Levels of disability among the elderly in institutionalized and home-based care in Bahrain

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مستويات العجز بين المسنّين الذين يتلقّوْن الرعاية في مؤسسات الإيواء، أو في بيوتهم في البحرين

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خلاصة: أجرينا مقارنة بين مستويات العجز بين المسنّين المقيمين في مؤسسة للإيواء وبين أولئك الذين يتلقوْن الرعاية في بيوتهم. وكان مجموع المسنّين الذين شملتهم هذه الدراسة 74 شخصاً، منهم 56 من نزلاء المؤسسة و18 يعيشون في بيوتهم. واستعملت "طريقة كليفتون لتقدير حالة المسنّين" من أجل تقييم ومقارنة عجز القدرات السلوكية بين المجموعتين. ولقد تبيّن أن المقيمين في بيوتهم كانوا أصغر سناً، كما كانوا أقل سلساً، وأكثر ألفة، وأفضل تواصلاً وأقل تخليطاً عن نزلاء المؤسسة. هذا بالرغم من أنهم كانوا أكثر عجزاً فيما يتعلق بالاستحمام والمشي.

ABSTRACT We compared the levels of disability between the elderly admitted to an institution and those cared for at home. Of the 74 elderly people in this study, 56 were institutionalized and 18 were living at home. The Clifton Assessment Procedure for the Elderly (CAPE) was used to assess and compare the behavioural disabilities between the two groups. In addition to their younger age, the home-cared elderly were less incontinent, more social, better communicators and less confused than the institutionalized group, despite the fact that they had more physical disabilities with regard to bathing and walking.

Degrés d'incapacité des personnes âgées soignées en établissement et à domicile à Bahreïn

RESUME Nous avons comparé les degrés d'incapacité entre les personnes admises en établissement et celles qui sont prises en charge à domicile. Sur les 74 personnes âgées faisant l'objet de cette étude, 56 étaient placées en établissement et 18 vivaient à domicile. La procédure d'évaluation de Clifton pour les personnes âgées a été utilisée pour évaluer et comparer les incapacités liées au comportement entre les deux groupes. Outre leur plus jeune âge, les personnes âgées prises en charge à domicile souffraient moins d'incontinence, étaient plus sociales, communiquaient mieux et étaient moins confuses que le groupe des personnes âgées placées en établissement, malgré leurs handicaps physiques plus nombreux pour le bain et la marche.

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Introduction

Since the beginning of this century, the number of people over 65 years of age has increased worldwide. Although this number is relatively stable in European countries, there are increasing numbers of elderly people in developing countries [*1,2*]. In the UK there are around 500 000 elderly people living in institutionalized care; 6.3% of the population over 65 years of age [*3*]. Of these, one-third are in specialized nursing facilities (hospitals and nursing homes) and two-thirds in residential homes. Out of the total population in Bahrain, the percentage of individuals between the ages of 60 and 69 years constitutes 3.2% of the population, and 1.81% are over 70 years of age. The percentage of elderly in residential care (residental home, nursing home or hospital) is nearly 1.33% of the total population over 65 years of age and of these, 0.5% are in nursing facilities (hospitals and nursing homes), 0.7% attend as day patients, while 0.13% live with their families [*1*].

As the overall number of elderly people increases there is a corresponding rise in the number of older persons with disabilities. Such disabilities may be social, physical, mental or psychological. Data from the USA have estimated that 9.5 million, non-institutionalized individuals, experience difficulty in performing basic activities, such as walking, self-care and home-management activities [*4*]. Of these, 59% are over the age of 65 years. In the 65–74-year-old age group, one in nine individuals has difficulty in performing basic activities. This ratio rises to one in four in the 75–84-year-old age group and three in five in individuals aged 85 years and over.

Epidemiological studies of mental, physical and social disorders among the elderly are vital for setting policies and for planning and providing services to this section of the population. It is claimed that by the age of 65–74 years, 3% of the total population will have some cognitive impairment and that by the age of 85 years nearly half may be demented [*5*]. However, this percentage rises to 66% when the elderly are institutionalized [*6*]. A Canadian study of institutions for the elderly found that cognitive and behavioural impairment was widespread among the residents of three types of institution: nursing homes, homes for the aged and psychiatric hospitals [*7*]. In Hong Kong the age-specific prevalence rate of dementia for people aged over 75 years varies from 2.5% to 15.9% [*8*], while this rate increases to between 32% and 63% among confined to institutions [*9*].

The degree of cognitive impairment of elderly people in institutions should influence the type of care required. Special programmes offering social stimulation, as well as skilled nursing care, should be offered to minimize functional problems [*8*]. After examining various possible interactions to improve the care provided to nursing home residents who have cognitive and behavioural problems, Rover and Rubins suggested that the most effective intervention would be to increase the staff-to-resident ratio [*10*].

