

ORIGINAL ARTICLE

PERSPECTIVE OF MALAYSIAN GENERAL PRACTITIONERS AND FAMILY PHYSICIANS TOWARDS ROUTINE SCREENING FOR DEMENTIA

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ABSTRACT

Dementia is one the commonest age-related illness that severe impact on the quality of life among the sufferers and their caregivers. The objective of this study was to determine the prevalence of dementia screening and associated factors among primary care physicians. This was a cross sectional postal based questionnaire that was adapted from a study in Canada. The questionnaire contains sections on demographic profile, years of practice, perception to cognitive screening, methods of assessing mental status and barriers to screening for cognitive impairment. Data analysis was done with SPSS v23.0. The response rate was 53.3%. 35 or 18.8% of GPs in our study perform routine screening for dementia for patient above the age of 65. It was found that physicians belonging to Indian Ethnic and other ethnic group had a 3.25- and 8.66-times higher odds of performing the screening test as compared to physicians from the Malay ethnic group, respectively ($p=0.033$ and $p=0.010$, respectively). It was also found that those that practiced in an urban location had 3.79 higher odds of performing dementia screening as compared to those practicing in a rural location ($p=0.003$). The prevalence of routine dementia screening was low. Factors identified as barrier to active screening of dementia should be tackled proactively to enable early diagnosis and optimisation of treatment.

Keywords: Dementia, Elderly, Screening, Primary care physicians

INTRODUCTION

Dementia is one of the most important age-related illnesses with an increasing prevalence worldwide (1). Malaysia has a population of approximately 32million (2020) which is 0.42% of the world population. According to Alzheimer's Disease International (2014), the prevalence of dementia in Malaysia was 123 000 in 2015 and projected to be 261 000 in 2030 and to increase fivefold to 590000 by 2050. However, more than half of dementia cases go undiagnosed at the primary care level. Though there is no cure for dementia to date, early detection will enable mobilisation of the necessary interventions including pharmacological management which slows down the disease progression, patient and family education and advance care planning. Hence, screening at the primary care level remains an important aspect of clinical care in dementia (3).

In general, dementia is not a specific disease but is rather a general term for the impaired ability to remember or make decisions that interferes with doing everyday activities. Furthermore, dementia mostly affects elderly aged 60 years and above, however; it is not a part of normal aging (32). The early signs of dementia could be

mistaken for signs of aging by relatives and this usually delays diagnosis and the required treatment. A study by Tsolaki (2009) found that it took an average of 16 months for the caregivers to seek medical advice from the health professionals as a result of their misinterpretation of dementia as a normal sign of growing old. The difficulty of early dementia diagnosis is a worldwide problem (2). A study conducted found that 66% of dementia cases are missed at the primary care level. As frontliners, general practitioners (GPs) play a vital role in dementia screening and subsequently assuming a key position in dementia care (Downs, 1996) as they see a significant percentage of the elderly population on a regular basis and usually have a good rapport with patients and their relatives (Linden et al., 1997; Schers et al., 2005) (3,4). Furthermore, general practitioners are the first point of contact for any illnesses suffered by the patient, hence they play a vital role in picking up cases of dementia in the community by performing opportunistic widely available screening tests for dementia. Hence, general practitioners are the key players in early detection of dementia and subsequent referral to specialists for further management.

Wilkinson et al found that 74% of patients consulted a general practitioner first after noticing symptoms of cognitive decline (1). However, GPs fail to identify up to 91% of dementia cases². Studies have revealed a considerable number of dementia patients who are at home who were not known to their general practitioners (5-7). Many general practitioners do not conduct routine screening for dementia. A study carried out in Australia noted that only 39% of Australian GPs regularly screen for dementia (8). Similarly, only 26% of Canadian general practitioners were reported to regularly screen for dementia (9). Another study conducted in Hungary finds that only 24% of the general practitioners use formal tests like MMSE and ECAQ when screening for possibility of dementia (25). Several factors have been identified by GPs on why mental status is not assessed regularly; namely lack of time, unsuitable screening tool for dementia, limited knowledge of dementia, diagnostic uncertainty and embarrassment to conduct a cognitive examination (8-10).

Routine screening of dementia has several benefits. Studies have shown that routine screening of patients by general practitioners could double the number of patients with dementia identified by GPs (11). An early diagnosis can be made and this will enable the patient to plan for the future while they are still mentally competent i.e. make a will, appoint a power of Attorney, organise enduring guardianship and develop an Advance Directive about their own medical care (12,13). In addition, due to recent advances in the medical treatment of dementia, early initiation of pharmaceutical treatment does not only slow down the progression of dementia but also cuts down on the costs (14). Earlier diagnosis can also lead to better outcome for caregivers. Education and earlier intervention for caregivers can reduce depression and other psychological, physical and social burden (15,16).

