

Chapter 5

Nature and Causes of Different Types of Disability

In this chapter a detail discussion on nature and causes of disability is made separately for each type of disability. Information on these aspects of disability was collected in the NSSO surveys on disability, latest one being held in the year 2002. Information on mental disability was collected for the first time in this latest survey.

5.1 Mental Disability:

Causes of mental disability: In more than 50% cases mental retardation has been reported to be caused by serious illness or head injury in the childhood. Across various sub-populations like rural, urban, male or female the causes of mental retardation remained more or less same.

Table 5.1: Percentage distribution of persons with mental retardation or mental illness by cause of mental disability for each sex and sector					
Cause of mental disability	Mental Retardation				
	Rural	Urban	Male	Female	All persons
Pregnancy & birth related	3	3	2	4	3
Serious illness during childhood	39	46	42	40	42
Head injury in childhood	9	13	9	11	10
Heredity	2	3	3	2	2
Other reasons	20	16	19	19	19
Not known	25	18	23	23	23
Total*	100	100	100	100	100
Mental Illness					
Pregnancy & birth related	3	2	0	6	2
Serious illness during childhood	7	15	9	9	9
Head injury in childhood	3	5	3	3	3
Heredity	3	3	3	3	3
Other reasons	44	50	48	42	46
Not known	40	25	36	37	36
Total *	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

*total incl. not recorded cases of 'cause of mental retardation'

In contrast to rural areas, more number of the persons reported to be mentally retarded due to serious illness in childhood in the urban areas. Also in rural areas the cause of disability was not known to more number of persons as compared to urban areas. Contrary to common belief, in less than 5% cases it was reported to be due to birth related causes or heredity.

In case of mental illness again only in very few cases it was attributed to heredity, birth related reasons and in only 9% cases were reported to be due to serious illness in the childhood. In 36% cases respondents could not report the exact cause of disability. Unlike the cases of mental retardation, for mental illness the percentage distribution by causes of disability varied, though marginally, from one sub-population to the other.

Fig. 5.1: Percentage distribution of all persons having mental retardation or mental illness with age at onset 0-18 years by cause of disability

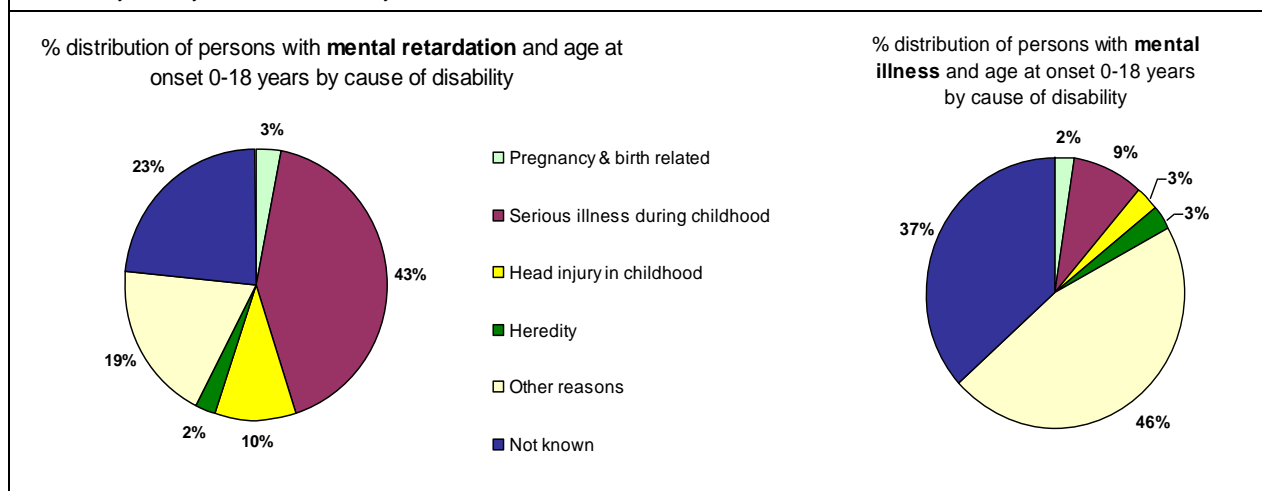


Table 5.2: Per cent distribution of persons 60 years and above with mental retardation or mental illness by age at onset of disability

