



Assessment of Pattern of Disability Certificates Issued In a Government Tertiary Care Hospital of Karnataka South India – A Three Year Study

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ABSTRACT

Background: To facilitate the national objective under the Rights of Persons with Disabilities Act, 2016 (RPWD) it is essential to collect, compile and analyse the data on disability at each level of health care and identify the constraints with same. The study conducted to assess the type of Disability certificates issued in tertiary care hospital; to identify the socio-demographic factors among Disability certificate beneficiaries; and to determine the degree of disability among Disability certificate beneficiaries.

Methodology: A cross-sectional study of on all type disability certificates issued as per (IDEAS) at a tertiary care hospital for three year period was done using a predesigned proform; disability certificates with complete details alone were included in the study ,data was analysed by SPSS 16

Results: 2437 certificates were issued .majority by 25.2% orthopaedics, **1.97 male: female disabled gender ratio. 30.4%** disabled belong to vulnerable age group. **59% from rural locality**, moderate degree disability commonest. *Gender &locality and gender °ree of disability statistically significant* (p<0.05)

Conclusions: there is an increasing trend in utilization of disability certificates at district hospital. Marginalization of disabled woman needs further exploration.

Key-words: disability certificates, district hospital, assessment,

INTRODUCTION

Under the Rights of Persons with Disabilities Act, 2016 (RPWD) it's the obligations on States to respect, protect and promote the rights of the people with disability¹⁻³ (PwDs).The new Act recognizes 21 types of disabilities and Benchmark disability refers to having at least 40% disability due to any illness which is duly certified by the Medical Board of a Government hospital⁴. As individuals with a benchmark disability are eligible to apply for various benefits and welfare measures under the act⁵.

In India, DISTRICT HOSPITAL is the authorized centre to issue disability certificate at the district level⁶. With new act expanding the number of benchmark disabilities there is an increased burden on the Medical Board of the district Hospital.

As understanding the socioeconomic and regional divides in disability statistics in India has considerable relevance for designing public health policies and programs⁷⁻⁸ this study aims to understand the profile and degree of various disability certificates issued at a district hospital. The findings are expected to provide reliable information in assessing the burden of disability certification on existing health system and helps in planning resources required to overcome the various constraints in present disability certification process.

AIM & OBJECTIVE(S)

The study was conducted to assess the type of Disability certificates issued in tertiary care hospital; to identify the socio-demographic factors among

Disability certificate beneficiaries; and also to determine the degree of disability among Disability certificate beneficiaries.

MATERIALS AND METHODS

A Cross-sectional hospital based study was done for a period of three months on disability certificates issued at district hospital attached to Hassan Institute of Medical sciences [HIMS]; a multi-specialty tertiary care teaching hospital catering to needs of more than 15 lakhs population of Hassan district in Karnataka state. Disability certificates issued from department of ENT, General Medicine, Ophthalmology, Orthopaedics, Pediatrics and Psychiatry during April 2016 to March 2019 as per the *Government of India's Guidelines for assessment of extent of disability and certification of specified disabilities*⁶ were considered. An universal sampling technique was adopted those certificates with incomplete details were excluded; using a pre-designed pre-tested proform, data on age, gender, locality, medical diagnosis, Type and degree of disability was collected from all the disability certifi-

cates fulfilling the inclusion and exclusion criteria. Confidentiality of patient data was maintained throughout the data collection and analysis process the study was approved by Institutional Ethical Committee of HIMS Hassan.

Statistical Analysis: Data was entered in MS EXCEL and analyzed by SPSS 16 for Descriptive statistics and expressed in percentages and proportions. Chi square test analysis was done to find association between categorical variables.