Therefore, this study aims to determine and identify the prevalence of routine screening of dementia amongst GPs, the common screening tool used by Malaysian general practitioners, identify the barriers to screening for dementia among the Malaysian General Practitioners and to recognise the number of GP's who are keen for geriatric training if offered by the Ministry of Health, Malaysia.

METHODS

Study Design

This is a descriptive, cross-sectional study which was conducted in Malaysia. All private General Practitioners whose names have been listed in the Ministry of Health database was included in the study. It will involve a three-stage random sampling method. In the first stage, the states of Malaysia will clustered into regions. This will then

be followed by simple random sampling of all the clusters (second stage). The third stage will involve randomly selecting one out of every four GPs from the states selected during the second stage.

Sample Size Determination

According to the National Healthcare and Workforce statistics 20121b, there are approximately 6069 Private and Public Clinics in Malaysia. The sample size calculated is 362 respondents.

Survey Instrument

Data will be collected by using a structured questionnaire which was posted to all the selected GPs. The response to the questionnaire can either be posted back, scanned and emailed back or a photo of the response be sent via "WhatsApp" back to the researchers. A cover letter will be sent together with the questionnaire requesting their participation and instructions on how to respond to the questionnaire along with the informed consent and assurance of confidentiality. A reminder letter will be posted a month later.

Questionnaire Design

To meet the objective of this study, a self-administered questionnaire is designed to explore the general practitioner's perspectives and practices with respect to dementia in Malaysia. The questionnaire used in this study is in English Language. It was partly adapted from a similar study carried out in Canada (7). Some items have also been added from another questionnaire of a dementia study in primary care for Irish General Practitioners (8). It was a 17-item questionnaire which consists of questions on demographic profile, years of practice, perception to cognitive screening, methods of assessing mental status and barriers to screening for cognitive impairment.

Data Analysis Procedures

First the data will be coded and interpreted by PASW Statistics Student Version 18. Data analysis including descriptive statistics will be used to describe participants' demographic characteristics, and texts, tables, graphs, percentages or mean will be used to present the results. To examine factors determining GPs screening practice and barriers to screening a multivariate analysis adjusting for confounding variables such as GPs, gender, age and training background will be conducted.

Ethic approval

All the participants were provided with informed consent before commencement of the survey. The ethical approval was acquired from ethic committee of National Malaysian Research Register (NMRR 15-1527-27295), which is in accordance with the Declaration of Helsinki.

RESULTS

The response rate was 53.3% (193/362). According to Table I, the mean age of the participants was 36.9 ± 9.2 years. Majority were Indians(n=68,35.2%) and female(n=116,60.1%). Majority of the participants were general practitioners (186, 96.4%), practising in urban location(n=142,73.6%) and duration of practice being between 5-10 years (94,48.7%). Only 2 (1.0%) of the participants had done specialised training, both at certificate level.161 or 83.4% of the physicians desired for further training, with 80 or 41.5% of them seeing patients between 25-50% patients above the age of 65 years. Majority of the participants (n=126,65.3%) claimed to have seen 1-9 dementia patients in the past 1 year. Majority of physicians(n=158,81.9%) routinely don't do dementia screening for patients above the age of 65 years, even though of 171 or 88.6% of them believe in screening for dementia. Among the 35 participants that do routine screening for dementia, majority used MMSE, followed by ECAQ and CDT (74.3%,20.0% and 5.7%, respectively). For the 158 participants that did not routinely do screening for dementia, lack of time is the most common reason (81.9%) and the least common reason are that lack of suitable screening tool for dementia screening (25.9%).

Table II. shown the factors that are associated with doing screening for dementia. It was found that older aged physicians, males, belonging to other ethnic groups, practising as a general practitioner and seeing more than 50% patients above the aged of 65 years as having higher propensity to do the screening test. In addition, those who desire to go for further training, practising in a rural based clinic, more than 10 years of practices, have specialized training on geriatrics and believed in routine screening for dementia also performed dementia screening more frequently. However, the only factors that had a significant association with performing screening for dementia were ethnicity, location of practice, having specialized training in geriatrics and believing in routine screening for dementia (p < 0.05).