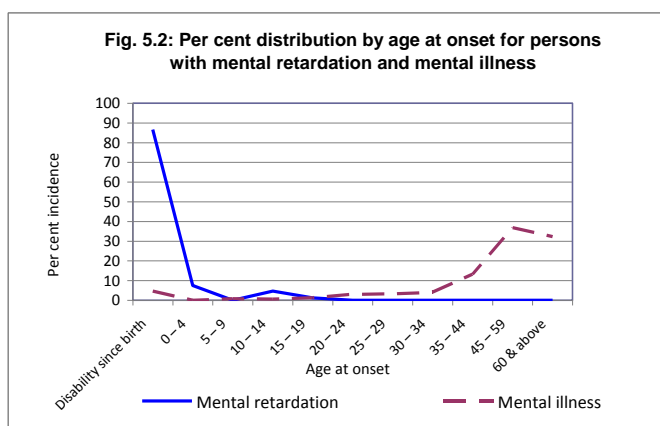
Age at onset	Mental retardation					Mental illness				
	Rural	Urban	Male	Female	All persons	Rural	Urban	Male	Female	All person
Since birth	90	71	85	90	87	5	3	5	5	5
0 – 4	7	8	10	4	8	0	0	0	0	0
5 – 9	0	0	0	0	0	1	1	1	1	1
10 – 14	3	13	3	7	5	0	1	1	1	1
15 – 19	0	8	2	0	1	1	2	2	1	1
20 – 24	0	0	0	0	0	3	3	3	3	3
25 – 29	0	0	0	0	0	3	3	4	3	3
30 – 34	0	0	0	0	0	4	4	5	4	4
35 – 44	0	0	0	0	0	12	16	12	14	13
45 – 59	0	0	0	0	0	41	21	34	39	37
60 & above	0	0	0	0	0	28	47	35	30	32
Total	100	100	100	100	100	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

Age at onset of mental disability: Mental retardation can be seen as a phenomenon whose manifestation was observed mostly at birth or at very early ages of life. More than 85% of the persons with mental retardation were disabled since birth. The proportion was still higher in the rural areas (90%) as

compared to the urban areas (about 70%) and again more for females (90%) than for males (85%). For 8% of the persons with mental retardation, the age at onset was 0-4 years (in both rural and urban areas). Another 3% acquired it between ages 10-14 years.

On the other hand, the problem of mental illness is more of an old age problem. Only 5% of the persons with mental illness were disabled since birth and another 10% acquired it between ages 5 to 34 years. Age 35 years onwards the disability starts setting in. For nearly 40% cases, the age at onset was 45-49 years and more than 30% acquired mental illness after the age of 60 years. Unlike rural areas, in urban areas about 20% fell mentally ill in the age-group 45-49 years and almost 50% acquired the disability after the age of 60 years. There was no major difference with respect to onset of mental illness for males and females.



Mentally retarded who were late in	Rural	Urban	Male	Female	All persons
Sitting	2.6	1.9	2.4	2.3	2.4
Walking	2.1	2.6	2.5	1.9	2.3
Talking	9.0	10.3	9.3	9.5	9.4
Combination of sitting, walking & talking	86.3	85.2	85.8	86.3	86.0
All mentally retarded persons	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

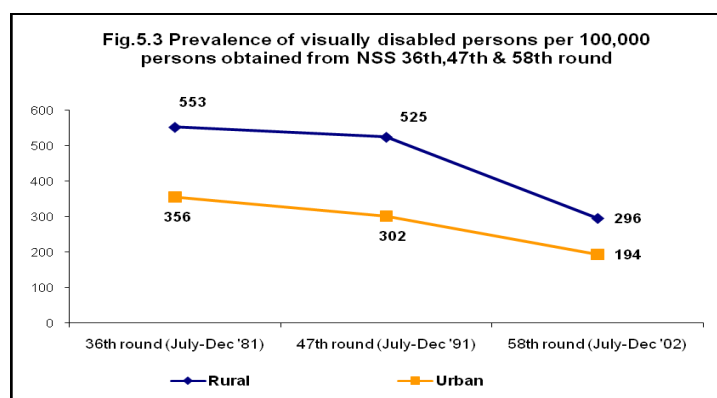
More than 85% of the mentally retarded persons showed a delay in the development of combination of sitting, walking and talking. About 10% were late only in talking and 2% each were late in only sitting or only walking. The trends were nearly the same among males and females although there were some minor differences between rural and urban areas.

5.2 Visual Disability

Prevalence of visual disability over years: The prevalence of visual disability can be examined over past NSS surveys. The prevalence of visually disabled persons has first shown a marginal drop from the year 1981 to 1991. Thereafter there has been a sharp dip in their proportion in the year 2002. The reduction in

the proportion of visually disabled has been significantly more in rural sector as compared to its urban counterpart.

sector	NSS 36 th round			NSS 47 th round			NSS 58 th round		
	(July – December, 1981)			(July – December, 1991)			(July – December, 2002)		
	male	female	person	male	female	person	male	female	person
rural	444	670	553	471	548	525	276	326	296
urban	294	425	356	263	346	302	163	228	194



