebral palsy	2.5	3.3	2.7	3.0	2.8
Polio	41.4	42.7	42.5	39.3	41.8
Leprosy cured	0.5	0.6	0.6	0.4	0.5
Leprosy not cured	0.8	0.3	0.8	0.2	0.6
Stroke	2.4	3.0	2.3	3.7	2.6
Arthritis	2.3	5.0	3.1	3.6	3.2
Cardio respiratory diseases	0.2	0.2	0.1	0.5	0.2
Cancer	0.1	0.3	0.2	0.1	0.2
Tuberculosis	0.4	0.2	0.3	0.3	0.3
Other illness	10.9	12.0	11.6	10.2	11.3
Burns	1.5	1.4	1.3	2.0	1.5
Injury other than burns	28.7	18.8	24.4	29.1	25.3
Medical/surgical intervention	1.7	1.6	1.7	1.6	1.7
Old age	0.8	1.3	0.9	1.4	1.0
Not known	3.0	5.0	3.8	3.2	3.7
Other reasons	2.8	4.4	3.8	1.3	3.3
Total	100	100	100	100	100.0

Source: NSSO 58th Round 2002

3.7 Causes of Visual Impairments

At national level highest prevalence rate of blindness was recorded for U.P Southern region (520), although in Uttar-Pradesh it was around 234. The incidence rate for Uttar Pradesh was around 13. On regional basis, the highest

incidences of blindness were recorded for U.P southern (47), followed by U.P Central. The highest incidence rate in U.P southern was found to be due to other eye diseases, small pox and old age and the proportional share of these accounted 23.4, 14.3 and 26.7 percent respectively.

Table 1.11: Percentage Distribution of Burden of Disease among Visually Challenged in Uttar Pradesh

Causes of Visual Disability	Male	Female	Rural	Urban	Total
Sore eyes during the first month of life	0.1	0.2	0.2	0.7	0.2
Sore eyes after one month	1.0	0.3	0.6	0.3	0.6
Severe diarrhoea before the age of six years	0.4	0.5	0.5	20.3	0.5
Cataract	19.4	24.2	22.3	8.3	22.1
Glucoma	6.2	6.9	6.3	3.1	6.5
Corneal opacity	1.4	1.3	1.2	22.0	1.4
Other eye diseases	21.9	20.1	20.8	9.5	20.9
Small pox	9.3	8.1	8.5	0.9	8.6
Burns	0.2	0.4	0.3	4.0	0.3
Injury other than burns	3.8	1.1	2.1	6.6	2.3
Medical/surgical intervention	2.9	3.3	2.7	12.8	3.1
Old age	13.8	19.6	17.5	7.2	17.0
Not known	5.4	8.4	7.0	4.2	7.0
Other reasons	14.2	5.6	10.0	100.0	9.4
Total	100	100	100	100	100.0

Source: NSSO 58th Round 2002

The proportional share of cataract was found to be around 22 percent of total blindness followed by other eye diseases 21 percent. The glaucoma and small pox have also been responsible for blindness but the shares of these diseases are not as high as in case of other eye diseases and both together account for about 15 percent of total blindness. The proportional share of cataract was slightly higher in rural areas compare to urban areas that accounted 22.3 and 8.3 percent respectively. The females percentage share was also found to

be higher in old age related blindness that corresponds with higher longevity and health care negligence compare to males in UP. At regional level, the cataract percentage share was found to highest in central UP and followed by eastern UP, however least share represented by southern UP (7.5 percent). Small pox was found to relevant in southern UP where about 14.3 percent cases were attributed to blindness. Among Scheduled tribes, about 54 percentage share of blindness was mainly associated to old age causes and 34

percent were suffering due to other eye diseases. However among Scheduled castes, the proportional share of cataract was found to be around 23 percent of total blindness followed by other eye diseases 22.4 percent. “The nutrition intake in terms of protein and calorie is higher among the non-tribal districts as compare to tribal districts. The percentage of severely malnourished children was found to be broadly at the identical level as well as in non-tribal districts. Among adults, the chronic energy deficiency was found to be higher among the tribal’s as compare to non tribal districts” (Yadav and Singh, 1999, p.101) [13].

Among scheduled castes, the percentage share of blindness was about 31percent that was also higher than the share of scheduled castes in total differently abled population. Moreover, the females’ share (63.5 percent) in the blindness was considerably higher than the males. It is mainly because women are denied equal access to health care services in India. The cataract treatment rate was higher for the males compare to females. The gender-sensitive intervention policies are required to improve cataract treatment among females (about 58 percent). They could not access the health care facilities primarily because of cultural, social and economic constraints. Those persons were living in households where biomass fuels being used for cooking food were found to be a noticeably higher prevalence of blindness (partial or complete) compare to those using cleaner fuels. “The extent of biomass fuel used in India indicated that 18 percent of partial and complete blindness among persons age 30 and older may be attributed to biomass fuel use only” (Mishra *et al.*, 1999, p.189). There are varieties of disabilities along with a host of causes for these disabilities. People with disabilities are often denied

choices and equality in relation to medical and health services, education, employment as also in other spheres of life. They consequently become isolated and frustrated. Social discrimination is a severe problem experienced by people with disability. Poor and deprived sections of society have least share in utilization and access to health care facilities. Despite government efforts, large vulnerable sections are living in degenerated conditions.

