

General Practitioner's Attitudes and Confidence in Managing Patients with Dementia in Singapore

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Abstract

The number of people living with dementia is increasing globally as a result of an ageing population. General practitioners (GPs), as the front-line care providers in communities, are important stakeholders in the system of care for people with dementia. This commentary describes a study conducted to understand GPs' attitudes and self-perceived competencies when dealing with patients with dementia and their caregivers in Singapore. A set of study information sheet and survey questionnaires were mailed to selected GP clinics in Singapore. The survey, comprising the "GP Attitudes and Competencies Towards Dementia" questionnaire, was administered. A total of 400 GPs returned the survey, giving the study a response rate of 52.3%. About 74% of the GPs (n = 296) were seeing dementia patients in their clinics. Almost all the GPs strongly agreed or agreed that early recognition of dementia served the welfare of the patients (n = 385; 96%) and their relatives (n = 387; 97%). About half (51.5%) of the respondents strongly agreed or agreed that they felt confident carrying out an early diagnosis of dementia. Factor analysis of the questionnaire revealed 4 factors representing "benefits of early diagnosis and treatment of patients with dementia", "confidence in dealing with patients and caregiver of dementia", "negative perceptions towards dementia care" and "training needs". GPs in Singapore held a generally positive attitude towards the need for early dementia diagnosis but were not equally confident or comfortable about making the diagnosis themselves and communicating with and managing patients with dementia in the primary care setting. Dementia education and training should therefore be a critical first step in equipping GPs for dementia care in Singapore. Shared care teams could further help build up GPs' knowledge, confidence and comfort in managing patients with dementia.

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Dementia is a syndrome characterised by a deterioration in memory, thinking, behaviour and the ability to perform daily activities.¹ As it is a major cause of disability and dependence, it not only affects the person with dementia, but also the carers, the wider community and other health and social providers. Studies suggest that the age standardised prevalence of dementia for those aged 60 years and above varies within 5% to 7% in most world regions² while in terms of absolute numbers, it is estimated that worldwide, 47.5 million people have dementia.¹ The worldwide cost

of dementia, including medical expenditure and informal care, was estimated at US\$604 billion in 2010.³

Early diagnosis of dementia is important as this allows people with dementia and their family to engage with support services and plan for the future. With the increasing prevalence of dementia, healthcare systems are shifting the care of dementia patients to primary care^{4,5} and a majority of caregivers regard the general practitioner (GP) as the key person in managing care for dementia patients.⁶ Thus, GPs are important stakeholders in the system of care for

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people with dementia. Their roles include early identification and diagnosis of dementia, providing information about the diagnosis, prognosis and services available in the community as well as referring the person for specialist care when appropriate.

However, the onset of dementia is often insidious and difficult to diagnose in the early stages. Research has shown that the inability of GPs to detect dementia was due to diagnostic uncertainties, concerns about their own clinical competencies, stigma, or a sense of therapeutic nihilism.⁷ Boustani et al^{8,9} estimated that in the United States (US), less than a third of patients with dementia were recognised by the primary care system as having dementia. The findings have been similar from studies conducted elsewhere in the world.^{10,11}

Singapore is a multiethnic, developed country in Southeast Asia, with a resident population of 3.9 million people, consisting predominantly of Chinese (74.3%), Malays (13.4%) and Indians (9.1%).¹² Private general medical practitioner clinics provide 80% of the primary healthcare services in Singapore, while doctors in government polyclinics provide the remaining 20%.¹³ Polyclinics provide a range of subsidised services both for acute and chronic medical conditions including outpatient medical care, screenings and immunisation, and x-ray and laboratory services, allowing them to be a one-stop health centre for the community.¹³ GP practices are usually located in neighbourhoods, enabling patients and their caregivers to access care beyond regular working hours and even during weekends. These clinics comprise of solo, small group or large healthcare group practices. They usually do not possess onsite laboratory and other investigative facilities, and are not subsidised by the government. Secondary and tertiary care is provided by the national specialty centres and the public as well as private hospitals. The main difference between the polyclinics and GP clinics is that patient care is shared between all the doctors in the polyclinic and a patient can be assigned to any doctor in the polyclinic; in contrast, patients who go to a GP clinic would usually see a particular doctor.