Table III. shown the predictors of performing dementia screening. It was found that physicians belonging to Indian Ethnicity and other ethnic group had a 3.25- and 8.66-times higher odds of performing the screening test as compared to physicians from the Malay ethnic group, respectively (p=0.033 and p=0.010, respectively). It was also found that those that practiced in an urban location had 3.79 higher odds of performing dementia screening as compared to those practicing in a rural location (p=0.003

Table 1a: Socio-demographic variables of the participating physicians (N=193)

Variables	Frequency (%)
Age of physicians (years)	36.9(9.2)
Gender	
Male	77(39.9)
Female	116(60.1)
Ethnic groups	
Malay	55(28.5)
Chinese	59(30.6)
Indian	68(35.2)
Others	11(5.7)
Qualification	
General practitioner	186(96.4)
Family Medicine Specialist	7(3.6)
Years of practice	
Less than 5 years	48(24.9)
5-10 years	94(48.7)
More than 10 years	51(26.4)
Specialized training in geriatrics	
Yes	2(1.0)
No	191(99.0)

Table 1b: Socio-demographic variables of the participating physicians (N=193)

Variables	Frequency (%)
What training?	
Certificate	2(100.0)
Diploma	0(0.0)
Fellowship	0(0.0)
Desire to go for some training	
Yes	161(83.4)
No	32(16.6)
Clinic location	
Urban	142(73.6)
Rural	51(26.4)
% patients are aged 65 years or older?	
< 25%	78(40.4)
25-50%	80(41.5)
>50%	35(18.1)
How many patients with dementia have you seen in the past 1 year?	
0	34(17.6)
1-9	126(65.3)
10-20	25(13.0)
>20	8(4.1)
You routinely do dementia screening for patients above the age of 65 years?	
Yes	35 (18.1)
No	158(81.9)
Do you believe routine screening should be carried out for all patients above the age of 65 years?	
Yes	171(88.6)
No	22(11.4)
If yes, what screening tool do you commonly use? (n=35)	
ECAQ (Elderly Cognitive Assessment Questionnaire)	7(20.0)
CDT (Clock Drawing Test)	2(5.7)
MMSE (Mini Mental State Examination)	26(74.3)
If no, why? (participants can select more than one option) (n=158)	
Lack of time	128(81.0)
Diagnostic uncertainty differentiating normal ageing from dementia	91(57.6)
Unsuitable screening tool for dementia screening	41(25.9)
Patients are resistant	61(38.6)
Embarrassment to conduct cognitive examination because of the stigma surrounding dementia diagnosis	62(39.2)

Table 2: Factors associated with doing screening for elderly patients

Variables	Screening for dementia		Chi square/Likeihood ratio @/t test#	P value
	Do	Don't do		
Age of physicians (years)	37.5(8.0)	36.8(9.4)	-0.415#	0.678
Gender				
Male	14(18.2)	63(81.8)	0.0	1.00
Female	21(18.1)	95(81.9)		
Ethnic groups				
Malay	6(10.9)	49(89.1)	11.32	0.01
Chinese	6(10.2)	53(89.8)		
Indian	19(27.9)	49(72.1)		
Others	4(36.4)	7(63.6)		
Qualification				
General practitioner	35(18.8)	151(81.2)	1.60@	0.354
Family Medicine Specialist	0(0.0)	7(100.0)		
Years of practice				
Less than 5 years	8(16.7)	40(83.3)	1.37	0.527
5-10 years	15(16.0)	79(84.0)		
More than 10 years	12(23.5)	39(76.5)		
Specialized training in geriatrics				
Yes	2(100.0)	0(0.0)	9.08@	0.032
No	33(17.3)	158(82.7)		
% patients are aged 65 years or older ?				
< 25%	10(12.8)	68(87.2)	2.53	0.301
25-50%	17(21.3)	63(78.8)		
>50%	8(22.9)	27(77.1)		
Desire to go for some training				
Yes	30(18.6)	131(81.4)	0.16	0.806
No	5(15.6)	27(84.4)		
Clinic location				
Urban	20(14.1)	122(85.9)	5.94	0.02
Rural	15(29.4)	36(70.6)		
Do you believe routine screening should be carried out for all patients above the age of 65 years?				
Yes	35(20.5)	136(79.5)	5.47@	0.016
No	0(0.0)	22(100.0)		

Table 3: Predictors of performing dementia screening

Variables	Odds ratio	95%CI	P value
Ethnic groups			
Malay	Ref	ref	ref
Chinese	1.249	0.350-4.458	0.732
Indian	3.250	1.097-9.631	0.033
Others	8.657	1.673-44.791	0.010
Specialized training in geriatrics			
Yes	3851209205.751	0.0	0.999
No	ref	ref	ref
Clinic location			
Urban	3.793	1.553-9.264	0.003
Rural	ref	ref	ref
Do you believe routine screening should be carried out for all patients above the age of 65 years?			
Yes	432852649.444	0.0	0.998
No	ref	ref	ref

DISCUSSION

Dementia remains largely an unrecognized public health problem despite efforts to increase awareness by professional bodies such as Alzheimer's Associations around the globe. A study by Eustace et al. 2007 found that the belief of cognitive decline with ageing, stigma and denial by relatives are amongst the factors contributing to late presentations for diagnosis (26).

