Functional Performance of Alzheimer's Disease and Vascular Dementia in Southern Taiwan

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This study investigated the functional performance of two major subtypes of dementia, Alzheimer's disease (AD) and vascular dementia (VaD), by the Functional Independence Measure (FIM), and to understand the need for assistance in performing activities of daily living. The subjects comprised 64 AD and 21 VaD patients who were recruited from two epidemiologic studies of dementia with a total of 3,931 community residents aged 65 years and above in southern Taiwan. The results showed that the severity of dementia was similar between the two groups. The mean score for AD was 82.7 and for VaD was 56.5 for total FIM ($p<0.05$), 61.6 and 41.7 for the motor dimension ($p<0.05$), and 21.1 and 15.7 for the cognitive dimension ($p<0.05$). There were significant differences ($p<0.01$) between AD and VaD in six FIM items and borderline or marginal significance ($p<0.05$) in most of the FIM items. For AD patients, stairs, lower dressing, bathing, and tub/shower transfer were the most difficult items in the motor dimension, and it was memory in the cognitive dimension. For VaD patients, bathing, upper and lower dressing, and grooming were the most difficult items in the motor dimension, and it was problem solving in the cognitive dimension. VaD patients were more dependent on all FIM items and required more assistance than AD patients. The functional performances of dementia patients were significantly associated with dementia severity and subtypes, together accounting for 40% of the variability in total FIM. In conclusion, most dementia patients are dependent in daily activities and different types and severity of dementia lead to different disability profiles; individualized care is, therefore, most appropriate.

Key Words: Alzheimer's disease, Functional Independence Measure, vascular dementia
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Dementia has been a major public health problem of the aging population in developed countries for decades. The elderly population aged 65 years and above has increased rapidly in Taiwan, from 7.1% in 1993 to 9.5% in 2004 [1]. It is estimated that there will be about 23.9% of people older than 65 years by 2051 in Taiwan [2]. Recent studies in Taiwan have shown that the prevalence of dementia among people aged 65 years and above is 2–4.4% [3–5]. Few illnesses associated with aging are as devastating to the patient or family as dementia. Characterized by chronic and often progressive cognitive deterioration, dementia causes patients to lose their functional capacity for independence and personal care [6]. It also affects the quality of life of both patients and caregivers and is directly linked to costs of care [7,8]. Although hospitalization or long-term care facilities often resolve patients' health problem, the heavy financial burden

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has a serious impact on the family and society. In any case, home care of the elderly is traditional in Taiwan. Dementia, therefore, has increasingly significant economic and social impacts on families and societies in Taiwan.

Dementia is a clinical syndrome of biopsychosocial components that produces disruption in behavior, cognition, and affect. Assessing the levels of functional abilities of these demented elderly is essential for understanding their needs and level of assistance required in order to provide them with adequate functional skills or aids. The performance of the activities of daily living (ADL) is influenced by progressive cognitive impairment in the demented elderly. The Functional Independence Measure (FIM) is a reliable, valid, sensitive, simple, practical, and efficient instrument to assess a patient's daily functioning [9–11]. The FIM, which is a part of the Uniform Data System for Medical Rehabilitation, has been developed to measure physical disability [12,13], to assess the outcomes of medical rehabilitation [14] and to estimate the burden of care [15]. In addition to ADL and mobility, the FIM also assesses communication and cognitive skills and has gained widespread popularity in the United States and other countries [16,17]. Since the daily activities of dementia patients are highly influenced by cognitive deficits as well as motor dysfunction, the FIM should be very suitable for assessing functional performance in dementia patients. However, FIM has seldom been used on demented elderly. The purpose of this study was to investigate the functional performance in two major types of dementia, Alzheimer's disease (AD) and vascular dementia (VaD), using FIM, and to understand the need for assistance in performing ADL for these two patient groups on the FIM items.