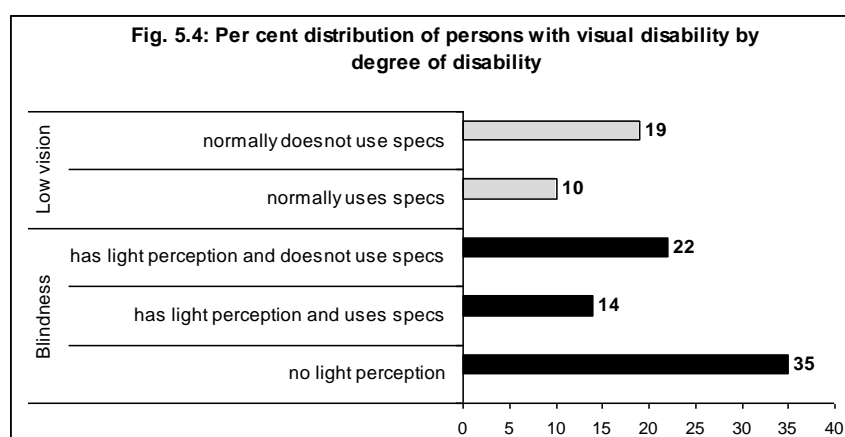
Next we can examine degree of disability, causes of disability, age at onset etc., separately for blind and for those with low vision.

Degree of disability	Rural	Urban	Male	Female	All persons
no light perception	34	35	35	34	35
<u>has light perception but cannot count fingers from a distance of 1 meter:</u>					
and normally uses specs.	14	18	16	14	14
and normally does not use specs.	23	19	20	24	22
Blindness (sub-total)	71	72	71	71	71
<u>has light perception but cannot count fingers from a distance of 3 meters:</u>					
and normally uses specs.	9	12	10	9	10
and normally does not use specs.	20	15	18	20	19
Low vision(sub-total)	29	28	28	29	29
All visually disabled	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

Degree of visual disability: Out of the total visually disabled persons, more than 70% were blind (of which 35% had no light perception and more than 35% had light perception but could not count fingers from a distance of 1meter) and nearly 30% suffered from low vision (that is the persons who had light perception but could not count fingers from a distance of 3 meters). The overall proportions of blind and low vision among the visually disabled remained more or less same across sectors and sex. Among the

visually disabled persons, who had light perception, a higher percentage of persons in the urban areas were using spectacles as compared their rural counterparts



Causes of Visual Disability:

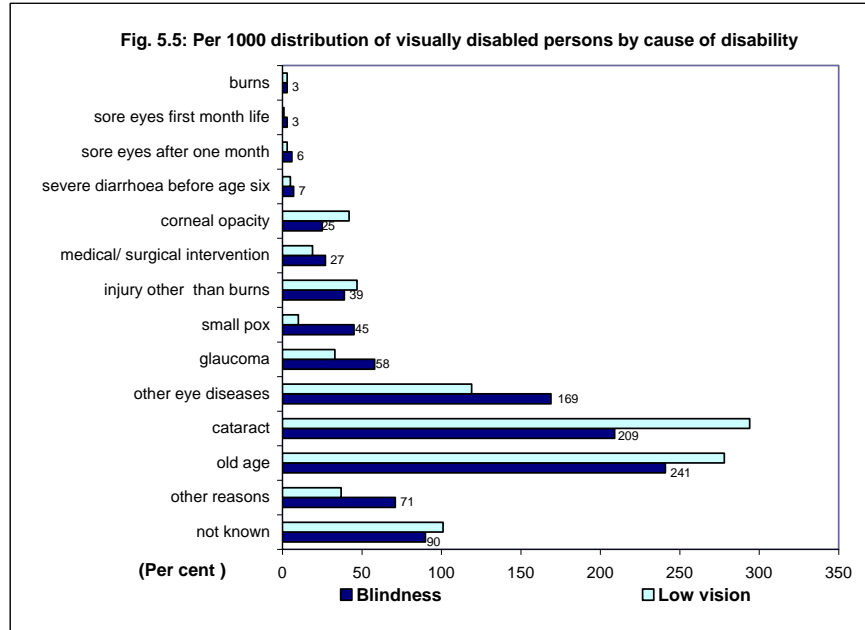
Table 5.6: Per thousand distribution of persons with blindness or low vision by cause of disability for each sex and sector

Cause of Visual Disability	Blindness					Low vision				
	Rural	Urban	Male	Female	All person	Rural	Urban	Male	Female	All persons
sore eyes first month life	3	1	4	2	3	1	1	1	0	1
sore eyes after one month	6	8	8	5	6	2	4	5	1	3
severe diarrhoea before age 6	7	8	8	6	7	5	7	8	3	5
cataract	212	196	192	223	209	280	358	276	309	294
glaucoma	52	80	56	59	58	32	40	36	31	33
corneal opacity	21	40	25	24	25	48	14	53	33	42
other eye diseases	170	164	183	157	169	109	163	137	104	119
small pox	47	36	51	40	45	10	9	14	7	10
burns	4	2	4	3	3	3	3	2	4	3
injury other than burns	38	47	54	28	39	44	58	69	29	47
medical/ surgical intervention	22	49	26	28	27	17	28	22	16	19
old age	250	200	202	272	241	295	198	223	321	278
other reasons	70	74	90	55	71	34	52	42	33	37
not known	90	89	87	92	90	110	59	102	99	101
total*	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Source: NSSO Survey on Disability (2002)

