THE FUNCTIONAL STATUS OF ELDERLY CHINESE 75 YEARS AND OLDER

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ABSTRACT

The functional status of a random sample of 180 elderly Chinese 75 years and older, living in the community in Singapore was assessed. The questionnaires used were the Older Americans Resources and Services (OARS) and the Geriatric Mental State (GMS) schedules. The subjects were divided into two age groups: (i) 75-79 and (ii) 80 years and above.

On the social resources rating scale, 29.2% of the younger age group and 22.4% of the older group had unsatisfactory social relationship or uncertain availability of help if needed. About 8.9% of the younger group and 23.9% of the older group needed assistance everyday in some activities of daily living. Moderate and severe impairment of mental health was noted in 22.1% and 26.9% of the two groups respectively. Only 1.7% of the sample had moderate and severe impairment in both social resources and activities of daily living.

The significance of this study on needs and services for elderly people in the future, is discussed.

Keywords: Elderly, Chinese, Functional Status

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INTRODUCTION

In a previous paper on elderly Chinese living in the constituencies of Henderson, Tiong Bahru and Bukit Merah[1], it was found that the health of those between 65 to 74 years was generally satisfactory, and serious impairment was observed mainly in elderly 75 years and older. With the improvement of health services and healthy lifestyle, it is anticipated that in the near future, the proportion of the healthy elderly will increase. The eleven countries survey in Europe by the WHO, has shown that decline in health becomes more dramatic after the age of 75[2]. With a similar scenario in Singapore, it is imperative that gerontological research should focus more on this vulnerable group.

With the ageing of the population in Singapore, it can be seen in Table I that the proportion of those 65 to 74 (young-old) will decline from 78.4% in 1987 to 76.3% in 2000 and 70.9% in 2030. However, the 75 and more group (old-old) will increase from 21.6% in 1987 to 23.7% in 2000 and 29.1% in 2030. There is a proportional increase of the old-old and a decrease of the young-old.

Understanding the functional status of the elderly population will provide valuable information on the elderly 'at risk'. The 'at risk' elderly are those who are frail and lack social or economic resources. The concept of functional status is wide, and although there are differences between countries on what to assess,the focus of interest is on health, economics and social life. Functional status is a measure of independent living in the community. Assessment of functional status has been conducted using various schedules, namely: the Older American Resources and Services (OARS)[3], Comprehensive Assessment and Referral Evaluation[4] and Philadelphia Geriatric Centre Multilevel Assessment[5]. In the 1985 survey[1], the OARS was used mainly because of its holistic approach. In this schedule, 5 areas are assessed: social resources, economic resources, physical health, mental health and activities of daily living (ADL). In the original survey, only 4 areas were studied (excluding economic resources). It was also found from the experience of the first survey, that performance of ADL correlated to a great extent with severity of impairment in physical health[6].

Table I

Estimated Elderly Population of Singapore 1987-2030

(In thousands)

Age Group	Year 1987	2000	2030
65-74	96 (78.4%)	141 (76.3%)	396 (70.9%)
75 & above	46 (21.6%)	79 (23.7%)	242 (29.1%)
Total	142 (100%)	220 (100%)	638 (100%)

Source: Population Planning Unit, Ministry of Health, 1982

This paper presents the data on the functional status (includes only social resources, mental health and activities of daily living) of a random sample of 180 elderly Chinese 75 years and older, living in the community in Singapore.

METHODOLOGY

The selection of the random sample was described previously[1]. The sampling procedure ensured that all the subjects 75 years and older were proportionately represented as in the 1980 census of population. The initial questionnaire included items on marital status, living arrangement, social relationships, availability of help, and activities of daily living.

The rating of social resources (adapted from OARS) is:

1 Good social resources
Social relationships are satisfactory and at least one person would take care of him (her) indefinitely.

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2 Mildly impaired
Social relationships are unsatisfactory but at least one person would take care of him (her) indefinitely.

OR

Social relationships are satisfactory and only short term help is available.

3 Moderately impaired
Social relationships are unsatisfactory and only short term help is available.

OR

Social relationships are satisfactory; but help would only be available now and then.

4 Severely impaired
Social relationships are unsatisfactory, and help would only be available now and then.

OR

Social relationships are at least satisfactory or adequate; but help is not even available now and then.

Activities of daily living (ADL) include: dressing, feeding, walking, bathing, toileting, shopping and light chores at home, e.g. washing and sweeping. The rating scale for ADL performance (adapted from OARS) is:

1 Good ADL capacity

Can perform all the Activities of Daily Living without assistance.