RESULTS

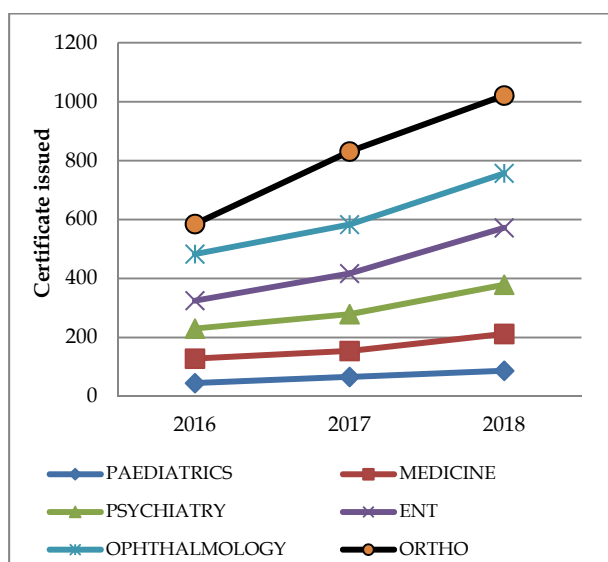
After applying the inclusion criteria, a total of (N) =2437 disability certificates issued during April 2016 to March 2019 were considered in the study. (Table-01) Of which majority of the certificates were from 614(25.2%) Orthopaedics department followed by 509(20.9%) Ophthalmology and 426 (17.5%) from ENT department. year wise analysis showed upward trend in utilizing disability certificates from 2016 to 2019 in all the departments. (Figure-01)

Table 01: Department-Wise Distribution of Disability Certificates from 2016 to 2019 at HIMS. Hassan. Karnataka

Dept	Beneficiaries						Total (%)		Total (%)
	2016-17		2017-18		2018-19		Male (%)	Female (%)	
	Male (%)	Female (%)	Male (%)	Female (%)	Male (%)	Female (%)			
ENT	50 (13.8)	45 (20.2)	93 (16)	45 (17.8)	129 (19.1)	64 (18.5)	272 (16.8)	54 (6.6)	426 (17.5)
Medicine	58 (16.0)	25 (11.2)	65 (11.2)	23 (9.1)	79 (11.7)	46 (13.3)	202 (12.5)	94 (11.4)	296 (12.1)
Ophthalmology	97 (26.8)	61 (27.3)	124 (21.4)	42 (16.6)	121 (17.9)	64 (18.5)	342 (21.2)	167 (20.3)	509 (20.9)
Orthopaedics	72 (19.9)	30 (13.5)	164 (28.3)	84 (33.3)	189 (28)	75 (21.7)	425 (26.3)	189 (23)	614 (25.2)
Paediatrics	25 (6.9)	20 (8.9)	43 (7.4)	23 (9.1)	56 (8.3)	31 (8.9)	124 (7.7)	74 (9)	198 (8.1)
Psychiatry	60 (16.6)	42 (18.8)	90 (15.5)	35 (13.9)	101 (14.9)	66 (19.1)	251 (15.5)	143 (17.4)	394 (16.2)
Total	362	223	579	252	675	346	1616(66.3)	821(33.9)	2437

Note; Because of incompleteness 90 disability certificates were excluded from analysis; majority from orthopaedics and General medicine; all of them were issued in the year 2016.

Figure 1: Year wise analysis of Disability Certificates



In the study, the mean age of disability certificate holder was 37.7 years and male: female disabled gender ratio was 1.97. Most of the disabled (16.6%) belonged to 31-40 years followed by (16.5%) in 41-50 years age group in both the male and female disabled. But among the elderly disabled (above 60 years of age), 10.1% were males, 4% were females. 92% of the beneficiaries were Hindus and most of the disabled (59%) were from rural locality. (Table-02)

Among the total disabled, about 30.51% belonged to vulnerable age group (the age groups between 0-14 years and those aged >60+ years were considered as vulnerable age group; 16.4% were in 0-14 years and 14.11% were 60+ years) (Table-02)

Overall (Table-03) mild degree of disability (42%) was commonly found followed by (40%) moderate and (18%) of severe degree of disability.