Materials and Methods

Subjects

All subjects were obtained from the two dementia studies in southern Taiwan conducted by Liu et al [4] and Lin et al [5] and underwent annual follow-up for 3 years parallel to the current study. In total, 3,931 elderly subjects aged 65 years and above were sampled by a multistep stratified random method from Kaohsiung city, Kaohsiung county, and Pingtung county. The ascertainment of dementia cases was done using a two-phase study design. In the screening phase (Phase 1), a culturally adapted version of the Chinese Mini Mental State Examination [18], Blessed Dementia Rating Scale [19], and a questionnaire regarding detailed demographic data and past medical history were administered by specially trained interviewers. In Phase 2, the CERAD (Consortium to Establish a Registry of Alzheimer's Disease) neuropsychologic test battery [20] was performed by neuropsychologists, and comprehensive neurobehavioral examinations, including Clinical Dementia Rating Scale (CDR) [21] and Hachinski Ischemia Scale [22], were administered by senior neurologists. The ICD-10NA, DSM-III-R criteria for dementia, NINCDS-ADRDA guidelines for AD [23], and NINDS-AIREN criteria [24] for VaD were employed to identify the subtypes of dementia. Severity of dementia was classified by the CDR, and CDR=1, 2, 3–5 represented mild, moderate, and severe, respectively. From the two studies, the total number of demented elderly was 153. Of these 153 demented elderly, 30 died, seven moved, and 14 could not be traced. Consequently, the remaining 102 subjects were enrolled. Of these 102 demented patients, 64 (62.7%) were classified as having AD, 21 (20.6%) as having VaD, eight (7.8%) as having a mixture of AD and VaD, two (2.0%) as having Parkinson's disease, and seven (6.9%) as having other disorders. Only 85 patients with AD and VaD were included in the analysis.

Instrument

Structured interview of 18 FIM items was used in this study. For each of the 18 FIM items, specific scaling descriptions are listed and used. The FIM was developed from the Barthel Index by the American Congress of Rehabilitation Medicine and the American Academy of Physical Medicine and Rehabilitation Task Force. This instrument was translated into Chinese and validated using Taiwanese subjects by Guo et al [25]. The FIM is an 18-item ordinal scale; each item is scored with a seven-level ordinal scale to assess the patient's need for assistance or devices in order to accomplish daily activities. The 18 items of the FIM are classified into six subscales and assess two dimensions: motor and cognitive. The motor dimension consists of self-care (eating, grooming, bathing, upper and lower dressing, toileting), sphincter control (bladder and bowel management), mobility (bed/chair, toilet, and tub/shower transfer), and locomotion (walking or

using wheelchair, stairs). The cognitive dimension consists of communication (comprehension, expression) and social cognition (social interaction, problem solving, memory). For each of the 18 FIM items, specific scaling descriptors are used. Degree of dependency is classified into three levels of functioning [9,16–17,26]: independence with no helper (ID), modified dependence on a helper (MD), and complete dependence on a helper (CD). Each item is rated on a seven-point scale. A score of 1 or 2 indicates CD; a score of 1 means requiring total assistance and 2 means maximal assistance. A score of 3, 4, or 5 indicates MD; a score of 3 means requiring moderate assistance, 4 minimal assistance, and 5 supervision. A score of 6 or 7 indicates ID; a score of 6 means modified independence and 7 means complete independence [9,16–17,26]. Scores on the FIM range from 18 to 126. A higher FIM score means a higher level of independence and better functional performance of the patient. The interrater reliability of this instrument ranges from 0.88 to 0.93 and the internal consistency reliability is 0.97.

Procedures

The patients and their families were contacted by telephone to ask if they were interested in participating in the study. Those who had no telephones were informed by mail. During home visit, a specially trained nurse evaluated the patient's performance on the FIM by observation and interviews of patients and their caregivers. Health education for caregivers was also conducted to enhance their knowledge about dementia, safety of environment, and skills of care. Five registered nurses participated in this study. A home visit was conducted for each patient. Each home visit took about 1–2 hours.

Statistical analyses

Background characteristics of subjects were analyzed with the χ^2 test to examine the differences between AD and VaD. The age and FIM score were analyzed by Student's t test. Multiple regression analysis was used to determine the importance of various predicting factors. Significance was defined as $p<0.01$ and borderline significance as $p<0.05$ because of multiple comparisons. Statistical analysis was performed with SPSS version 8.0 (SPSS Inc., Chicago, IL, USA). Data were analyzed with percentage, χ^2 test, mean, standard deviation, Student's t test, and multiple regressions.