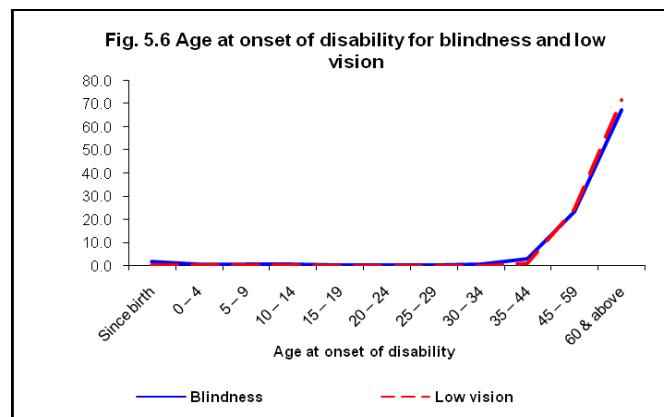
* 'total' includes not recorded cases of 'cause of blindness/low vision'

More than 60% of the persons with blindness acquired disability due to the following three reasons - old age (nearly 25%), cataract (21%) and other eye diseases (more than 15%). Similarly about 70% of the persons with low vision also acquired disability due to these same three reasons-cataract and old age (nearly 30% each) and other eye diseases (more than 10%).



These three reasons were more prevalent in the rural areas as compared to urban sector in case of blindness. But, in case of low vision, in urban areas, cataract and other eye diseases were significantly more responsible for causing disability, whereas in rural sector a higher proportion of persons had low vision due to old age. Other reasons that were more significantly responsible for blindness especially in the urban areas were glaucoma, corneal opacity, injury other than burns and medical/ surgical intervention. In contrast to males, cataract and other eye diseases were more common, and injury other than burns, old age and other reasons were less prevalent among females.

Age at onset of visual disability: More than two-third of persons with blindness and more than 70% of persons with low vision acquired the disability after the age of 60 years. Another 25% got disabled in the age group 45-49 years and there was very little difference in this respect between the two types of visual impairment. Less than 2% of visually challenged persons were disabled since birth.



Age at onset	Blindness					Low vision				
	Rural	Urban	Male	Female	All persons	Rural	Urban	Male	Female	All persons
Since birth	19	13	21	15	18	7	5	13	2	6
0 – 4	7	9	5	8	7	6	1	2	7	5
5 – 9	9	5	7	9	8	5	0	5	4	4
10 – 14	7	10	7	8	8	3	3	4	3	3
15 – 19	4	10	4	6	5	1	0	3	0	1
20 – 24	4	2	2	5	4	2	4	2	2	2
25 – 29	5	1	2	7	5	1	1	0	1	1
30 – 34	7	12	12	5	8	1	0	2	0	1
35 – 44	34	22	41	25	32	9	21	7	14	11
45 – 59	220	294	214	246	233	248	245	233	258	248
60 & above	684	621	683	666	673	717	716	729	708	717
total	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Source: NSSO Survey on Disability (2002)

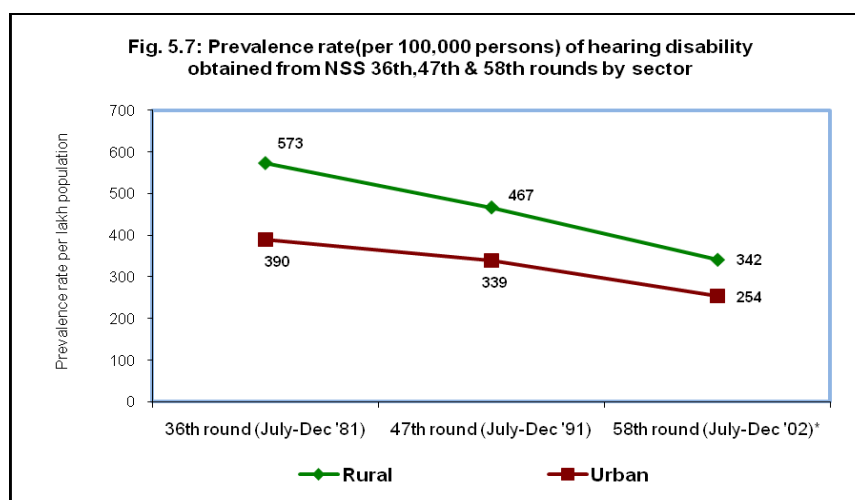
5.3 Hearing Disability

Prevalence of hearing disability- comparison over NSS survey rounds:

sector	NSS 36th round			NSS 47th round			NSS 58th round*		
	(July – December, 1981)			(July – December, 1991)			(July – December, 2002)		
	male	female	persons	male	female	persons	male	female	persons
rural	595	510	573	498	435	467	351	332	342
urban	386	395	390	325	355	339	252	256	254

* for persons of age 5 years and above in NSS 58th round.

There has been a steady decline in the proportion of persons with hearing disability between 1981 (36th round) and 2002 (58th round). However in the NSS 58th round the information on having hearing disability was obtained from persons of age 5 years and above unlike the previous two surveys. Also there was a sharper drop in the prevalence of disability in the rural areas as compared to the urban sector.