A recent study in Singapore—the Well-being of the Singapore Elderly (WiSE)—established the prevalence of dementia to be 10% among Singapore residents aged 60 years and above.¹⁴ However, there was a very low rate of diagnosis of dementia being made by doctors.¹⁵ In all, 3% of the respondents in the WiSE study were diagnosed to have dementia by medical practitioners, of which 11.5% were diagnosed by GPs. The explanation for this could not be established by the study.¹⁵

A number of polyclinics co-manage patients with mild to moderate dementia, with specialists from tertiary hospitals. These collaborative partnerships allow for training and

capability building among the community-based clinicians, enabling better care for patients with dementia. The Ministry of Health, Singapore (MOH) launched its first application call in April 2017 for GPs to join the Primary Care Networks (PCNs) scheme. Under this scheme, GPs will be able to manage their patient's healthcare needs more holistically by leveraging on a team-based care model. This study is thus timely in gaining an understanding of the attitudes of GPs towards diagnosing and managing dementia, and a critical first step to the planning and development of primary care services for dementia. Unfortunately, relatively little empirical work has been done in Singapore that examines the views and perceptions of GPs in providing care for people with dementia. This study was therefore aimed at understanding GPs' attitudes and self-perceived competencies when dealing with patients with dementia and their caregivers.

Materials and Methods

GPs were recruited from a list of GP clinics (obtained from MOH) located in the whole of Singapore. The government-run polyclinics were excluded from the survey. Inclusion criteria for the study included all GPs working in clinics that were operational at the point of survey. Excluded were doctors in specialist clinics and those who were serving a 'defined' population such as staff of a specific company etc. The sample size was calculated using a single proportion formula based on the results of the study by Pathak and Montgomery¹⁶ which found that about 46.8% of GPs reported themselves as being "somewhat confident towards the diagnosis of dementia". The sample size was thus calculated to be 383 GPs to achieve 5% precision at the 95% confidence interval. Assuming that 4% of questionnaires may have missing data, the overall sample size was calculated as 400 participants.

A cover letter along with the study information sheet and the survey questionnaire were mailed to the selected GP clinics. Participation was anonymous and the information sheet described the intent and details of the study. The cover letter provided a link to an online survey which was designed using QuestionPro. Respondents could choose to complete either the online or the paper-based survey and mail it back using the return envelope provided. The survey was estimated to take about 20 minutes to complete and this was stated in the information sheet. Each GP was assigned a unique participant identity (ID) to avoid duplication. The study was approved by the relevant ethics committee (National Healthcare Domain Specific Review Board). Consent was implied by the completion and return of the questionnaire. Respondents were each reimbursed with a voucher amounting to S\$40 as an inconvenience fee sent via registered mail. The voucher was sent to the address

used for mailing the invitation letter, unless respondents indicated an alternate address at which they preferred to receive the voucher. The administration process was handled by staff who were not part of the research team and hence, confidentiality was maintained at all times.

The respondents were administered the following questionnaires:

(i) Sociodemographic questionnaire: This included questions on age, gender, ethnicity, qualifications and other relevant sociodemographic data.

(ii) Questionnaires assessing attitudes and competencies were developed by adapting questions from the instrument developed by Pentzek et al¹⁷ and Turner et al¹⁸ as well as based on input from local experts in dementia and a GP.

The questionnaire that assessed attitudes towards the diagnosis, management and outcomes of those with dementia comprised 11 questions which were related to the GPs’ own personal views on dementia. The questions were intended to measure attitudes towards early recognition, treatment options and outcomes. Answers were measured on a 4-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree).

The questionnaire that assessed self-perceived competencies in dealing with and managing patients with dementia (and their caregivers) comprised 9 questions. The questions were intended to measure how confident they were in diagnosing, informing patients and caregivers of the diagnosis and managing patients with dementia. Two additional questions were asked to find out whether they would feel more confident in managing patients if treatment guidelines or specific training were provided to them. Answers were on a 4-point Likert scale ranging from 1 (strongly agree) to 4 (strongly disagree).

