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DISABILITY ASSESSMENT OF A LARGE HOSPITAL POPULATION WITH A MENTAL HANDICAP

L. Fernando, D. Kohen and G. Mathew

Introduction

Large mental handicap hospitals have functioned historically by offering invaluable shelter and asylum to a large group of people with a mental handicap. The consequences of institutionalisation have included secondary handicaps in a significant number of the resident population.

Today, with the changes in philosophy, care in the community and active resettlement programmes in the hospitals are the accepted norms. There are now limited needs for long-term hospital admissions, most people being able to live in supported residential units. This study has been planned to assess the whole hospital population with the idea of evaluating disabilities and handicaps, level of independence, their present needs in the hospital in order to plan for their future needs in the community.

This assessment of the disabilities of a large mental handicap hospital population will form the basis for future evaluation and reassessment of the individuals in their community residential units and enable comparison of functioning in the residential setting.

The data from the inpatients were fed into the computer which formed part of the Cell Barnes Hospital Psychiatric Database (CBH-PD). This psychiatric database has been valuable in psychiatric, medical, management and research purposes.

Methodology

The entire resident population of the Cell Barnes Hospital (N=390) has been assessed using the Disability Assessment Schedule (DAS) (Holmes *et al.*, 1982) in a six months period dating from 1.11.91 to 1.5.92.

* **Dr. L. Fernando, M.R.C.Psych.**
Senior Registrar, Cell Barnes Hospital, Highfield Lane, St. Albans, Herts. AL4 0RG UK
Dr. Dora Kohen, M.D., M.R.C.Psych.
Consultant Psychiatrist, Whittington Hospital, Psychiatric Wing, Highgate Hill, London N19 5NF UK
Dr. G. Mathew, M.R.C.Psych.
Consultant Psychiatrist, Cell Barnes Hospital, Highfield Lane, St. Albans, Herts. AL4 0RG UK
* *For Correspondence*

The DAS has been designed to elicit information on patterns of abilities, disabilities and behaviour problems exhibited by adults and children with mental handicap. It is a 44-item screening device with high test/re-test and inter-rater reliability (Holmes *et al.*, 1982). Each item has a series of ratings ranging from 3-8 points. The 44 items are listed under several headings - i.e. mobility, continence, self-help, vision, hearing, communication, skills, behaviour problems, quality of social interaction, stereotyped behaviour, echolalia, repetitive speech and symbolic activities.

For all the items, the greater the score the higher the level of development and lower the level of disability. The total score of all items is 179.

Each resident has been personally seen and the DAS completed by one of the investigators with the help of the nursing and other ward staff, ward doctors.

These DAS scores were compared with the demographic variables of the whole hospital population.

Results

Of the 390 people with learning disabilities residing in the hospital, 59% (N = 230) are males and 41% (N = 160) are females. 35% (N = 135) are over 50 years of age and 65% (N = 255) are under 50 years of age (TABLE I).

TABLE I
Demographic Variables of the Total Hospital Population (N = 390)

	(N)	%
Total Population	390	100
Sex		
Males	230	59
Females	160	41
Age		
> 50 years	135	35
< 50 years	255	65
Age/Sex		
Males > 50	68	17
Females > 50	67	17
Males < 50	162	42
Females < 50	93	24
Length of Stay		
> 10 years	366	94
< 10 years	24	6
Level of Handicap		
Mild/Moderate	142	36
Severe/Profound	248	64

94% (N = 366) have stayed in the hospital for more than 10 years: 6% (N = 24) have stayed in the hospital for less than 10 years.

The levels of handicap assessed according to DSM-III-R criteria show that 36% (N = 142) are mildly and moderately handicapped; 64% (N = 248) are severely and profoundly mentally handicapped (TABLE I).

Disability Assessment Schedule results are seen on TABLE II.

62% (N = 241) of the whole population are fully mobile, whilst 38% (N = 149) of the hospital population have varying degrees of mobility problems. Of these 15% (N = 60) are non mobile or need total help in walking on flat surfaces.

42% (N = 165) are fully continent day and night, whilst 58% (N = 225) of the hospital population show a degree of incontinence ranging from rare nocturnal incontinence to full day and night incontinence. Of these 17% (N = 66) are doubly incontinent day and night 5-7 times/week, and need daily toileting.

In the DAS self-help skills are rated on ability to feed, wash and dress independently. Only 15% (N = 57) of the hospital population are fully skilled in this area, whilst 71% (N = 275) need some help to fulfil these needs and 15% (N = 58) of the hospital population are unable to help themselves at all in these areas and need total help.