2 Mildly impaired

Can perform all but one to three of the Activities of Daily Living. Some help is required, but not necessarily everyday. Can get through any single day without help.

3 Moderately impaired

Regularly requires assistance with at least four Activities of Daily Living. Needs help each day but not necessarily throughout the day or night.

4 Severely impaired

Needs help throughout the day and/or night to carry out the Activities of Daily Living.

For mental health assessment, the Geriatric Mental State (GMS) schedule by Copeland et al[7,8] was used. This is a semi-structured standardised interview instrument which is being used for the WHO Multisite Epidemiological Study of Dementia. The rating scale of mental health (adapted from OARS) is:

1 Good mental health

Handles both routine and major problems in his life satisfactorily and is intellectually intact and free of psychiatric symptoms.

2 Mildly mentally impaired

Has mild psychiatric symptoms and/or mild intellectual impairment. Continues to handle routine, though not major, problems in his life satisfactorily.

3 Moderately mentally impaired

Has definite psychiatric symptoms, and/or moderate intellectual impairment. Able to make routine, common-sense decisions, but unable to handle major problems in his life.

4 Severely mentally impaired

Has severe psychiatric symptoms and/or severe intellectual impairment, which interfere with routine judgement and decision making in everyday life.

RESULTS

Characteristics of Sample

In the 1985 survey, there were 180 elderly subjects aged 75 years and older, with 69 males (38.3%) and 111 females (61.7%). The sample was divided into 2 age groups: (i) 75-79 and (ii) 80 and more. As shown in Table II, in the younger group, there were 113 subjects with 41 males (36.3%) and 72 females (63.7%). In the older group, there were 67 subjects with 28 males (41.8%) and 39 females (58.2%). In marital status, 68.7% of the older group were widowed compared to 48.7% of the younger group. However there was a higher proportion of singles in the younger group (11.5%) than the older group (5.9%). The majority of subjects in both groups were living with their family; 14.2% of the younger group were living with friends compared to 9% of the older group; and 7.9% of the younger group and 6% of the older group were living by themselves.

Table II
Characteristics of Sample

	Age Group	
	75-79 n=113 (100%)	80> n=67 (100%)
Sex		
Male	41 (36.3%)	28 (41.8%)
Female	72 (63.7%)	39 (58.2%)
Marital Status		
Widowed	55 (48.7%)	46 (68.7%)
Married	43 (38.1%)	17 (25.4%)
Divorced	2 (1.7%)	-
Single	13 (11.5%)	4 (5.9%)
Living Arrangement		
With family	88 (77.9%)	57 (85%)
With friend	16 (14.2%)	6 (9%)
Alone	9 (7.9%)	4 (6%)

Social Resources

The social resources rating scale assesses social relationships of the elderly person and whether help is available if needed. In the 75-79 age group, 80 subjects (70.8%) had good or mild impairment of social resources; and only 33 (29.2%) indicated moderate or severe impairment. In the 80 years and older group, 52 (77.6%) were generally satisfied with their social resources; and only 15 (22.4%) expressed dissatisfaction. However, the difference between the 2 groups was not significant (Table III).

Activities of Daily Living (ADL)

The performance rating scale of ADL is a measure of health and independence. In the younger age group, 103 (91.1%) had good or mild impairment of ADL; and only 10 (8.9%) were moderately or severely impaired. In the older group, 51 (76.1%) had good or mild impairment of ADL; and 16 (23.9%) had moderate or severe impairment. Comparing the 2 groups, the older group was more impaired in ADL ($p < 0.001$). All those with moderate or severe impairment had physical or mental disorders, eg. stroke, cancer, chronic bronchitis, renal failure, heart diseases, depressive disorder and dementia.

Mental Health Status

In the mental health assessment using the GMS, although many elderly people had mild symptoms of poor memory, sleep problems, tension and low mood, only 43 (23.9%) were

Table III
Functional Status of Elderly Chinese

	Age Group		
	75-79 n=113 (100%)	80 & more n=67 (100%)	P
Social Resources			
Good or mild impairment	80 (70.8%)	52 (77.6%)	ns
Moderate or severe impairment	33 (29.2%)	15 (22.4%)	
Activities of Daily Living			
Good or mild impairment	103 (91.1%)	51 (76.1%)	p<0.001
Moderate or severe impairment	10 (8.9%)	16 (23.9%)	
Mental Health			
Good or mild impairment	88 (77.9%)	49 (73.1%)	ns
Moderate or severe impairment	25 (22.1%)	18 (26.9%)	

diagnosed to have definite mental disorders, eg. depressive disorder, dementia, paranoid disorder and anxiety disorder.