3.8 Causes of the Low vision impairments in Uttar Pradesh

The low vision causes have followed the analogous pattern of blindness. In Uttar Pradesh, the percentage share of cataract was found to be considerably higher (30.7 percent) followed by old age (24.8 percent), other eye diseases (14.5 percent) and not known causes (10.2 percent) in low vision disability. Since, low vision is precisely old age related problems so that percentage share of females in burden of diseases especially related to cataract was slightly higher than the males. In the rural areas, the percentage share of cataract was slightly higher than urban area.

The percentage share of cataract was appreciably higher in UP central (40.2 percent) followed by eastern UP (34.7 percent), western and southern UP. The percentage share of old age in burden of disease was found to be highest southern UP (34 percent) followed by eastern and western UP. The percentage share of Glucoma was about 5.6 percent in total low vision of UP but distribution among NSS region revealed that highest percentage share belong to central UP and southern UP that accounted about 14 percent and 11 percent respectively.

Table: 1.12: Percentage Distribution of Burden of Disease among Low Vision in Uttar Pradesh

Low vision cause	Male	Female	Rural	Urban	Total
Sore eyes during the first month of life		1.2	0.7		0.6
Sore eyes after one month	1.2		0.6		0.6
Severe diarrhoea before the age of six years	3.8	0.0	1.7	2.0	1.7
Cataract	29.6	31.7	31.8	23.5	30.7
Glaucoma	4.4	6.5	5.0	9.0	5.6
Corneal opacity	0.7	0.3	0.6		0.5
Other eye diseases	13.3	15.4	11.9	31.2	14.5
Small pox	1.8	1.1	1.5	1.2	1.4
Injury other than burns	4.2	3.2	3.5	4.7	3.7
Medical/surgical intervention	2.8	2.8	3.0	1.3	2.8
Old age	25.6	24.1	25.6	19.1	24.8
Not known	10.1	10.3	10.9	5.8	10.2
Other reasons	2.5	3.4	3.1	2.2	3.0
Total	100	100	100	100	100

Source: NSSO 58th Round 2002

3.9 Communication Disability

In India, the highest incidence rate of hearing disability was recorded for Pondicherry (24) followed by Andhra (15), Chhattisgarh (12), Uttar-Pradesh (11), Kerala (10) and Haryana (10). The NSS region wise, the highest prevalence rate was estimated for UP Southern (768) followed by Pondicherry (721), and Sikkim (665). The highest prevalence rate for speech disability was estimated for Sikkim (665) and Assam Hills (509) followed by U.P Southern (404).

3.10 Probable causes of Hearing Disability

The NSSO have collected the information related to probable cause of hearing disability. The most probable cause of hearing disability was ear discharge that accounts for 25.5 percent of total disability while other reasons such as old age and other illness have also accounted for 23 and 22 percent respectively of hearing disability. The proportional share of ear

discharge in rural areas was slightly higher than the urban areas that constitute 26.6 and 19.5 percent respectively. It seems that rural areas do not have enough access to public health services that’s why percentage of rural areas were comparatively higher to urban areas especially in ear disease related cases. The percentage share of noise induced hearing losses were higher in urban areas compare to rural areas because noise pollution have increased significantly with the increase of urbanization and industrializations in India. The continuous and prolonged exposure to noise leads to many disorders and ailments. The most important one of them is hearing disability. “It has been noted by WHO that half the causes of deafness are preventable and about 30 percent, though not preventable, are treatable or can be managed with assistive devices. Thus, about 80 percent of all deafness can be said to be avoidable” (WHO, cited in Garg *et al.*, 2009, pp.79-80).

Table 1.13: Percentage Distribution of Burden of Disease among Hearing Differently abled in Uttar Pradesh

Hearing causes	Male	Female	Rural	Urban	Total
German measles/ rubella	1.6	0.8	1.4	0.0	1.2
Noise induced hearing loss	1.7	1.7	1.5	3.0	1.7
Ear discharge	27.0	23.7	26.6	19.5	25.5
Other illness	17.4	27.6	22.0	22.2	22.1
Burns		0.3		0.9	0.1
Injury other than burns	5.6	3.6	4.4	6.4	4.7
Medical/surgical intervention	0.9	2.2	1.5	1.7	1.5
Old age	26.5	19.1	22.4	26.7	23.1
Not known	14.1	14.8	15.2	10.1	14.4
Other reasons	5.2	6.2	5.0	9.5	5.7
Total	100	100	100	100	100

Source: The NSSO 58th round 2002.