RESULTS

Background characteristics of subjects are shown in Table 1. This study consisted of 64 (75.3%) AD and 21 (24.7%) VaD patients. Mean age was 80.3±7.4 years for AD patients, and 75.3±6.2 years for VaD patients ($t=2.82$, $p<0.01$). There were significant differences in gender ($\chi^2=5.58$, $p<0.05$) between the two groups.

Table 1. Background characteristics of subjects

Variables	Total ($n=85$) *n* (%)	AD ($n=64$) *n* (%)	VaD ($n=21$) *n* (%)	Statistical value
Gender				$\chi^2=5.58$*
Male	34 (40.0)	21 (32.8)	13 (61.9)	
Female	51 (60.0)	43 (67.2)	8 (38.0)	
Mean age (yr)	78.93±7.45	80.33±7.39	75.29±6.19	$t=2.82$†
Education				$\chi^2=3.81$
Illiterate	59 (69.4)	48 (75.0)	11 (52.4)	
Literate	3 (3.5)	3 (4.7)	0 (0.0)	
Elementary school	15 (17.6)	9 (14.1)	6 (28.6)	
Junior high school	2 (2.4)	1 (1.6)	1 (4.7)	
Senior high school or above	6 (7.1)	3 (4.7)	3 (14.3)	
Severity of dementia (CDR)				$\chi^2=4.19$
Mild (CDR 1)	58 (68.2)	45 (70.4)	13 (61.9)	
Moderate (CDR 2)	13 (15.3)	7 (10.9)	6 (28.6)	
Severe (CDR 3, 4, 5)	14 (16.5)	12 (18.8)	2 (9.6)	

*$p<0.05$; †$p<0.01$. AD = Alzheimer's disease; VaD = vascular dementia; CDR = Clinical Dementia Rating scale.

Table 2. Degree of dependency in various dementia severities by Functional Independence Measure (FIM) items

FIM items	Mild (n=58) (CDR 1) %			Moderate (n=13) (CDR 2) %			Severe (n=14) (CDR 3, 4, 5) %			Total (n=85) %		
	ID	MD	CD	ID	MD	CD	ID	MD	CD	ID	MD	CD
Eating	69.0	8.7	22.3	15.4	23.1	61.5	21.4	14.3	64.3	52.9	11.8	35.3
Grooming	69.0	3.4	27.6	15.4	15.4	69.2	7.1	7.1	85.8	50.6	5.9	43.5
Bathing	63.7	5.1	31.1	15.4	7.7	76.9	7.1	7.1	85.8	47.0	5.9	47.0
Upper dressing	67.3	5.1	27.6	15.4	0.0	84.6	0.0	14.2	85.8	49.4	4.7	45.9
Lower dressing	65.5	5.1	29.3	15.4	7.7	76.9	7.1	14.3	78.6	48.2	5.9	45.9
Toileting	67.3	6.8	25.9	15.4	7.7	76.9	21.4	0.0	78.6	51.8	5.9	42.3
Bladder management	69.0	12.1	18.9	15.4	23.1	61.5	14.3	0.0	85.7	51.8	11.8	36.4
Bowel management	69.0	13.9	17.1	30.8	15.4	53.8	21.4	0.0	78.6	55.3	11.8	32.9
Bed/chair transfer	65.5	8.6	25.9	23.1	15.4	61.5	28.6	7.1	64.3	52.9	9.4	37.7
Toilet transfer	63.8	10.3	25.9	30.8	7.7	61.5	28.6	0.0	71.4	52.9	8.3	38.8
Tub/shower transfer	62.0	10.4	27.6	23.1	15.4	61.5	14.3	7.1	78.6	48.2	10.6	41.2
Walk or wheelchair	67.3	3.4	29.3	30.8	7.7	61.5	28.6	0.0	71.4	55.3	3.5	41.2
Stairs	64.1	5.7	30.2	16.6	16.6	66.8	21.4	7.1	71.4	49.4	7.6	43.0
Comprehension	37.9	44.9	17.2	30.7	23.1	46.2	7.1	14.3	78.6	31.8	36.4	31.8
Expression	50.0	31.0	19.0	30.7	23.1	46.2	0.0	7.1	92.9	38.8	25.9	35.3
Social interaction	51.7	34.5	13.8	30.7	23.1	46.2	0.0	14.3	85.7	40.0	29.4	30.6
Problem solving	37.9	39.7	22.4	15.4	23.1	61.5	0.0	35.7	64.3	28.2	36.4	35.3
Memory	29.3	46.6	24.1	7.7	7.7	84.6	0.0	7.1	92.9	21.2	34.1	44.7