In the younger group, 88 (77.9%) had good or mild impairment of mental health and only 25 (22.1%) had definite mental disorders. In the older group, 49 (73.1%) were in good or mildly impaired mental health and 18 (26.8%) had moderate or severe impairment. The difference in the 2 groups was not significant.

Table IV is a cross-tabulation of social resources and activities of daily living of the 180 subjects. It can be seen that there were only 3 (1.7%) elderly who had moderate/severe impairment in both social resources and activities of daily living. They were the elderly who were unwell and lacked help - in short, the elderly 'at risk'.

Table IV
Social Resources and ADL of Elderly Chinese

	Social Resources		Total
	Good/mild impairment	Moderate/severe impairment	
ADL			
Good/mild impairment	109 (60.5%)	23 (12.8%)	132 (73.3%)
Moderate/severe impairment	45 (25%)	3 (1.7%)	48 (26.7%)
Total	154 (85.5%)	26 (14.5%)	180 (100%)

DISCUSSION

The significance of the functional status assessment is to identify the elderly 'at risk' and to plan services to meet their needs. Theoretically, the 'at risk' elderly are those who are disabled and living alone with poor social support. As mentioned in the outset, another dimension of enormous importance but not surveyed is the economic resources of the subjects. A more comprehensive assessment should certainly include this factor.

In the report on the national survey of senior citizens[9], about 84% of those 75 years and more, were living with their families and only 8.1% lived alone. Similarly in this study only a small proportion of the sample was living alone - 7.9% in the 75 to 79 group and 4% in the 80 years and more group. Those living alone were either single or widowed.

As mentioned previously, the ADL performance of the original sample of 612 elderly (65 years and more) was found to correlate with health status[6]. The results have shown that in the 75 to 79 age group, 91.1% could still continue independent living and only 8.9% needed assistance. In the 80 years and more group, 76.1% were still able to lead independent lives but 23.9% needed help daily. The majority of elderly people above 75 years were not decrepit but capable of performing most of the activities of daily living. This is comparable to the WHO sociomedical survey of the elderly in the developed countries[2].

For mental disorders, there was a difference between the 65 to 74 age group and the 75 years and more group[6]. In the former group, there were more cases of depressive disorder; and in the latter, more dementia. It was also found that the prevalence of dementia increases with age - 0.9% for the 75 to 79 age group, 4.8% for the 80 to 84 group and 12.0% for the 85 and more group. The care of the elderly with dementia is more exacting than any other illnesses in late life[10,11], and those 80 years and more have greater propensity to develop the illness. The study indicates that the majority of the elderly were in good mental health, and marked deterioration was observed in only 22.1% of the 75 to 79 age group and 26.9% in the 80 years and more group.

Social resources assess the availability of help if needed for short term and long term care. This is crucial in the management of the frail elderly in the community. In this study, 29.2% of the younger group and 22.4% of the older group were uncertain about the availability of help and had poor social support. In the national survey of senior citizens[9], 53.1% of women and 44.4% of men, 75 years and more, said that they had no close friends; and in this group only 70% had frequent visits from children living apart from them.

As indicated in Table IV, the elderly 'at risk' are those with moderate/severe impairment in ADL performance and social resources. In this study, only 3 of the 180 elderly belonged to this 'at risk' group - a prevalence of 1.7%. From the existing data it is possible to estimate, with caution, that for every 1000 elderly (75 years and older) in the 3 constituencies, there are 17 'at risk'. The rate should not be extrapolated to all other constituencies. The rate could decrease in future because the proportion of the healthy elderly may increase slightly with improvement in health care. The improvement in available social support services in the community would also certainly lower the rate. Therefore improvement in these two variables will diminish the number of 'at risk' elderly.

One of the main objectives of the geriatric service is to provide assistance for the elderly 'at risk'. The array of essential services has been discussed in the Report of the Advisory Council on the Aged[12]. This expansive network encompasses day care centres, in-patient hospital service, domiciliary care, home help, respite service, long-term care, etc. The role of the general practitioner is seldom emphasised although in the national survey[9] the majority of the elderly (54%) mentioned that they would consult the general practitioners rather than government clinic (28.9%) if they were unwell. It follows that a knowledge of geriatric medicine is essential to general practitioners and medical undergraduates.

Identifying the elderly 'at risk' from a community survey

is extremely exacting. A more rational approach is to maintain a register at primary health centres and hospitals of these frail elderly, who live alone, have financial difficulties or inadequate social support. The register will help the geriatric service to monitor and assist these elderly 'at risk'.

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