Only 15% (N = 58) of the hospital population received full scores in vision, hearing and communication, whilst 85% (N = 332) of the population proved to have some degree of deficiency in these items. 6% (N = 23) are almost blind, 3% (N = 12) are almost deaf, 22% (N = 86) had limited methods of communication,

TABLE II
Disability Assessment Schedule of the Whole Hospital Population (N = 390)
Full Score = No Disability

DAS	Full Score	
	(N)	%
Mobility	241	62
Continence	165	42
Self Help	57	15
Vision/Hearing/Communication	58	15
Skills	5	1
No Behaviour Problems	81	21
Sociable	172	44
No Stereotyped Behaviour	30	8
Speech No Echolalia/ Repetitive Speech	126	32
Symbolic Activities	56	14

11% (N = 43) do not understand communication, 24% (N = 95) do not use communication.

DAS showed that only 1% (N = 5) had complete abilities in reading, writing, counting, handling money, domestic skills, handicrafts and occupational skills, whilst 99% (N = 385) did not obtain full scores in these skills. 47% (N = 183) have no identifiable reading, writing, counting, domestic, handicraft and occupational skills.

From the DAS results only 21% (N = 81) of the hospital population had no behavioural disorders whilst 79% (N = 309) had some degree of behaviour problems or disturbances. 32% (N = 126) of the hospital population show a degree of physical aggression ranging from a severe management problem to a potential problem.

Analysis of the social interaction item showed that 44% (N = 172) were sociable, whilst 56% (N = 218) had some degree of impairment in their social interactions.

Only 8% (N = 30) did not show any stereotyped behaviour and always engaged in constructive or appropriate recreational activities, whereas 92% (N = 360) had a degree of one form or other of stereotypic movements.

32% (N = 126) are people with sufficient speech and no echolalia, whilst 17% (N = 66) of the population had echolalia, and repetitive speech. 51% (N = 198) had no speech at all.

The item "Symbolic activities" scores imaginative play, interest in TV, radio, current events, and other people, etc. 14% (N = 56) had the full score on this item, whilst 86% (N = 334) had deficiencies in these aspects.

17% (N = 66) of the hospital population had both echolalia/repetitive speech and poor symbolic activities.

Discussion

The results of the disability assessment and the screening with DAS has given a valid description of the needs and problems of this hospital population. As expected, the majority of this mentally handicapped population do not have full scores on most of the items of this assessment instrument. This hospital population has lower scores and hence a greater degree of disabilities.

The DAS as suggested by Holmes *et al.* (1982) has given a better portrait of each resident, describing their weaknesses and strengths and it also has helped to identify their specific needs.

It has been useful in comparing the abilities/disabilities and their correlations with demographic variables.

This information provides a baseline against which the future data to be collected from the same population at a later stage can be compared in longitudinal studies, and in cross-sectional studies with other hospital and community populations.

Over one third have some degree of mobility problems. Cerebral palsy, physical handicap and medical problems contribute to mobility problems. These individuals need high staffing levels in the community, structural

adaptations in the home, transport facilities and appropriate day care facilities.

Incontinence is a main issue in nursing care and has serious social consequences. The majority of this population have different degrees of incontinence and one sixth are doubly incontinent almost daily. Therefore there is a sizeable proportion who need full nursing care such as regular changing and baths.

Most need some help in feeding, washing and dressing, whilst 15% need total help in these areas and are fully dependent on staff.

Vision, hearing and communication are important in the independence of the individual. 6% of the hospital population are almost blind requiring 24 hour staffing and special needs in day care facilities. 3% of the hospital population are almost deaf and they need trained staff in signing and in communication. One fifth of the hospital population have no verbal and have limited nonverbal communication abilities and there should be a priority in enhancing their skills now whilst still in the institutional setting in order to reduce behaviour problems later in the community.

Reading, writing, counting, handling money, domestic skills, handicrafts and occupational skills are expected to be impaired in the institutionalised mental handicap population. These results suggest that a large majority need further training in personal and occupational skills.

Behaviour problems are known to be a major cause for hospital readmission (Campbell and Malone, 1991). A large section of this population have some degree of behaviour problems. These individuals need highly skilled staff input. The control of these behaviours is of paramount importance prior to community resettlement. These individuals with behaviour problems need trained staff in the community to provide the necessary management and treatment. Hence the need for education, training and the input from community team professionals to the staff members to support these individuals and to reduce readmissions.

About one third of this hospital population who display physical aggression need recurrent health interventions which has implications on plans for the services, the need for long term residential units in the future.

A large majority of the population had a degree of one form or other of stereotypic movements. This could be the result of institutionalization or a feature of the autistic spectrum.

The DAS shows that the majority are socially impaired; 17% show varying degrees of autistic traits such as echolalia, reptitive speech and poor symbolic activity.