CDR = Clinical Dementia Rating scale; ID (independence) = complete independence or modified independence; MD (modified dependence) = levels of assistance required supervision, minimal contact assistance or moderate assistance; CD (complete dependence) = maximal assistance or total assistance.

A higher percentage of dementia was found in lower educational groups. With regard to severity of dementia, 58 subjects (68.2%) had mild dementia (CDR=1), 13 (15.3%) had moderate dementia (CDR=2), and 14 (16.5%) had severe dementia (CDR=3–5). However, there were no significant differences in education and severity of dementia (CDR score) between the two groups.

Table 2 shows the degree of dependence by FIM at different stages of dementia. In general, the degree of dependence was associated with the stage of dementia. The frequency of CD was 13.8–31.1% for mild dementia, 46.2–84.6% for moderate dementia, and 64.3–92.9% for severe dementia. For the 58 mild demented elderly (CDR=1), the four leading difficult motor items were bathing, stairs, lower dressing and walking or using a wheelchair. For the 13 moderate dementia patients, the four leading difficult motor items were upper dressing, bathing, lower dressing, and toileting, and the two most difficult cognitive items were memory (84.6%) and problem solving (61.5%). For the 14 severe demented elderly, grooming, bathing, upper dressing, and bladder management were the most difficult items, and 85.8% of them were completely dependent on a helper in motor items. Memory, expression (both 92.9%), and social interaction (85.7%) were difficult in the cognitive dimension.

As shown in Table 3, the VaD group had lower scores than the AD group on all six subscales (self-care, sphincter control, mobility, locomotion, communication, social cognition), the two dimensions (motor, cognitive), and total scores. The total mean FIM score for AD was 82.7 (65.6% of maximal score) and for VaD was 56.5 (44.8% of maximal score). The AD group obtained a mean score of 61.6 (67.6% of maximal score) and the VaD group a score of 41.7 (45.8% of maximal score) on the motor dimension. The AD group obtained a mean score of 21.1 (60.2% of maximal score) and the VaD group a score of 15.7 (44.9% of maximal score) on the cognitive dimension. We also found borderline significant differences in the motor and cognitive dimensions, and total FIM scores between the AD and VaD groups. Most of the FIM items were significantly different between AD and VaD, except bladder management, language comprehension, and memory. Among the motor dimension items, the six most significantly different items between AD and VaD were bed/chair transfer (t=3.18,

Table 3. Comparison of the Functional Independence Measure (FIM) scores between Alzheimer's disease (AD) and vascular dementia (VaD)

FIM items	AD ($n=64$) M±SD	VaD ($n=21$) M±SD	t
Motor dimension	61.6±33.1	41.7±30.7	2.44*
Self-care subscale	28.6±15.3	18.4±14.7	2.76†
Eating	5.2±2.3	3.6±2.3	2.67†
Grooming	4.7±2.8	2.9±2.6	2.58*
Bathing	4.6±2.7	2.8±2.5	2.75†
Upper dressing	4.7±2.7	2.7±2.4	3.14†
Lower dressing	4.6±2.7	2.9±2.6	2.65†
Toileting	4.8±2.7	3.2±2.6	2.40*
Sphincter control subscale	9.9±5.2	7.5±5.2	1.97
Bladder management	4.8±2.7	3.6±2.6	1.76
Bowel management	5.1±2.6	3.7±2.6	2.14*
Mobility subscale	14.4±7.7	9.6±7.5	2.63†
Bed/chair transfer	5.0±2.6	3.0±2.4	3.18†
Toilet transfer	4.8±2.7	3.2±2.6	2.46*
Tub/shower transfer	4.6±2.7	3.1±2.5	2.15*
Locomotion subscale	9.3±5.4	6.2±5.2	2.15*
Walk/wheelchair	4.8±2.8	3.1±2.7	2.37*
Stairs	4.5±2.7	3.0±2.6	2.09*
Cognitive dimension	21.1±9.9	15.7±9.5	2.08*
Communication subscale	8.9±4.3	6.9±4.3	1.73
Comprehension	4.3±2.1	4.0±2.5	0.69
Expression	4.6±2.3	3.1±2.2	2.59*
Social cognition subscale	12.2±5.9	8.8±5.4	2.24*
Social interaction	4.6±2.2	3.4±2.1	2.19*
Problem solving	4.0±2.2	2.6±1.8	2.99†
Memory	3.5±2.0	2.9±2.0	1.24
Total FIM scores	82.7±41.4	56.5±38.9	2.46*