Table 02: Socio Demographic Profile of the Disability Certificate Beneficiaries

Variable	Male (%) (n=1616)	Female(%) (n=821)	Total (%) (n= 2437)	P value
Age(yrs)				
0-10	154 (6.3)	94 (3.8)	248 (10.2)	
11-20	225 (9.2)	121 (4.9)	346 (14.2)	
21-30	228 (9.3)	128 (5.2)	356 (14.6)	
31-40	244 (10)	162 (6.6)	406 (16.6)	
41-50	283 (11.6)	121 (4.9)	404 (16.5)	
51-60	234 (9.6)	99 (4.1)	333 (13.6)	
61-70	161 (6.6)	73 (2.9)	234 (9.6)	
71-80	66 (2.7)	17 (0.6)	83 (3.4)	
81-90	21 (0.8)	6 (0.2)	27 (0.9)	
Religion				
Hindu	1484(60.8)	762 (31.2)	2246 (92.1)	0.668
Muslim	112 (4.6)	51 (2.1)	163 (6.6)	
Christian	20 (0.8)	8 (0.3)	28 (1.1)	
Locality				
Rural	930 (38.1)	517(21.2)	1447 (59.3)	*0.009
Urban	686 (28.1)	304 (12.5)	990 (40.6)	
Vulnerability				
Vulnerable*	499 (20.4)	242 (10.1)	741 (30.5)	0.476
0-14years	252(10.3)	148(6.1)	400(16.4)	
>60 years	247(10.1)	94(4)	341(14.1)	
Non-vulnerable				
15-59 yrs	1117(45.8)	579 (23.7)	1696 (69.5)	

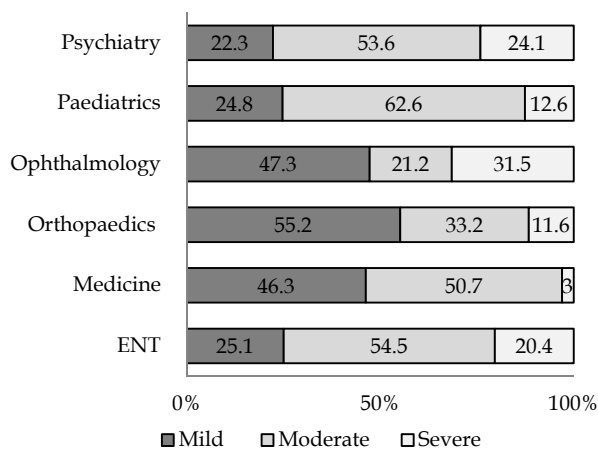
Note: Figures in parenthesis indicate percentages, *p value<0.05 = significant

*the age groups between 0-14years and those aged > 60+ years are considered as vulnerable

Table 03: Degree of Disability among the disability certificates

Degree	Male (%)	Female (%)	Total (%)
Mild	699 (28.7)	322 (13.2)	1021 (41.9)
Moderate	674(27.6)	295 (12.1)	969 (39.7)
Severe	243 (10)	204 (8.4)	447 (18.4)
Total	1616 (66.3)	821 (33.7)	2437

Note; $\chi^2 = 34.98$; degrees of freedom=1 @ $p \leq 0.05$

Figure 3: Department- Wise Distribution of Degree of Disability

*Figures expressed in percentages

On department wise analysis; mild degree was common among the disability certificates issued by (47.3%) ophthalmology and (55.2%) orthopaedics department. whereas moderate degree was the commonest in departments of (54.5%) ENT, (50.7%) in General medicine, (62.6%) in paediatrics, and (53.6%) in psychiatry. (Figure-02)

DISCUSSION

In the present study increased trend in availing the disability certificates observed during April 2016 to March 2019 in all the departments could be because of expanding the number of certifiable disabilities and also disability benefits under the new RPWD 2016 act.⁵ (Figure-01)

In our study, 25.2% of the certificates were of physical disability/orthopaedics followed by 20.9% visual disability and 17.5% hearing disability certificates.