Statistical Analysis

Descriptive analysis was conducted for the sociodemographic variables. Mean and standard deviation (SD) were presented for continuous variables while frequencies and percentages were presented for categorical variables. The factor structure was explored using exploratory factor analysis (EFA). EFA was performed using Mplus version 7.0 with the mean- and variance-adjusted weighted least square estimator, which has been recommended for the analysis of ordered categorical data.¹⁹ To allow the correlation between factors, oblique geomin rotation was used, and the factor loading was set at 0.3 as a cutoff. Prior to EFA, we used multiple criteria including eigenvalue >1.0, scree plot, pattern of loadings on each item (e.g. cross-loading, consistently lowest loading across different models), and the interpretability to determine number of factors and items that should be retained.

A parallel analysis (PA) which is arguably the current golden rule, was also used to determine how many factors should be extracted for EFA.^{20,21} The PA was carried out using R software version 3.1.3. The internal reliability (Cronbach’s alpha) for each factor was calculated as well. Subscores were calculated by summing the scores of the respective items in each factor, with lower scores reflecting higher level of GPs’ attitudes and self-perceived competencies when dealing with patients with dementia and their caregivers. Multivariate linear regression was conducted using SAS software version 9.4 to examine the sociodemographic correlates (i.e. age, gender, ethnicity, education level, number of years spent in general practice, and type of practice for each of the identified factor scores [dependent variables]). A two-sided *P* value below 0.05 was considered as statistically significant.

A total of 1009 clinics were approached; 241 clinics were ineligible for various reasons such as they no longer provided general care but were specialist clinics. In addition, some clinics had shut down and others were in sites that were accessible only to employees of a specific company. A total of 400 respondents completed the survey, giving the study a response rate of 52.1% (Fig. 1). One of the respondents was excluded from the final analysis as there was extensive missing data (more than 50% answers were missing). Thus in all, 399 GPs were included in the final analyses. The sample comprised 27.8% female and 72.2% male respondents. The majority of the respondents were aged between 40 to 59 years (64.1%), of Chinese ethnicity (92.2%), with 20.3 (mean) years (SD = 10.7) of service

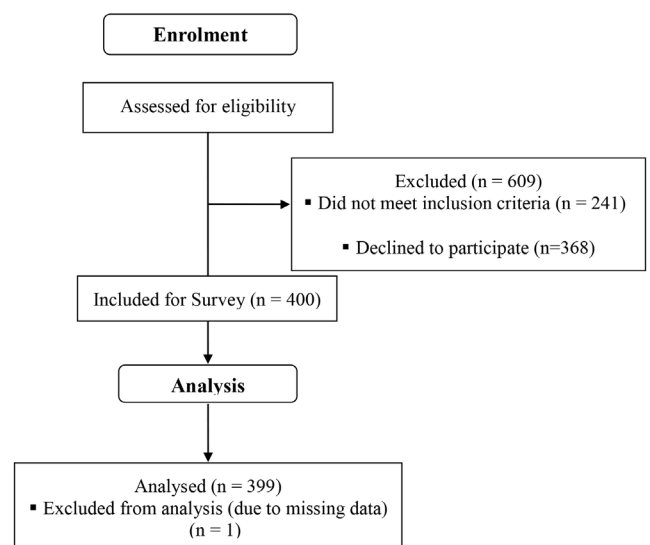


Fig. 1. Flow diagram for recruitment of general practitioners.

(Table 1). About 74.2% of the GPs (n = 296) were seeing dementia patients in their clinics.

GPs' Attitudes to Dementia Care

Responses to the items of the attitudes scale are shown in Table 2. Almost all the GPs strongly agreed or agreed that early recognition of dementia served the welfare of the patients (n = 385; 97.0%) and their relatives (n = 387; 97.5%). Slightly less than three-fourths of the GPs strongly

Table 1. Sociodemographic Correlates of the Sample of GPs Responding to the Survey

| | n* | % |
|--|-------|-------|
| Age group (years) | | |
| 28–39 | 68 | 17.09 |
| 40–59 | 255 | 64.07 |
| 60–83 | 75 | 18.84 |
| Age (mean, SD) | 50.07 | 10.88 |
| Education | | |
| MBBS | 224 | 56.14 |
| MBBS and MMed | 67 | 16.79 |
| MBBS and postgraduate diploma | 72 | 18.05 |
| Others | 36 | 9.02 |
| Gender | | |
| Male | 285 | 72.15 |
| Female | 110 | 27.85 |
| Race | | |
| Chinese | 364 | 92.15 |
| Malay | 7 | 1.77 |
| Indian | 16 | 4.05 |
| Others | 8 | 2.03 |
| Practice | | |
| Solo | 233 | 58.54 |
| Group | 165 | 41.46 |
| Number of years in general practice (mean, SD) (ranged from 1 to 50 years) | 20.33 | 10.73 |