*$p<0.05$; †$p<0.01$. M = mean; SD = standard deviation. Note: Levels of functioning and their scores: 7 = complete independence; 6 = modified independence; 5 = supervision; 4 = minimal assistance (at least 75% independent); 3 = moderate assistance (at least 50% independence); 2 = maximal assistance (at least 25% independent); 1 = total assistance (<25% independence).

$p<0.01$), upper dressing ($t=3.14$, $p<0.01$), problem solving ($t=2.99$, $p<0.01$), bathing ($t=2.75$, $p<0.01$), eating ($t=2.67$, $p<0.01$), and lower dressing ($t=2.65$, $p<0.01$). Of the 18 FIM items, the scores were around 4–5 points (minimal assistance to supervision) for AD (except for memory) and 2–4 points (maximal to minimal assistance) for VaD.

We applied multiple regression analysis to determine the important factors in predicting the performance on FIM. It was found that CDR had the highest predictive ability, followed by subtypes of dementia, for motor dimension, cognitive dimension, and total FIM scores. These two predictors together accounted for 36.7% of the variability in motor FIM scores, 38% in cognitive FIM scores and 40% in total FIM scores (Table 4).

Discussion

This study was conducted in the community and the investigators examined the patients in their homes and were able to observe their environment and actual performance. Also, the subjects were recruited from community surveys and could represent the real picture of dementia care status in Taiwan, compared to most hospital studies. Severity of dementia was determined with the CDR [21], which proved to be very useful in assessing the need for support services. Figure 1 shows that higher CDR score indicates more dependence on caregivers and need for more assistance in daily activities. Among patients with mild dementia, one third were dependent in motor dimension activities, and only half to one third were

Table 4. Multiple regression analysis predicting Functional Independence Measure (FIM) scores in dementia

Dependent variables	Independent variables	Unstandardized regression coefficients	Standardized regression coefficients	*F*	R^2
Motor dimension scores	CDR (stage 1/others)	–16.72	–0.49*	8.48	0.37
	Subtype of dementia (AD *vs.* VaD)	–28.79	–0.36*		
	Gender (male *vs.* female)	–10.93	–0.16		
	Age (yr)	–0.56	–0.13		
	Level of education (illiterate/literate elementary, junior high school, senior high school, and above)	–0.78	0.03		
Cognitive dimension scores	CDR (stage 1/others)	–5.43	–0.53†	9.68	0.38
	Subtype of dementia (AD *vs.* VaD)	–7.44	–0.32*		
	Gender (male *vs.* female)	–3.31	–0.16		
	Age (yr)	–0.07	–0.05		
	Level of education (illiterate/literate elementary, junior high school, senior high school and above)	0.99	0.14		
Total FIM scores	CDR (stage 1/others)	–22.14	–0.52†	9.75	0.40
	Subtype of dementia (AD *vs.* VaD)	–36.86	–0.37*		
	Gender (male *vs.* female)	–13.58	–0.16		
	Age (yr)	–0.67	0.12		
	Level of education (illiterate/literate elementary, junior high school, senior high school and above)	1.85	0.07		

*$p < 0.01$; †$p < 0.001$. CDR = Clinical Dementia Rating scale; AD = Alzheimer's disease; VaD = vascular dementia.