Degree of hearing disability: Depending upon the extent of person's inability to hear properly, the degree of hearing disability has been classified into 3 categories- profound, severe and moderate. A person was considered as having *very severe or profound* hearing disability, if he/she could not hear at all or could hear only loud sounds. *Severe* hearing disability exists, if a person could hear only shouted words, while *moderate* hearing disability was reported when the disability was neither very severe nor severe. Persons having moderate hearing disability usually would ask to repeat the words spoken by the speaker or like to see the face of the speaker during conversations.

Degree of disability	Rural	Urban	Males	Females	All persons
Profound	31	34	32	31	32
Severe	40	36	38	40	39
Moderate	29	29	29	29	29
All	100	100	100	100	100

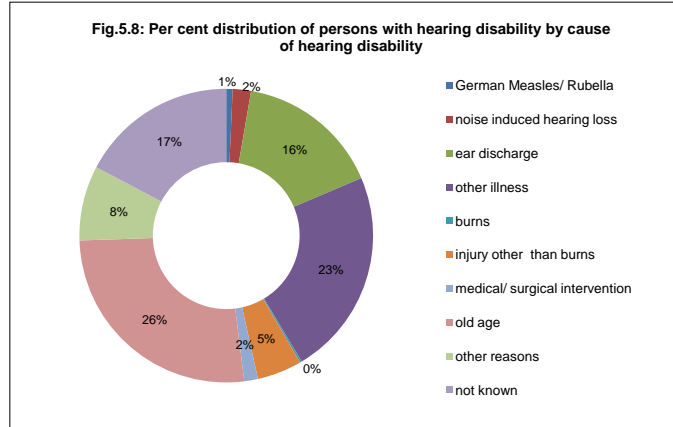
Source: NSSO Survey on Disability (2002)

Among the persons with hearing disability, in more than 30% cases disability was reported to be profound, another 40% had severe disability, and only 30% had moderate hearing disability. Across different sub-populations the proportions remained more or less same.

Causes of hearing disability: The single major reason for hearing disability was old age (more than 25%). Other major causes included other illness (more than 20%) and ear discharge (more than 15%). In more than 15% of the cases, the cause was not known. Among the two sectors, ear discharge was a more prevalent cause in the rural sector than the urban sector, while for other causes including old age and noise induced hearing loss were more prevalent in the urban sector. In the rural sector more than 18% of disabled persons did not know the cause of hearing disability.

Cause of hearing disability	Rural	Urban	Male	Female	All persons
German Measles/ Rubella	0.6	0.8	0.8	0.5	0.7
noise induced hearing loss	1.7	3.1	2.5	1.5	2.0
ear discharge	16.5	13.2	16.2	15.4	15.8
other illness	22.9	22.1	22.0	23.5	22.7
burns	0.2	0.2	0.3	0.1	0.2
injury other than burns	4.7	5.9	5.6	4.2	4.9
medical/ surgical intervention	1.4	2.2	1.3	1.8	1.5
old age	25.4	29.5	25.4	27.2	26.3
other reasons	7.7	9.9	7.9	8.5	8.2
not known	18.3	12.8	17.5	16.8	17.2
Total (including not recorded cases)	100	100	100	100	100

Source: NSSO Survey on Disability (2002)



Age at onset of hearing disability: Nearly 60% of the persons with hearing disability acquired the disability after the age of 60 years and about 25% acquired it in the age-group 45-49 years. About 6% got hearing disability since birth. As compared to the rural areas, lesser proportion of urban persons was disabled since birth and a higher percentage acquired it after 60 years. Among males and females, a higher proportion of males was disabled since birth or acquired it after the age of 60 years. By and large hearing disability can be considered more as old age disability.

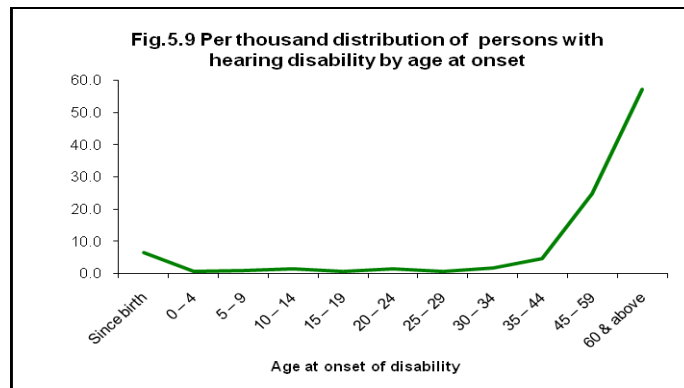


Table 5.11: Per 1000 distribution of persons 60 years and above with hearing disability by age at onset of disability for each sex and sector

Age at onset	Rural	Urban	Male	Female	All persons
Since birth	68	53	77	53	65
0 – 4	7	5	8	5	6
5 – 9	7	14	7	10	9
10 – 14	15	10	16	12	14
15 – 19	5	10	5	6	6
20 – 24	16	8	14	15	14
25 – 29	5	8	5	7	6
30 – 34	16	13	14	18	16
35 – 44	46	47	41	51	46
45 – 59	257	215	227	267	247
60 & above	557	618	585	557	571
total	1000	1000	1000	1000	1000