GP: General practitioner; MBBS: Bachelor of Medicine and Bachelor of Surgery; MMed: Master of Medicine

*Not all 399 respondents answered all the questions.

agreed or agreed (n = 275; 70.2%) that antedementia drugs had a positive influence on the course of the disease. Almost all of the GPs strongly agreed or agreed (n = 389; 98%) that much could be done to improve the quality of life of patients with dementia and their carers. Despite strongly disagreeing or disagreeing that “the primary care has limited role to play in the care of people with dementia” (n = 313; 79%), more than half of the GPs in this sample felt that “managing dementia is usually more frustrating than rewarding” (n = 251; 64%) and that “patients with dementia can be a drain on resources with little positive outcome” (n = 225; 57.1%).

GPs' Confidence Concerning Diagnosis/Management

Responses for aspects on self-perceived competencies in dealing and managing patients with dementia and their caregivers are shown in Table 2. Only about half of the respondents strongly agreed or agreed that they felt confident carrying out an early diagnosis of dementia (item 12; 51.5%), and about half of the respondents (51.5%) did not feel comfortable about diagnosing a patient with dementia (item 16). In addition, the majority of the respondents were also not confident with the pharmacological treatment of dementia (item 14; 77.1%).

Factor Structure of the GP Attitudes and Competencies towards Dementia Questionnaire

Table 2 shows the item endorsements of the scale. The results of the initial eigenvalues and scree plot suggested that 4-, 5-, or 6-factor models were all potential solutions. Further simulation analysis using the PA indicated that a 4-factor model should be extracted from EFA analysis. Inspection of pattern of loadings on each item (e.g. cross-loading, consistently lowest loading across different models) and the interpretability of each item within extracted factors suggested the 4-factor model to provide the best solution. The model also fitted the data well (root mean square error of approximation [RMSEA] = 0.096, comparative fit index [CFI] = 0.974; Tucker-Lewis Index [TLI] = 0.960), although there was a clear need for improvement in RMSEA index.

Table 2. Item Endorsement of GP Attitudes and Competencies towards Dementia Questionnaire

| Item | Agree/Strongly Agree* | | Disagree/Strongly Disagree* | |
|---|-----------------------|------|-----------------------------|------|
| | n | % | n | % |
| 1 The early recognition of dementia usually serves the welfare of the patient | 385 | 97.0 | 12 | 3.0 |
| 2 The early recognition of dementia usually serves the welfare of the patient's relatives | 387 | 97.5 | 10 | 2.5 |
| 3 The present treatment option with antedementia drugs usually have a positive influence on the course of the disease | 275 | 70.2 | 117 | 29.8 |
| 4 Much can be done to improve the quality of life of demented patients | 389 | 98.0 | 8 | 2.0 |

GP: General practitioner

*Not all 399 respondents answered all the questions.

Table 2. Item Endorsement of GP Attitudes and Competencies towards Dementia Questionnaire (Cont'd)

| Item | Agree/Strongly Agree* | | Disagree/Strongly Disagree* | |
|------|-----------------------|------|-----------------------------|------|
| | n | % | n | % |
| 5 | 389 | 98.0 | 8 | 2.0 |
| 6 | 209 | 52.8 | 187 | 47.2 |
| 7 | 379 | 95.7 | 17 | 4.3 |
| 8 | 251 | 64.0 | 141 | 36.0 |
| 9 | 225 | 57.1 | 169 | 42.9 |
| 10 | 81 | 20.5 | 314 | 79.5 |
| 11 | 83 | 21.0 | 313 | 79.0 |
| 12 | 202 | 51.5 | 190 | 48.5 |
| 13 | 152 | 38.8 | 240 | 61.2 |
| 14 | 90 | 22.9 | 303 | 77.1 |
| 15 | 172 | 43.9 | 220 | 56.1 |
| 16 | 191 | 48.5 | 203 | 51.5 |
| 17 | 196 | 50.0 | 196 | 50.0 |
| 18 | 238 | 60.6 | 155 | 39.4 |
| 19 | 138 | 35.1 | 255 | 64.9 |
| 20 | 143 | 36.3 | 251 | 63.7 |
| 21 | 358 | 91.1 | 35 | 8.9 |
| 22 | 345 | 88.2 | 46 | 11.8 |

GP: General practitioner

*Not all 399 respondents answered all the questions.