independent in various cognitive functioning activities. In general, the functional performance of FIM is significantly associated with severity and subtype of dementia. Galasko reported that AD patients demonstrate a similar deterioration course in functional loss, starting from forgetting, to inability to use household appliances, dressing, locomotion, and finally eating [27]. In motor function, self-care was the most difficult subscale, and 61.5–85.8% of patients with moderate to severe dementia were completely dependent in this area. The four most difficult motor items for the 85 demented elderly were bathing, upper dressing, lower dressing, and grooming. Most patients with severe dementia are completely dependent on a helper and need to be fed, are incontinent, or bedridden [21]. However, the deterioration course of various motor activities varied a lot, which may be a result of different progression courses of dementia in both AD and VaD and the various proportions of AD to VaD at different dementia stages in this sample. In contrast, the deterioration in cognitive functioning was more consistent and homogeneous with the progression of dementia because the staging of dementia, regardless of the subtype, was based mainly on cognitive dysfunction.

There were significant differences in age and gender between AD and VaD patients; however, age and gender were not significantly associated with FIM score. VaD patients were more dependent than AD patients in all 18 FIM items [28] and vascular dementia, causally related to stroke, always induced physical disability such as paralysis, limb rigidity, spasticity, and gait abnormality [29], which is consistent with Chen et al's report that VaD patients have more physical and severe functional disabilities compared to AD patients [30]. The most significant differences between AD and VaD groups in the 18 FIM items were activities involving locomotion, which resulted from motor

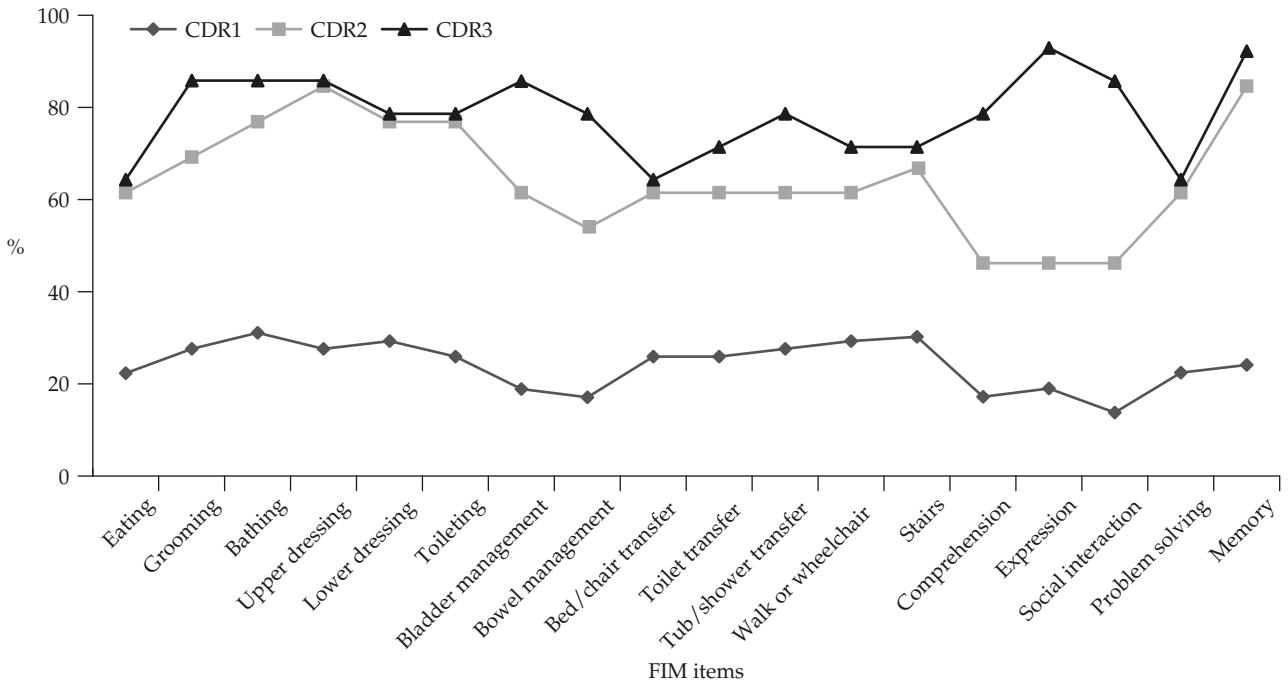

Figure 1. *Complete dependence in Alzheimer's disease and vascular dementia by Functional Independence Measure (FIM) items. CDR = Clinical Dementia Rating scale.*

disability via stroke. Going up or down stairs was the most difficult item for AD patients, which might result from gait apraxia [31]. This probably was the cause of fall accidents. Thus, the AD patients always performed better in ADL and were more independent than the VaD patients except for bladder management, comprehension, and memory, which are highly related to dementia severity. Both types of dementia patients had large ranges of FIM performance, especially VaD patients, indicating high heterogeneity in functioning among dementia patients.