Instruments for assessing mental health in the elderly vary greatly in content, detail and administration time, but it is generally agreed that brief screening tests are clinically useful for case identification and in monitoring changes over time [*10,11*]. The Clifton Assesment Procedure for the Elderly (CAPE) rating scale has been extensively used to measure several areas of disability, including self-care, incontinence, mobility, behaviour, communication and cognition. Few studies, however, have made a direct comparison between the elderly institutionalized in residental homes and those living

in their own homes. It is more relevant, however, to compare the features of disability in the elderly that may lead to their being institutionalized or being cared for in their homes [12].

In this study we have attempted to compare levels of disability between the elderly admitted to an institution and those who remained in their homes.

Two homes for the elderly are available in Bahrain. The first, with a capacity of 48 beds, was built in 1985 in Isa Town. The other, the Muharraq Home for the Elderly, with a capacity of 60 beds, of which only eight were occupied initially, opened in late 1996. Both homes are under the care of the Ministry of Labour and Social Affairs. Since the main objective of social planning in Bahrain is to maintain the well-being of the elderly while remaining in their own homes, strict regulations were drawn up to control admission to these institutions. These conditions were that:

- the elderly should be Bahraini nationals over the age of 60 years;
- they should be unable to work and satisfy their needs on their own;
- they should be free from infectious diseases and/or mental disorders;
- they should have no support and be prepared to live in the home;
- their families should be unable to provide the necessary care for them.

In these institutions the elderly were given extensive social and health care, provided with vocational therapy and cultural and recreational programmes. These institutions also extend their care to the elderly who opt to live in their own homes but need special care. This service is provided by the Mobile Unit Programme, which extends its services on a day-care basis in the institution.

Subjects and methods

An English version of the questionnaire translated into Arabic (and re-translated back into English to check for accuracy) was used to obtain information about levels of various disabilities in the elderly. The CAPE assessment [12] contains 18 items covering four areas: physical disability, apathy or inactivity, communication difficulties and social disturbance.

All 56 of the elderly people residing in the two residential homes (institutions) in Bahrain were included in the study and were compared with a group of 18 elderly people living in their own homes but under the care of the institutions as day-care patients. These 18 people were the only group of elderly people who were in their homes and in the vicinity of the residential homes. The information was collected by three senior nurses who were caring for these individuals. The nurses were trained to complete the questionnaires and the inter-rater reliability among them was 96%.

The total sample of 74 people had an equal number of males and females. Their ages ranged between 65 years and 85 years. The *SPSS* package was used for analysis and the chi-squared test was applied to test the level of significance between the two groups of various disabilities. $P < 0.05$ was considered significant.

Results

In the home-care group 78% were 74 years of age or under and 22% were 75 years or over. In the institutionalized group, 55% were 74 years or under and 45% were 75 years or over ($P < 0.05$). There was no significant difference in sex ratio between the groups. Table 1 compares the two groups using various disability factors incorporat-

Table 1 **Disability levels in elderly people living in residential homes (institutions) and those living in their own home, as determined by the 18 items of the CAPE behavioural rating scale**

Item	Institution ($n = 56$) %	Home ($n = 18$) %	χ^2	*P*-value[a]
Personal characteristics				
Sex				
Male	55	33		
Female	45	67	2.643	$0.1 > P < 0.2$
Age group (years)				
≤ 65	18.2	22		
66–74	36.4	56		
75–84	38.2	11		
≥ 85	7.3	11	4.728	NS
Physical disability				
When bathing or dressing requires				
No assistance	7	0		
Some assistance	38	22		
Maximum assistance	55	78	3.353	NS
With regard to walking				
No signs of weakness	5	0		
Walks slowly or uses a stick	34	17		
Unable to walk or if able to walk, needs a frame or someone by their side	61	83	3.382	NS
Is incontinent of urine and/or faeces (day or night)				
Never	50	83		
Sometimes	16	17		
Almost always	34	0	8.715	0.02
Is in bed during the day (does not include couch or settee)				
Never	57	0		
Sometimes	34	28		
Almost always	9	72	32.879	0.001
Is confused, loses his/her way				
Almost never	36	61		
Sometimes	25	22		
Almost always	39	17	4.203	NS
Apathy and inactivity				
If allowed outside, would:				
Never need supervision	29	11		
Sometimes need supervision	45	72		
Always need supervision	27	17	4.298	NS
Helps out in the home/ward				
Often	54	44		
Sometimes	46	50		
Almost never	0	6	3.369	NS

Table 1 (*Continued*)

Item	Institution ($n = 56$) %	Home ($n = 18$) %	χ^2	*P*-value[a]
Keeps occupied in a constructive useful activity (works, reads, has hobbies)				
Almost always	14	0		
Sometimes	20	33		
Almost never	66	67	3.684	NS
Socializes with others				
Establishes good relations with others	45	89		
Has some difficulty establishing relationships	23	11		
Has a great deal of difficulty establishing relationships	32	0	11.583	0.01
Is willing to do things asked or suggested				
Often goes along	9	5		
Sometimes goes along	30	78		
Almost never goes along	61	17	12.789	0.01
Communication difficulties				
Understands what you communicate (speaking, writing or gesturing)				
Understands almost everything	54	83		
Understands some of what you communicate	34	17		
Understands almost nothing of what you communicate	12	0	5.599	$0.05 > P < 0.1$
Communicates in any manner (speaking, writing or gesturing)				
Well enough to be easily understood at all times	57	78		
Can be understood sometimes or with difficulty	29	17		
Can rarely or never be understood for whatever reason	14	5	2.539	NS
Social disturbance				
Is objectionable to others during the day				
Rarely or never	63	83		
Sometimes	32	17		
Frequently	5	0	2.989	NS
Accuses others of doing him/her bodily harm or stealing his/her personal possessions — if sure the accusations are true rate as zero, otherwise rate 1 or 2				
Never	64	94		
Sometimes	27	6		
Frequently	9	0	3.362	0.05