Based on these considerations, we found that the 4-factor model fit the data best. Factor loadings from the 4-factor model are shown in Table 3. The first factor represented “benefits of early diagnosis and treatment of patients with dementia” as defined by 6 items (items 1-5 and 7). The second factor was labelled as “confidence in dealing with patients and caregiver of dementia” as defined by 11 items (items 6 and 11-20). The third factor was labelled as “negative perceptions towards dementia care” (3 items) (items 8-10) while the last factor was labelled as “training needs”, as measured by 2 items (items 21 and 22). The Cronbach alpha for the 4 factors ranged from 0.64 to 0.89.

Sociodemographic Correlates

Table 4 shows the correlates of the 4-factor scores. Multivariate linear regression analyses results revealed that male GPs and those who practised without partners (i.e. solo practice) were associated with significantly higher scores i.e. lower agreement with “benefits of early diagnosis and treatment of patients with dementia”. GPs with both a Bachelor of Medicine and Bachelor of Surgery (MBBS) and Master of Medicine degrees (MMed, a postgraduate academic degree

awarded in Singapore) were significantly associated with higher “confidence in dealing with patients and caregivers of dementia” as compared to those with only a MBBS.

Discussion

The current research explored Singapore GPs' attitudes and self-perceived competencies towards dementia diagnosis, management and treatment. This study showed that majority of the GPs felt positively towards the early diagnosis of dementia, endorsed the need for improving the quality of life of patients and carers, and preferred more training to better equip themselves in the management of dementia. Furthermore, the study demonstrated the psychometric properties of the 22-item attitudes and self-reported competencies of GPs towards dementia care questionnaire and proposed a 4-factor structure in dealing and managing patients with dementia, namely, “benefits of early diagnosis and treatment of patients with dementia”, “confidence in dealing with patients and caregiver of dementia”, “negative perceptions towards dementia care”, and “training needs”.

Table 3. Factor Structure of GP Attitudes and Competencies towards Dementia Questionnaire

| Item | Benefits of Early Diagnosis and Treatment of Patients with Dementia | Confidence in Dealing with Patients and Caregiver of Dementia | Negative Perceptions towards Dementia Care | Training Needs | |
|---|--|---|--|----------------|--------------|
| 1 | The early recognition of dementia usually serves the welfare of the patient | 0.787 | 0.256 | -0.111 | 0.019 |
| 2 | The early recognition of dementia usually serves the welfare of the patient's relatives | 0.750 | 0.277 | -0.109 | -0.001 |
| 3 | The present treatment option with antedementia drugs usually have a positive influence on the course of the disease | 0.557 | 0.203 | -0.058 | -0.164 |
| 4 | Much can be done to improve the quality of life of demented patients | 0.828 | 0.294 | 0.067 | -0.011 |
| 5 | Much can be done to improve the quality of life of carers of demented patients | 0.716 | 0.223 | 0.091 | 0.059 |
| 6* | A cognitive examination demands specialist expertise | 0.121 | -0.460 | 0.194 | -0.181 |
| 7 | All patients suspected of dementia should undergo a diagnostic evaluation | 0.444 | -0.063 | 0.068 | 0.096 |
| 8 | Managing dementia is usually more frustrating than rewarding | 0.178 | -0.338 | 0.738 | 0.014 |
| 9 | Patients with dementia can be a drain on resources with little positive outcome | -0.046 | -0.177 | 0.780 | 0.024 |
| 10 | There is little point in referring families to services as they do not want to use them | -0.084 | -0.089 | 0.441 | -0.157 |
| 11* | The primary care has limited role to play in the care of people with dementia | -0.119 | -0.427 | 0.261 | -0.232 |
| 12 | I usually feel confident carrying out an early diagnosis of dementia | -0.018 | 0.787 | 0.047 | -0.057 |
| 13 | I usually feel confident with the provision of care for dementia patients and their caregivers | 0.028 | 0.903 | 0.08 | -0.141 |
| 14 | I usually feel confident with the pharmacological treatment of dementia | -0.028 | 0.736 | 0.025 | -0.106 |
| 15 | I usually feel confident with the organisation of social support for patients and their relatives (e.g. support groups, ambulatory care) | 0.085 | 0.583 | 0.031 | -0.174 |
| 16 | I usually feel comfortable about diagnosing a patient with dementia | -0.075 | 0.853 | 0.085 | 0.063 |
| 17 | I usually feel comfortable informing dementia patients about their diagnosis | 0.059 | 0.849 | 0.071 | 0.028 |
| 18 | I usually feel comfortable informing the relatives about the patient's diagnosis | -0.013 | 0.837 | 0.067 | 0.089 |
| 19 | I usually feel comfortable about managing a patient with dementia | -0.062 | 0.903 | -0.065 | -0.04 |
| 20 | I usually feel confident responding to coexisting behaviour problem | -0.07 | 0.737 | -0.017 | -0.05 |
| 21 | I would feel more confident about managing patients with dementia if treatment guidelines for the diagnosis and treatment of dementia were made available to me | -0.023 | 0.297 | -0.039 | 0.885 |
| 22 | I would feel more confident about communicating with patients and caregivers if I was provided training on how to deal and speak with patients with dementia and their relatives | 0.061 | 0.173 | 0.057 | 0.792 |
| Fit indices | | | | | |
| chi-squared (degree of freedom) = 697.263 (149) | | | | | |
| RMSEA = 0.096 | | | | | |
| CFI = 0.974 | | | | | |
| TLI = 0.959 | | | | | |
| SRMR = 0.063 | | | | | |
| Cronbach's alpha | 0.786 | 0.895 | 0.634 | 0.850 | |