Several studies [16,25,32–34] have shown that eating is the easiest self-care item in both groups. The AD patients could complete this task under supervision, while the VaD patients needed moderate to minimal assistance. In self-care items, bathing and dressing were the most difficult for AD patients, resulting from complicated procedures [35], while upper dressing was the most difficult for VaD patients, probably relating to hemiparesis. These neurologic dysfunction and neurobehavioral impairments influenced ADL performance, and causes of impaired functioning in dementia patients were often complicated. We consider sphincter control as an example. Bladder management was more difficult than bowel management. Urge incontinence in AD may relate to dysfunction of sphincter control and forgetfulness from central degenerations. However, stroke can cause bladder dysfunction, resulting in neurogenic bladder and uninhibited bladder, causing incontinence, which may be aggravated by memory lapses, inattention, emotional factors, inability to communicate, and impaired physical mobility [36].

In general, there were no significant differences in global cognitive impairment between the two groups, because dementia was defined, according to DSM-IV [37], as multiple cognitive deficits [37]. Nevertheless, there was significant difference in some specific cognitive domain between the two groups. Figure 2 and Table 3 show that AD had better functional performance than VaD. VaD patients required moderate assistance, while AD patients ranged from requiring supervision to minimal assistance. This result may reflect the fact that VaD patients have expressive, receptive aphasia as well as dysarthria while AD patients have difficulty mainly in understanding (comprehension deficit) until the late stage [29]. VaD patients also had much difficulty in problem solving, which may be due to the fact that VaD patients frequently have frontal dysfunction and physical disability to conduct the task. These reflect that the disabilities of dementia patients