Source: NSSO Survey on Disability (2002)

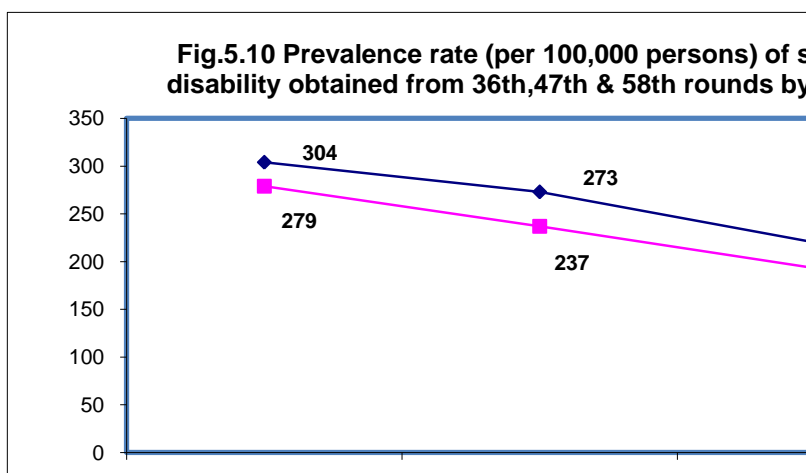
In more than 80% of cases the hearing disability was reported to have been acquired after age 45 years and in most cases after the age of 60 only. Only 6% were born with the disability and another 13% acquired it before the age of 45 years. More males were found to be born with hearing impairment as compared to females.

5.4 Speech Disability

Prevalence of speech disability - comparison over NSS survey rounds: Three surveys on disabled persons were conducted adopting more or less the same concepts, definitions and procedures during the second half of 1981, 1991 and 2002, respectively. It is, therefore, possible to examine the changes in the prevalence of speech disability in the period 1981 to 2002. It may be noted that while the data for 36th and 47th rounds were collected for persons of age 5 years and above, those for the 58th round were collected for all ages. Hence for the sake of comparison estimates for persons of age 5 years or more have been taken for NSS 58th round.

sector	NSS 36 th round			NSS 47 th round			NSS 58 th round*		
	(July – December, 1981)			(July – December, 1991)			(July – December, 2002)		
	male	female	persons	male	female	persons	male	female	persons
rural	379	228	304	333	208	273	254	184	220
urban	342	207	279	285	182	237	228	154	193

* for persons of age 5 years and above



The graph shows that there has been a reduction in the proportion of persons with speech disability in 2002 (58th round of NSS) as compared to the results of the 36th round in 1981 in both the sectors (rural and urban). The prevalence of speech disability was more among males than among females in both rural and urban sectors as observed in all the survey years.

Type and degree of speech disability:

Type of speech disability	Rural	Urban	Male	Female	All persons
Cannot speak	49	45	45	51	48
Speaks only in single words	18	20	18	21	19
Speaks unintelligibly	14	15	15	14	14
Stammers	11	12	14	6	11
Speaks with abnormal voice	6	6	6	6	6
Any other speech defect	3	3	3	2	3
All <i>including n.r. cases</i>	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

Nearly 50% of the persons with speech disability could not speak and nearly 20% of the speech disabled spoke only in single words. A higher percentage of disabled persons could not speak in rural areas as compared to the urban sector. Among disabled females, the problem of not being able to speak was more prevalent than males. But a higher proportion of disabled males stammered in contrast to proportion of disabled females.

Causes of speech disability: Paralysis was found to be the single most major cause of speech disability accounting for almost a quarter of all cases. Mental illness or retardation and voice disorders were reported among other common causes. However, contrary to the popular perception, hearing impairment was not reported as cause of speech disability in many cases. In more than 40% of cases the cause could not be specifically ascertained.