GP: General practitioner; CFI: Comparative fit index; RMSEA: Root mean square error of approximation; SRMR: Standardised root mean squared residual; TLI: Tucker-Lewis Index

*Items 6 and 11 were reverse scored.

Table 4. Sociodemographic Correlates of the Factors of GP Attitudes and Competencies towards Dementia Questionnaire

| Parameter | Benefits of Early Diagnosis and Treatment of Patients with Dementia | | | Confidence in Dealing with Patients and Caregiver of Dementia | | | Negative Perceptions towards Dementia Care | | | Training | | |
|-----------------------------|---|---------------|---------|---|----------------|---------|--|---------------|---------|-----------|---------------|---------|
| | Beta | 95% CI | P Value | Beta | 95% CI | P Value | Beta | 95% CI | P Value | Beta | 95% CI | P Value |
| Age group | | | | | | | | | | | | |
| 28 – 39 | 0.09 | -1.20 to 1.38 | 0.895 | 1.89 | -1.01 to 4.79 | 0.201 | 0.32 | -0.53 to 1.18 | 0.458 | 0.08 | -0.53 to 0.69 | 0.789 |
| 40 – 59 | 0.20 | -0.62 to 1.02 | 0.631 | 0.49 | -1.35 to 2.32 | 0.604 | 0.27 | -0.28 to 0.81 | 0.336 | 0.15 | -0.24 to 0.54 | 0.451 |
| 60 – 83 | Reference | | | Reference | | | Reference | | | Reference | | |
| Gender | | | | | | | | | | | | |
| Male | 0.55 | 0.03 to 1.07 | 0.039 | -0.63 | -1.81 to 0.54 | 0.291 | -0.29 | -0.64 to 0.06 | 0.106 | 0.16 | -0.08 to 0.41 | 0.193 |
| Female | Reference | | | Reference | | | Reference | | | Reference | | |
| Ethnicity | | | | | | | | | | | | |
| Malay/ Indian/ Others | 0.30 | -0.55 to 1.15 | 0.488 | -0.98 | -2.89 to 0.93 | 0.313 | 0.47 | -0.10 to 1.05 | 0.106 | 0.24 | -0.15 to 0.64 | 0.230 |
| Chinese | Reference | | | Reference | | | Reference | | | Reference | | |
| Education | | | | | | | | | | | | |
| Others | 0.57 | -0.28 to 1.42 | 0.189 | -1.80 | -3.71 to 0.11 | 0.065 | 0.21 | -0.36 to 0.78 | 0.463 | 0.10 | -0.30 to 0.50 | 0.627 |
| MBBS and postgrad diploma | -0.46 | -1.10 to 0.17 | 0.153 | -1.08 | -2.51 to 0.34 | 0.136 | 0.24 | -0.18 to 0.66 | 0.263 | -0.15 | -0.46 to 0.15 | 0.312 |
| MBBS and MMed | -0.08 | -0.74 to 0.58 | 0.812 | -1.73 | -3.21 to -0.25 | 0.022 | -0.01 | -0.45 to 0.43 | 0.962 | -0.14 | -0.45 to 0.17 | 0.361 |
| MBBS | Reference | | | Reference | | | Reference | | | Reference | | |
| Number of years as GP | 0.02 | -0.02 to 0.05 | 0.356 | 0.04 | -0.04 to 0.12 | 0.369 | 0.00 | -0.03 to 0.02 | 0.865 | 0.01 | -0.01 to 0.03 | 0.187 |
| Type of practice | | | | | | | | | | | | |
| Solo | 0.52 | 0.03 to 1.00 | 0.036 | 0.16 | -0.93 to 1.25 | 0.774 | -0.15 | -0.47 to 0.17 | 0.365 | 0.08 | -0.15 to 0.31 | 0.478 |
| Group | Reference | | | Reference | | | Reference | | | Reference | | |