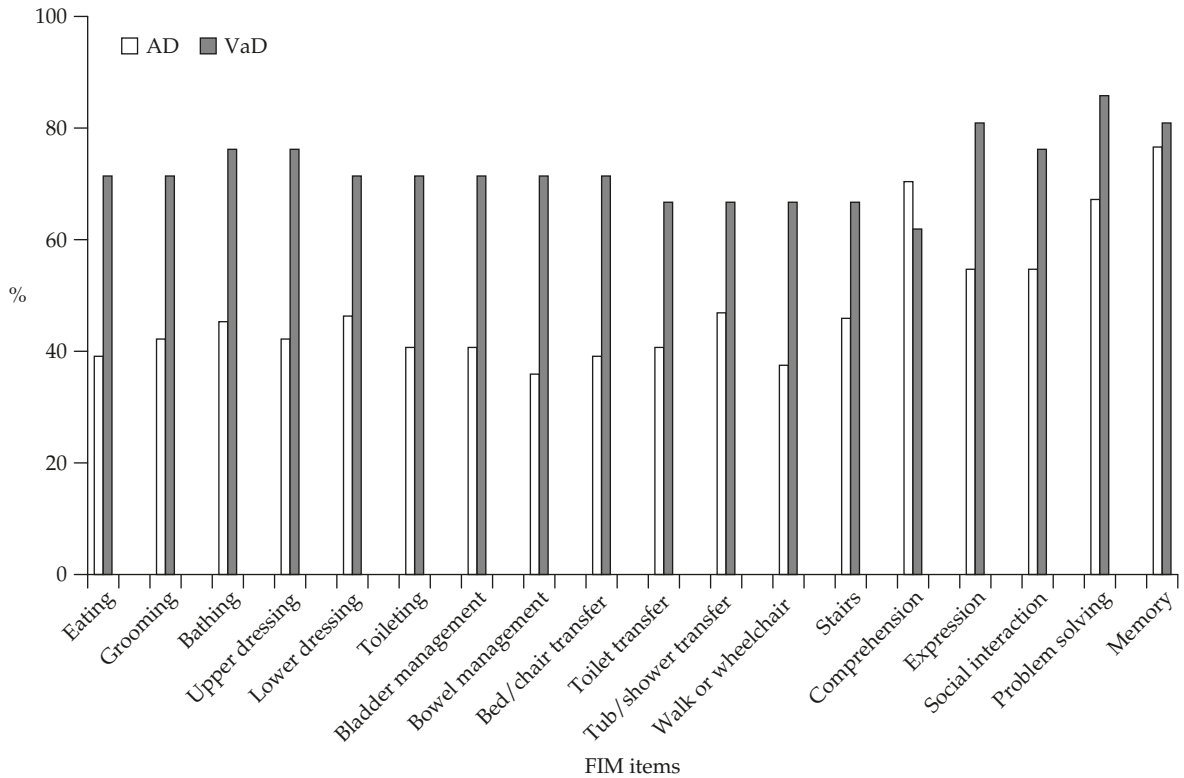

Figure 2. *Modified dependence and complete dependence in Alzheimer's disease (AD) and vascular dementia (VaD) by Functional Independence Measure (FIM) items.*

are very heterogeneous regarding cause, severity and individual difference.

This study explored the functional performance of dementia patients in Southern Taiwan and showed prominent functional impairment that was diverse between two major types of dementia and which changes with disease progression. Due to the high heterogeneity of dementia, disabilities in various types and severity of dementia are quite different. Detailed assessment of functional performance for every dementia patient is essential for adequate care, and an individualized plan of care for each patient is mandatory for better care. Future studies should recruit more subjects so that the dementia patients can be divided into more groups, in addition to severity and type. In addition, simultaneous assessment of cognitive function, behavioral problem, and CDR score may bring out more fruitful findings. Public education about knowledge and home care of dementia, efforts to reduce incidence of head trauma, prevention of stroke, and treatment of risk factors would benefit in the care of demented elderly and in controlling its severity. The results of this study provide references in caring for dementia patients.

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南台灣社區阿滋海默氏症與血管性失智症患者生活功能之表現

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本研究之目的係以生活功能獨立程度量表來評估阿滋海默氏症與血管性失智症患者生活功能之表現，以探討病人執行生活活動時應給與之協助。本研究以 64 位阿滋海默氏症及 21 位血管性失智症患者為對象，樣本來自兩個在南台灣社區之失智症流行病學研究，共訪視 3,931 位 65 歲以上老人。研究結果發現阿滋海默氏症病患與血管性失智症兩組病患之失智嚴重度在統計上無顯著之差異 ($p > 0.05$)，但血管性失智症病患在所有生活功能獨立程度之表現上，均比阿滋海默氏症病患較差需要較多之協助，比較兩組之生活功能獨立，程度量表之總分，阿滋海默氏症得 82.7 分，血管性失智症得 56.5 分 ($p < 0.05$)；在動作功能領域上，阿滋海默氏症得 61.6 分，VaD 得 41.7 分 ($p < 0.05$)；認知功能領域上，阿滋海默氏症得 21.2 分，血管性失智症得 15.7 分 ($p < 0.05$)。而在十八項生活功能活動上，有 6 項有統計學上顯著差異 ($p < 0.01$)，但多數項目仍有相當差異 ($p < 0.05$)。阿滋海默氏症患者在動作功能領域上，在上下樓梯、下半身穿褲裙、洗澡與移位到浴盆或浴室是最困難的項目，而血管性失智症患者是穿衣，穿褲、裙、洗澡與盥洗。在認知功能領域上，記憶力對阿滋海默氏症患者而解決問題的能力對血管性失智症患者是最困難的項目。研究結果也顯示，失智症病患於生活功能程度之表現與失智症嚴重度及失智症類型有明顯之相關，上列兩項變項，可解釋在生活功能獨立程度活動總分的回歸預測模式變異量 40%。總之失智症病患在執行生活功能獨立活動，因個別認知功能或動作功能之障礙程度有其個別差異性，應依個別性需要，給予適當之協助。

關鍵詞：阿滋海默氏症，生活功能獨立程度量表，血管性失智症

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