The effects of urbanisation and industrialisation can also be seen in terms of injury other than burns where, percentage share of injury was considerably higher in urban areas than rural areas. The percentage share at urban areas was significantly higher than rural areas that account 26.7 and 22.4 percent respectively in old age related hearing disability. Moreover, females share in old age hearing disability was lower than the males.

The causes of ear discharge was found to more prone in eastern and southern UP where about 36 percent in both the region was attributed to hearing loss. However, percentage share of western and central UP was slightly higher in other illnesses compare to other regions.

3.11 Cause of Speech Disability in Uttar Pradesh

The NSSO have collected the information related to probable cause of speech disability. The most probable cause of speech disability was other illnesses and paralysis that accounts about 22 and 21 percent respectively of total speech disability and followed by voice disorder have also accounted for about 12.5 percent. The proportional share of paralysis in rural areas was slightly lower than the urban areas that constitute 20 and 24 percent respectively. While, the percentage share of other illness have not shown any striking difference in rural and urban areas. But the percentage share of voice disorders, and not known reasons were lower in urban areas compare to rural areas.

Table 1.13: Percentage Distribution of Burden of Disease among Speech Differently abled in Uttar Pradesh

Speech causes	Male	Female	Rural	Urban	Total
Hearing impairment	2.6	5.9	3.4	5.1	4.0
Voice disorder	14.8	9.3	13.9	9.7	12.5
Cleft palate/lip	1.9	2.1	1.3	3.4	2.0
Paralysis	17.2	26.4	19.6	24.0	21.1
Mental illness / retardation	4.6	12.9	7.3	9.8	8.1
Other illness	26.0	16.0	22.0	21.4	21.8
Burns		0.7		0.9	0.3
Injury other than burns	9.2	1.4	5.6	6.7	5.9
Medical/surgical intervention	3.7	1.4	2.5	3.3	2.8
Not known	8.7	17.1	14.3	8.1	12.3
Other reasons	11.2	6.7	10.2	7.5	9.3
Total	100.0	100.0	100.0	100.0	100.0

Source: The NSSO 58th round 2002.

The effects of urbanisation and industrialisation can also be seen in terms of injury other than burns where, percentage share of injury was slightly higher in urban than rural areas that account 6.7 and 5.6 percent respectively. The causes associated with speech disability in southern and central UP were mainly attributed to Paralysis where about one fourth belongs it. However, in eastern and southern UP, other illness was found accountable for about 32 and 23 percent respectively.

4. Conclusion

Morbidity leads to disability. Communicable and non-communicable diseases are held responsible for various kinds of morbidity and disability. Maternal conditions, HIV, AIDS and tuberculosis are the three major causes of disease burden in developing region. The IMR in low and middle-income countries is higher in the most populous countries. Pneumonia, diarrhoea, measles, malaria and malnutrition, disease accounts for 70 percent of all childhood deaths globally. It also addresses other serious causes of febrile diseases (for example, dengue) and other associated disability problem such as eye

problem associated with measles or vitamin A deficiency and ear infections.

In Uttar Pradesh, the percentage share of locomotor disability was found to be highest that accounted about 56.5 percent of total disability. Age-group wise distribution of differently abled persons have revealed that more than 50 percent population suffering from disability were found to be in 0-4 age group, about 13 percent were belong to 60 and above age group. The most probable cause of locomotor incidence were polio, injury other than burns, and other illnesses of which share in burden of diseases ranging from 41.8 percent, 25.3 percent, and 11.3 percent respectively in Uttar Pradesh and at aggregate level these diseases were accountable for more than 75 percent locomotor disability.

The proportional share of cataract was found to be around 22 percent of total blindness followed by other eye diseases 21 percent. The glaucoma and small pox have also been responsible for blindness but the shares of these diseases are not as high as in case of other eye diseases and both together account for about 15 percent of total blindness. In Uttar Pradesh, the percentage share of cataract was found to be

considerably higher (30.7 percent) followed by old age (24.8 percent), other eye diseases (14.5 percent) and not known causes (10.2 percent) in low vision disability. Since, low vision is precisely old age related problems so that percentage share of females in burden of diseases especially related to cataract was slightly higher than the males.

The most probable cause of hearing disability was ear discharge that accounts for 25.5 percent of total disability while other reasons such as old age and other illness have also accounted for 23 and 22 percent respectively of hearing disability. The most probable cause of speech disability was other illnesses and paralysis that accounts about 22 and 21 percent respectively of total speech disability and followed by voice disorder have also accounted for about 12.5 percent.

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