There are more people with full DAS scores in the group over 50 years of age than the group under 50 years of age. Most marked differences with highly significant statistical results were seen in behaviour problems, social interaction, speech and symbolic activities (TABLE III). In this respect our residents are similar to Darenth Park Hospital residents in 1980 (Wing, 1989). The older group is more sociable, with few behaviour problems, and consists of more

TABLE III

Significant results of Pearson Chi-square Analysis of DAS scores and Demographic Variables

$p<0.05$, DF = 1

Demographic Variables	D.A.S.	Full Score %		X^2	Probability P
Age		Under 50 > Over 50			
	Mobility	66	54	5.213	0.0224
		Over 50 > Under 50			
	Continence	50	38	6.994	0.0082
	No Behaviour Problems	31	16	11.907	0.0006
	Sociable	61	35	23.185	0.0000
	Speech No Echolalia/ Repetitive Speech	59	18	68.577	0.0000
	Symbolic Activities	26	8	22.464	0.0000
Age/Sex		Under 50 years Males > Females			
	Mobility	71	57	5.151	0.0232
	Continence	43	29	5.039	0.0248
		Under 50 years Females > Males			
	Sociable	44	30	4.955	0.0260
Length of Stay		Under 10> years	Over 10 years		
	Mobility	100	59	15.811	0.0001
	Continence	71	40	8.526	0.0035
	Self Help	67	11	55.522	0.0000
	Vision/Hearing/Communication	46	13	19.364	0.0000
Handicap		Mild/Mod.>Sev./Prof.			
	Mobility	69	58	3.887	0.0487
	Continence	68	27	61.856	0.0000
	Self Help	39	1	104.078	0.0000
	Vision/Hearing/Communication	38	2	94.581	0.0000
	Skills	4	0	8.846	0.0029
	No Behaviour Problems	27	18	5.095	0.0240
	Sociable	69	30	56.214	0.0000
	No Stereotyped Behaviour	21	0	56.761	0.0000
	Speech No Echolalia/ Repetitive Speech	73	9	171.071	0.0000
	Symbolic Activities	35	2	78.959	0.0000

people with speech without echolalia, whilst the younger group have many who are socially impaired, with poor communication and difficult behaviour.

There is no statistically significant difference in scores between males and females over the age of 50 years. Between males and females under 50 years of age, there is a significant difference in mobility, continence and social interaction (TABLE III).

The people in the hospital for less than 10 years are more able than people in the hospital for more than 10 years, in mobility, continence, self-help, and vision hearing communication skills (TABLE III).

This reflects the changes in admission policies to mental handicap hospitals over the last 10 years. Whilst in the past a diagnosis of mental handicap was sufficient for hospital admission, with community care there are stricter criteria for hospital admission. Cerebral palsy, physical handicap, autism and social reasons are no longer an indication for admission to a mental handicap hospital. Most of the admissions to this hospital over the last 10 years have been for behavioural problems and mental illness (Kohen *et al.*, 1992).

In recent times community services such as respite care units, group homes, hostels, social services, have taken over the social care of people previously admitted to hospitals. This helps to project needs for the future of people with psychiatric problems.

As expected there is a significant difference in the scores of the mild/moderate handicapped group versus the severe/profound handicapped group in all items (TABLE III).

Conclusion

The DAS can contribute to the prediction of a successful outcome in community care, by identifying the specific need of the people.

The disabilities assessed by the DAS can be broadly divided into three major groups in this respect.

Group 1 includes those items such as literacy and numeracy skills which most of our population lack. Even without these skills, the patients can manage to live in the community and lack of these skills will not be an impediment to community care.

Group 2 includes the disabilities such as poor mobility, incontinence, poor self help skills, poor vision hearing and communication which require additional care, support and provisions in the community. If these can be met this group of people will be successfully resettled in the community.

Group 3 includes patients with major behavioural problems and psychiatric disorders, which need to be adequately controlled, stabilised or treated before being resettled in the community, and these problems are crucial in predicting the outcome of successful community care programmes.

This study has confirmed the view that the majority of the resident population of the hospital have varying degrees of behaviour problems and disabilities. The hospital population at

present consists of the psychiatrically unwell, behaviourally difficult, and multiply handicapped individuals. The results show that there is a sizeable proportion of the population in this hospital, who, as in the Glenside Hospital Survey (Eastley and Lucas, 1992) require nursing facilities which are not yet fully available in the community.

It is hoped that with new community units, assessment admission facilities and full respite care provisions, this disabled population will be discharged from the hospital.

With trends towards community care, normalisation, deinstitutionalisation, and with the ongoing resettlement programmes, disability assessment is crucial in identifying specific needs of patients in their present and future management and in the planning of services.

Summary

The current study describes the results of the evaluation of the entire population of a mental handicap hospital using the Disability Assessment Schedule (DAS) with a view to identifying the weaknesses, strengths, needs and comparing their correlations with demographic variables.

The large majority of this hospital population have varying degrees of disabilities.

The older group who had been in the hospital for longer periods of time were significantly more sociable, with better verbal expression, fewer with behaviour problems and less autistic behaviour as compared to the younger group.

The severely/profoundly handicapped group had significantly lower scores in all the DAS items.

The different populations in this study illustrate the changes in admission policies to mental handicap hospitals over the last decades, and the future need of facilities for psychiatrically unwell, behaviourally difficult, and multiply handicapped people in the community.

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