According to 2011 census and national disability statistics report 2016, the most common type of disability is Loco-motor disability (20%), followed by Visual (19%) and hearing disability (19%).⁹⁻¹⁰ In the study done in South India, 88.4% had physical impairment, 4.8% hearing impairment, 4.5% visual impairment/blindness and 2.3% intellectual impairment.¹¹

The mean age of 37.7 years observed in the study is alarming as disability is shifting towards younger age and considering the chronic nature of these illnesses, it is going to be huge burden on the health system. In a disability survey among 2441 people of North Indian community the mean age of the participants was 40.4±15.2 years and 51.6% (n=1260) were male.¹²

In the present study, disability certificate beneficiaries are more among males (66.3%) compared to females and male disabled have outnumbered the female disabled in all the age groups (Table-2) which is similar to disability statistics in which disability prevalence in India is 56% in males and 44% in females.⁹⁻¹⁰ and in a study done by Kashyap et al.¹³ male disabled were 51% and a study by Balhara et al.,¹⁴ on 173 disability certificate seeking patients in a tertiary care multispecialty hospital, 72.3% were male. In a study by Gudlavalleti et al.¹¹ males were 65.5% and female were of 35%.

The above findings appears to prove *Girls and women of all ages with any form of disability are generally among the more vulnerable and marginalized of society* as women with disabilities are more likely to be institutionalized than men with disabilities.¹⁵

In the study 30.5% total disabled were in vulnerable group of which 10.1% were girls and women; as many studies have reported that *disabled women are deprived women and experiences compounded vulnerabilities in accessing social, economic, transport and health care services*.¹⁶⁻¹⁹ the findings needs to explored further.

On analyzing the gender specific type of disability; in the present study among male disabled 26.3% had physical disability, 21.2% visual, 16.8% hearing and 15.5% psychiatry related disability. In females 23% had physical, 20.3% visual 17.4% psychiatry and 11.4% medical disability.

These results differ from that of the national statistics⁹⁻¹⁰ in which among the male disabled, 22% were of physical disability, 18% each of visual / hearing disability. and in case of the female disabled, 20% each of visual / hearing disability, 18% of physical disability. Where as in a south Indian study among women disabled, Visual Impairment was 2.8%, Intellectual Impairment 4.4%, Hearing Impairment 5.7%, generalized convulsive disorders 12.5%, 74.5%.was Physical Impairments.²⁰

Note that in our study psychiatric disability is the third most important type of disability in females and fourth in male disability certificates. (**Table-01**)

In the above study, most of the disability beneficiaries belong to (59.3%) rural locality compare to urban (40.6%) locality which is similar to that of national statistics⁹⁻¹⁰ in which the prevalence of disability in rural and urban Indian population is 2.24% and 2.17% respectively and majority (69%) of the disabled population resided in rural areas.

In the present study, mild (22.3%) and moderate (53.6%) degree being the common degree of disability found among all type disability certificates issued; which implies these individuals can be effectively rehabilitated for an economically productive employment and personal fulfilment with an appropriate vocational rehabilitation measures as disabled persons employment status is only 36% in India.⁹⁻¹⁰

On assessing the association between *gender and locality* (as male disabled were more common in both rural (38.1%) and urban (28.1%) areas compare to female disabled) it was found to be **statistically significant** ($p < 0.05$) (**TABLE 02**).

On analyzing the association between *gender and degree of disability*, (male disabled with mild and moderate degrees of disability were more as compared to severe degree of disability) was found be **statistically significant** (**Table 03**). Other factors like religion, vulnerable age groups, type of disability did not reach a statistically significant level in this study. (**Table-02**)

CONCLUSION

There is a increasing trend in utilizing disability certificates. Orthopaedic/ locomotor disability and moderate degree is the most commonly obtained type and degree of disability certificate. in all the age groups male disabled are more than the female disabled; marginalization of disabled woman observed in the study could be because of cultural, transport or information barrier which needs to be studied further.

Recommendation present study provides reliable disability related health service utilization statistics at a district hospital and measures the burden of disability certification on the existing health services. the results can be used in planning need based strategies to improve the disability services in all the sectors of health care.

Limitation of the study the above study analysed three years disability data; as it was a secondary data, details like marital status, caste, household income, education level, employment status were not available from the disability register. These details could have given more insight into socio – demographic profile of the disability certificate holders; which further helps in planning welfare measures for the disabled persons at the district level. The above study can be replicated in other district hospitals; to quantify the burden of disability certification on the entire State health care system.

Relevance of the study currently there is need to strengthen disability statistics of India; the above analysis adds to the disability data from a district hospital of a state; which can help in reviewing the utilization of disability benefits following certification at district level.

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