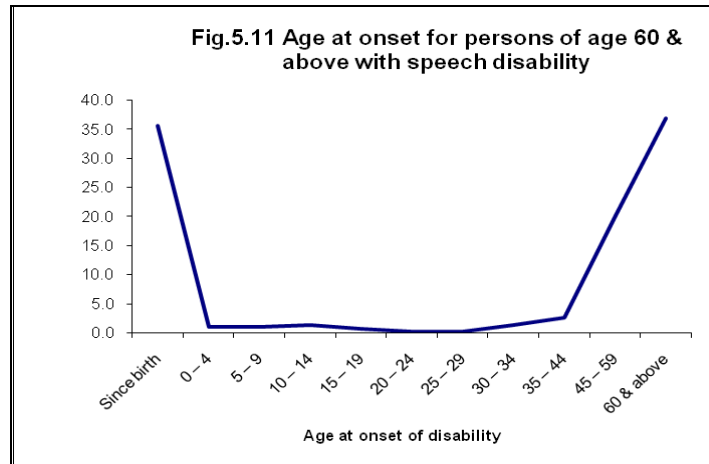
Cause of speech disability	Rural	Urban	Male	Female	All persons
Paralysis	23.9	25.0	24.3	24.2	24.2
Mental illness / retardation	7.9	10.0	7.5	10.3	8.5
Voice disorder	9.0	6.7	7.9	8.9	8.3
Injury including burns	5.1	6.7	7.2	3.0	5.6
Medical/ surgical intervention	2.0	4.4	2.5	3.1	2.7
Cleft palate/lip	1.5	2.1	1.2	2.4	1.7
Old age	1.4	1.0	1.0	1.7	1.3
Hearing impairment	0.9	0.1	0.1	0.2	0.3
Other illnesses	22.2	24.3	23.7	21.4	22.8
Other reasons	6.8	6.8	6.3	7.6	6.8
Not known	14.8	10.2	14.6	11.2	13.3
All (incl. not recorded cases)	100.0	100.0	100.0	100.0	100.0

Source: NSSO Survey on Disability (2002)

Age at onset of speech disability: For more than a-third of the speech disabled persons, the age at onset was after 60 years, about 20% acquired disability in the age-group 45-49 years and more than 35% of speech disabled persons were disabled since birth. In rural sector, a higher proportion of persons were disabled since birth and in the urban areas, a higher proportion acquired it after the age of 45 years. A relatively higher proportion of females were speech disabled since birth and more males acquired it after the age of 45 years.

Age at onset	Rural	Urban	Male	Female	All persons
Since birth	37.5	30.6	33.1	39.1	35.6
0 – 4	1.1	0.6	1.2	0.6	0.9
5 – 9	0.9	0.9	0.2	1.9	0.9
10 – 14	1.5	0.6	1.1	1.4	1.3
15 – 19	0.7	0.1	0.9	0.0	0.5
20 – 24	0.1	0.1	0.1	0.1	0.1
25 – 29	0.2	0.1	0.0	0.4	0.1
30 – 34	1.2	1.5	1.9	0.4	1.3
35 – 44	3.3	0.4	2.1	3.1	2.5
45 – 59	19.0	21.8	22.2	16.5	19.8
60 & above	34.5	43.4	37.1	36.7	36.9
total	100.0	100.0	100.0	100.0	100.0

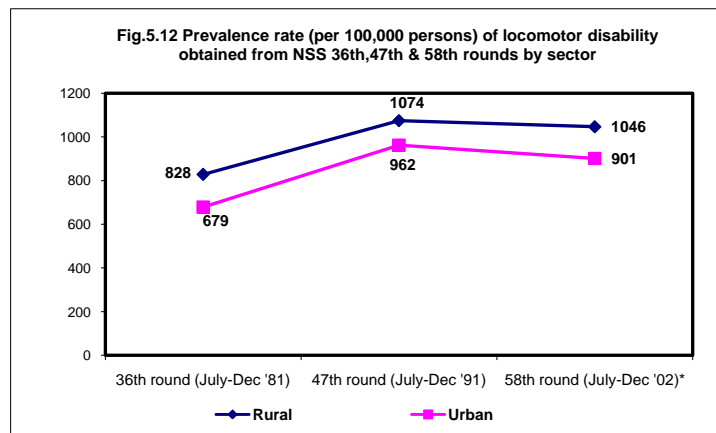
Source: NSSO Survey on Disability (2002)



5.5 Loco motor Disability

Prevalence of loco motor disability- comparison over NSS survey rounds: The prevalence of this particular disability was noticeably more in urban areas in comparison to rural, and also more among males than among females.

sector	NSS 36 th round			NSS 47 th round			NSS 58 th round		
	(July – December, 1981)			(July – December, 1991)			(July – December, 2002)		
	male	female	persons	male	female	persons	male	female	persons
rural	1047	597	828	1345	784	1074	1274	804	1046
urban	800	544	679	1170	728	962	1058	730	901



It can be seen that, in both the rural and urban areas, the prevalence of loco motor disability in the year 1991 was much higher as compared to the rate in 1981. But thereafter it has shown marginal decline in 2002.

Type of loco motor disability: About 45% of the loco motor disability was attributed to deformity of limb, more than 20% to dysfunction of joints of limb, another 15% to paralysis, 10% to any other deformity of body and 8% to loss of limbs. Deformity of limb was more prevalent in the rural sector whereas a higher percentage of persons were loco motor disabled due to dysfunction of joints of limb. In contrast to females, a higher percentage of males exhibited deformity or loss of limb. On the other hand, females suffered more with dysfunction of joints of limb.