CI: Confidence interval; GP: General practitioner; MBBS: Bachelor of Medicine and Bachelor of Surgery; MMed: Master of Medicine

Factor 1: Benefits of Early Diagnosis and Treatment of Patients with Dementia

The majority of the GPs agreed with the statements reflecting the benefits of early diagnosis and treatment of patients with dementia. Responses on the subscale showed that GPs strongly agreed with the need for early recognition of dementia, diagnostic evaluation, and that much could be done to improve the quality of life of patients with dementia and their carers. The item which had the lowest agreement was whether the present treatment options with antidementia drugs had a positive influence on the course of the disease, with only 70.5% agreeing with the item. Currently, both cholinesterase inhibitors (ChEIs; including rivastigmine, donepezil, and galantamine) and the N-methyl D-aspartate receptor antagonist memantine, are available in Singapore for the treatment of dementia. A review assessing the effects of ChEIs on people with Alzheimer's disease (AD) has shown small but positive treatment effects on cognitive

function, activities of daily living and behaviour.^{22,23} Trials for memantine similarly show benefits in terms of improvement in cognition and clinical impression among patients with AD.²⁴ However, concerns remain about whether the magnitude of the benefits outweighs the risks of medication.^{24,25} A systematic review of the clinical- and cost-effectiveness of these drugs concluded that the results of the cost-effectiveness were uncertain and very sensitive to change and thus the implications for service provision were not very clear.²³ This ambiguity could have led to the lack of consensus about the best practice for management and to differences in clinical guidelines for treatment across countries, and thus, may be one of the reasons that GPs did not strongly endorse a positive effect of these drugs on dementia. Given the available evidence, it is important that GPs make care decisions during consultation with patients and their families based on realistic expectations of the benefits, side-effects and costs of antidementia treatment.

Factor 2: Confidence in Dealing with Dementia Patients and Their Caregivers

Our study indicates that only about half of the GPs were comfortable and confident about diagnosing a person with dementia and informing them and their caregivers of the diagnosis. Even fewer felt confident or comfortable about managing patients with dementia. These findings are similar to that of another study from Scotland and London where only one-third of the GPs expressed confidence in their diagnostic skills while two-thirds did not feel confident in the management of behaviour and other problems in dementia.¹⁸

Studies suggest that older adults preferred knowing about their dementia diagnosis and while some felt upset with the diagnosis, they did not regret knowing it.²⁶ Evidence also suggests that there were considerable advantages to the early diagnosis of dementia. It allowed the person with dementia (PWD) and relatives the opportunity to make practical and financial decisions.²⁷ It offered a chance for the PWD and their family to come to terms with the diagnosis,²⁸ and caregivers felt that they would have been more patient and understanding of the person's behaviour if they had received a diagnosis earlier.²⁹