To our knowledge, this is the first study conducted to look into the prevalence of dementia screening practices in Malaysia. Our study highlights that 81.9% of physicians routinely do not perform dementia screening for patients above the age of 65 years, however; 88.6% of them believe in screening for dementia. The findings of our study were consistent with the study done in Ottawa-Carleton region by O'Connor DW et al reported that 74.3% of primary care physicians did not do dementia routine screening for their elderly patients however majority of them believed in the need to do dementia routine screening (7). The findings of our study were also consistent with a study in Hungary that finds that the majority of responding GPs agreed that early recognition is vital. Moreover, only 24% of them used formal screening tools like Clock Drawing Test (CDT) or Mini Mental State Examination (MMSE) (25). However, a study published in the UK by Renshaw et al in 2001 found that nearly half of the GPs found that early diagnosis of dementia was important (27).

The low prevalence rate of dementia screening in our study (18.1%) coupled with a high percentage of positive attitude towards dementia screening

showed that there were barriers to dementia screening in the general practice setting. The main reported barrier in our study for dementia screening was lack of time and the least reported reason was due to lack of suitable screening tool. Furthermore, majority of the people thought that diagnostic uncertainty differentiating normal ageing from dementia, 38.6% were due to patient resistance and the others showed that they felt embarrassment to conduct cognitive examination because of the stigma surrounding dementia diagnosis. Our findings conformed with a study done in Canada that found that the main barrier to use formal mental status testing was lack of time and 58% was due to patient resistance and 22% was due to inadequate available tests (7). This highlights further the busy outpatient settings not only in Malaysia but across the globe which forms the main barrier in conducting formal tests for dementia. A study by Brodaty et al .2006 mentions that most primary care physicians spend less than 11 minutes per consultation, and hence an ideal screening tests should take no more than 5 minutes or less for the tool to be feasible in GP practice (29).

According to previous literatures, a few studies reported GPs limited acquaintance with diagnostic criteria, a limited knowledge on dementia symptoms and outdated understanding of dementia (21-23). On the other hand, 38.6% of the patient resistance barrier reported in our study was possibly due to cultural belief that 'memory loss' was part of ageing. Other probable explanation was that presence of social stigma surrounding the diagnosis of dementia and denial by relatives who may again attribute the symptoms as normal process of ageing. A study

done by Chong et al.2015 in Singapore showed that only 3% of those with dementia were diagnosed in contrast to the 10% prevalence (28). The authors of the study postulated that this could be due to the low number of patients seeking help for dementia as there was a strong culturally rooted sense of familial responsibility where help seeking from health care services was seen as failure of one's familial responsibility (28). These barriers to screening strongly highlighted the needs for more widespread education to the GPs and awareness campaign to the public on dementia and the importance of early recognition and intervention.

In our study, on 18.8% of GPs performed routine screening for dementia for patient above the age of 65 years old. Majority of them, 74.3% used MMSE, followed by 20.0% used ECAQ and 5.7% with CDT. Our findings were similar to a study done in Ireland where the majority (82%) of the GPs used MMSE as a dementia routine screening tool (29).

According to a study done by Olivari BS.et al, there was a higher probability of screening amongst older aged physicians, males, belonging to other ethnic groups, practising as a general practitioner and seeing more than 50% patients above the aged of 65 years (30). Moreover, the authors also noted that only 18.0% of GPs who performed the screening tests for dementia and among them, 20.0% had acquired some training in geriatrics (31). Furthermore, among majority of GPs who did not perform screening tests for dementia, none have had any training in geriatrics. Therefore, training or fellowship in geriatrics can be seen as a favourable factor to increase the likelihood of dementia screening.

Limitation

The study mainly focussed on the Malaysian General Practitioners only and therefore, potential of selection bias may have influenced our model estimates. Furthermore, since there was fewer availability of free and open access data, some of the references cited in our study for insightful comparison were published over the past few years.

CONCLUSION

This study provided new insights into the lack of training of Malaysian GPs in the field of dementia as well as low prevalence of screening for it (18.1%). Hence, a formal training suited for GPs was highly recommended to improve the prevalence of dementia screening across GPs in Malaysia and directly improving the rate of dementia detection and referral to specialists for early intervention and management.

Our finding also highlighted the lack of time being the main barrier and hence, a feasible screening tool for dementia would be a quick screening tool with good specificity and sensitivity. Other factors

such as practising in a rural location and belonging to certain ethnicity need also be tackled as factors that inhibits active screening for dementia. Therefore, the national control programs for dementia in Malaysia especially for older adults especially in rural areas, also needed to promote awareness in terms of regular screening, physical activities, and healthy balanced diet.

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Conflict of Interest

There is no conflict of interest.

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