Table 5.17: Percentage distribution of persons with loco motor disability by type of disability for each sex and sector

Type of loco motor disability	Rural	Urban	Male	Female	All persons
Deformity of limb	46	44	46	44	45
Dysfunction of joints of limb	22	25	21	26	23
Paralysis	14	15	14	15	15
Other (deformity of body)	10	8	9	10	10
Loss of limb	8	8	8	9	5
All (incl. not recorded cases)	100	100	100	100	100

Source: NSSO Survey on Disability (2002)

Causes of loco motor disability: It could be seen that polio and injury other than burns were the two major causes of loco motor disability contributing more than 50% of cases. Out of the rural and the urban sectors, stroke, arthritis and injury other than burns were more prevalent in the urban area and polio was found more common in the rural area. The females, in comparison to males, acquired loco motor disability more due to arthritis, other illness and old age. On the contrary, among the various causes of disability, males suffered more due to polio and injury other than burns.

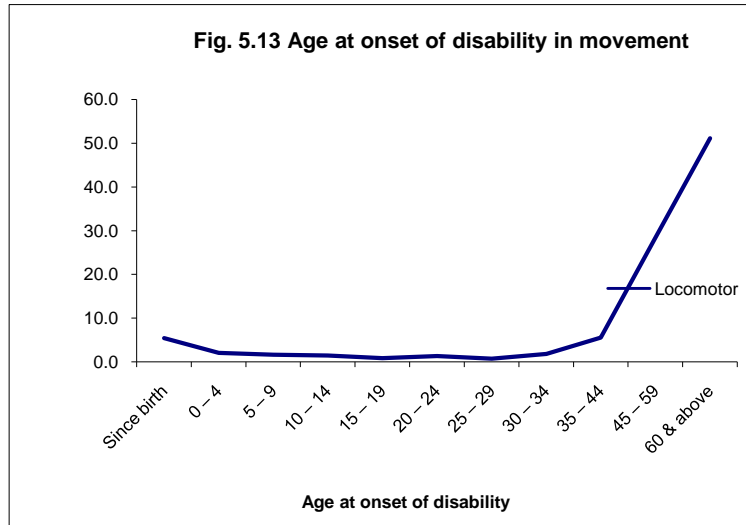
Causes of locomotor disability	Rural	Urban	Male	Female	All persons
Polio	29.5	27.0	29.0	28.6	28.9
Injury other than burns	25.6	27.1	29.5	19.9	26.0
Other illness	12.0	12.0	10.8	14.1	12.0
Stroke	6.6	8.2	7.1	6.8	7.0
Other reasons	4.6	4.1	4.2	4.9	4.4
Not known	4.7	3.1	4.1	4.7	4.3
Old age	3.5	3.1	2.0	5.9	3.4
Arthritis	2.9	3.5	2.2	4.6	3.1
Cerebral palsy	2.4	2.3	2.3	2.6	2.4
Medical/ surgical intervention	2.0	2.6	2.2	2.0	2.1
Burns	2.0	1.8	1.9	2.1	1.9
Leprosy cured	0.8	2.9	1.5	1.2	1.4
Leprosy not cured	1.7	0.8	1.5	1.3	1.4
Cardio-respiratory disease	0.3	0.3	0.4	0.2	0.3
Cancer	0.3	0.2	0.3	0.3	0.3
Tuberculosis	0.3	0.3	0.4	0.2	0.3

Source: NSSO Survey on Disability (2002)

Age at onset of loco motor disability: More than 50% of the persons with loco motor disability acquired it after the age of 60 years, 28% in the age-group 45-49 years and only 5% were disabled since birth. In rural areas, the onset of disability was more likely since birth and in the early years of childhood as compared to the urban area. About 57% of the people with movement disability acquired disability after the age of 60 years in the urban areas, in comparison to 49% in the rural areas. As compared to females, males showed a higher proportion of disability in the age-group 5-59 years.

Age at onset	Rural	Urban	Male	Female	All persons
Since birth	59	37	54	53	54
0 – 4	19	24	20	20	20
5 – 9	18	10	20	11	16
10 – 14	14	14	14	14	14
15 – 19	8	6	11	4	8
20 – 24	12	16	18	6	13
25 – 29	7	6	11	3	7
30 – 34	20	13	21	14	18
35 – 44	61	38	66	42	55
45 – 59	288	269	291	274	284
60 & above	492	567	472	557	511
total	1000	1000	1000	1000	1000

Source: NSSO Survey on Disability (2002)



Type of aid/ appliances used by loco motor disabled: About a third of the persons with loco motor disability used crutches, 11% used calipers, nearly 8% acquired support from wheelchair or artificial limbs, 6% used tricycle, 5% had splint and only 1% had spinal brace. More than 25% were using some other aid/appliance apart from the above mentioned items.

Table 5.20: Percentage distribution of persons with loco motor disability persons by type of aid / appliance acquired for each sex and sector

Type of aid/ appliance	Rural	Urban	Male	Female	All persons
Crutch	33	32	34	30	33
Callipers	9	15	10	12	11
Wheelchair	8	8	8	8	8
Artificial limbs	7	9	8	5	7
Tricycle	7	5	7	4	6
Splint	5	4	5	5	5
Spinal brace	1	2	1	1	1
Others	29	24	25	33	27
All	100	100	100	100	100

Source: NSSO Survey on Disability (2002).