Table 1 (*Continued*)

Item	Institution ($n = 56$) %	Home ($n = 18$) %	χ^2	*P*-value[a]
Hoards apparently meaningless items (wads of paper, string, scraps)				
Never	79	56		
Sometimes	18	39		
Frequently	3	5	3.744	NS
Sleep pattern at night is				
Almost never awake	34	6		
Sometimes awake	59	50		
Often awake	7	44	15.93	0.001
Sensory impairment[b]				
Sight				
Can see (or can see with glasses)	63	67		
Partially blind	0	0		
Totally blind	37	33	0.102	NS
Hearing				
No hearing difficulties	77	89		
No hearing difficulties although uses an aid	5	11		
Has hearing difficulties which interfere markedly with communication	18	0	4.132	NS

[a] *$P < 0.05$ significant*
[b] *Items not scored in the ratings*
NS = not significant

ed in CAPE. These can be summerized as follows.

Physical disabilities

Physical disabilities were mostly related to mobility. Disabilities affecting bathing were higher among the home-cared elderly than the institutionalized (100% versus 93%) and the same pattern was found for walking (100% versus 95%). In addition, more home-cared elderly were in bed during the day (100% versus 43%, $P < 0.001$) and fewer were confused than the institutionalized group (39% versus 64%). The percentage of elderly who were incontinent was higher in the institutionalized group (50% versus 17%).

Apathy or inactivity

More of the home-cared elderly were able to establish good relations with others than the institutionalized (89% versus 45%). and more of them were willing to cooperate and do things when asked (83% versus 39%).

Communication difficulties

The home-cared group were better communicators than the institutionalized (78% versus 57%); they also understood better when others communicated with them (83% versus 54%). These findings were not, however, statistically significant.

Social disturbances

The home-cared group socialized better than the institutionalized and had no difficulty in establishing good relations with others. They were also less objectionable to others during the day. More of the elderly who were admitted to residental care had a paranoid attitude, e.g. accusing others of bodily harm. Although the institutionalized elderly slept better at night compared to those at home, it was found that only five (9%) of the institutionalized elderly were on regular hypnotic medication.

Sensory impairment

The home-cared group had less sensory impairment; 89% had no hearing difficulties, compared to 77% of the institutionalized group, and 67% had no visual impairment (with or without the help of glasses) compared to 63%.

Discussion

The study revealed some significant findings in both populations. The home-cared elderly were slightly younger than the institutionalized group, yet they had more physical disabilities affecting activities like bathing and walking and, as a result, more of them were in bed during the day.

Probably because of their younger age the home-cared group experienced less confusion (39%) than the institutionalized group (64%). The higher percentage of both confusion and incontinence among the institutionalized group could be a reflection of their more advanced age. It could also be assumed that one of the main reasons for individuals being admitted to residential care was the inability of relatives to tolerate and cope with the disabilities of their elderly family members. This was further supported by the finding of a higher number of elderly with incontinence among the residential group; 50% compared to 17% of the home-cared group ($P < 0.02$). Both incontinence and confusion seem to militate against keeping elderly people at home, since both conditions demand extensive physical effort from their care givers.

The home environment usually provides stimulation for the elderly through continuous activity by the family members and by friends and visitors. In this study that the home-cared group were less confused and more social than the institutionalized group. They were also better at establishing good relations with others and were more compliant.

In dealing with the elderly, families in this part of the world are faced with a dilemma. On the one hand, because of psychological, economic and social factors, families may prefer to delegate their care to an institution, on the other, the prevalent moral, religious and cultural obligations dictate against admitting the elderly to an institution. Once admitted, however, the elderly tend to be forgotten — the so-called "granny dumping" phenomenon. In an institution, these elderly people will often have less contact with others, their social and psychological well-being may deteriorate and ultimately they may develop paranoia. This behaviour characteristic was found in our study, with more of the institutionalized group (36% versus 6%) accusing others of doing harm to them or stealing their personal belongings than the home cared elderly.

In Bahrain as well as in the other affluent countries in the area, the percentage of people above the age of 65 years is increasing annually. It is expected that by the year 2000 the percentage will be 3.25% of the population [*1*]. It is, therefore, very important to study all the relevant issues relating

to this sector of the population, as well as factors relating to the family with regard to their abilities and the difficulties they encounter while trying to take care of their elderly at home. It is hoped that in the future the services provided in Bahrain will be based more on the needs of society, with preferences given to improving the mobile home-care scheme, which presently provides a valuable service to those elderly people in their homes and to their families.

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