The reluctance of GPs to make and communicate the diagnosis may reflect their lack of training as well as their concerns about limited therapeutic options and the propensity of the diagnosis to cause distress to both the patient and their relatives. Studies have found that the lack of confidence and reservations towards informing patients and caregivers could stem from the diagnostic uncertainty in the early stages, patient denial,^{30,31} lack of proper instruments available for diagnosis, negative view of dementia by family members and society, overlapping features with other neurological and psychiatric conditions,¹⁶ and the belief that a diagnosis of dementia might conversely limit access to medical services because of the associated stigma and lack of dementia-specific services.³¹ Although many of the GPs did not express confidence in diagnosing and managing patients with dementia, close to 80.0% of the GPs agreed that primary care played an important role in the care of people with dementia. It was also interesting to note that the majority of GPs were not confident with the pharmacological treatment of dementia (only 22.9% expressed confidence in doing so) even though 70.2% agreed that the present treatment option with antedementia drugs usually have a positive influence on the course of the disease. The MOH Clinical Practice Guidelines suggest that “pharmacotherapy should not be used in isolation in the management of dementia, but in conjunction with non-pharmacological management, including education and counselling of the patient and caregiver”; the guidelines further suggest that the decision to initiate pharmacotherapy should be made after a detailed consultation with the

patient and family on the expected benefits, side-effects and associated costs of the treatment.³² Lack of time, as well as lack of access to a multidisciplinary team may thus hinder GPs in initiating treatment with antedementia drugs even though they may be aware of the benefits of therapy.

As the older adult population increases in Singapore, the number of older adults with dementia is likely to increase proportionally and thus GPs, being at the forefront, will need to play an increasing role in both the diagnosis and management of dementia. Seow³³ suggested that the adoption of certain enablers—making a diagnosis over several visits, ensuring corroborative history by a caregiver who is familiar with the older adult, detailed physical examination, use of cognitive scales and early referral to a specialist for a definitive diagnosis—could help GPs in Singapore to overcome some of these barriers related to the diagnosis of the condition. Collaborative care has been proposed as a way to improve the quality of care of dementia among primary care patients and their caregivers.^{34,35} A similar model of shared care between family physicians and specialists to manage persons with dementia within the primary care polyclinics has been explored in Singapore. These dementia shared care teams comprise a multidisciplinary team from the specialised hospitals (geriatricians, nurse clinicians, etc.) who co-run clinic sessions with family physicians³⁶ to provide assessment, treatment, and support for dementia patients. The programme should be evaluated, and if the results show increased early diagnosis, improvement in quality of care and increased patient and caregiver satisfaction, then the expansion of such teams must be considered.

Factor 3: Negative Perceptions of Dementia Care

The GPs in the sample endorsed some negative perceptions towards dementia care. For instance, 64% of the GPs strongly agreed or agreed that “managing dementia is usually more frustrating than rewarding” and 57.12% reported that “patients with dementia can be a drain on resources with little positive outcome”. Endorsement of these negative perceptions was higher than that reported from other studies of GP.^{16,18,37} These perceptions may be due to a multitude of reasons such as the inability of GPs to meet the demands of patients and their caregivers, especially in solo practices. In addition, family involvement in the care of the dementia patient may lead to conflicts in terms of treatment options and priorities, and the difficulties in providing a clear prognosis, especially if GPs feel that treatment is limited.³⁸ The majority of GPs disagreed with the statement that “there is little point in referring families to services as they do not want to use them”. Thus, GPs in Singapore felt the need to refer families to services. Hence, it is important that they are aware of the community services available and that

the process of referral is made easy such that patients and their caregivers can be easily directed to relevant services.

Factor 4: Training

The vast majority of GPs in our study endorsed the need for training—in the form of both treatment guidelines as well as communication skills for establishing a better relationship with the PWDs and their caregivers. Our findings are similar to the findings of Kaduszkiewicz et al³⁹ who found that majority of the GPs (56%) expressed the opinion that “guidelines for the diagnosis and treatment of dementia would be of help” and half (50%) stated an interest in “participating in a training programme on how to deal and speak with demented patients and their relatives”. Other studies have suggested that GPs do experience difficulty in explaining diagnosis of dementia to patients and carers,^{40,41} fearing that informing the patients would inflict damage on them, or they were uncertain about the course of the disease.⁴² Thus, training for GPs is essential and should be focused on both the provision of easy-to-read-and-use treatment guidelines as well as communication skills. Dementia training programmes delivered either as online training or using blended methods (i.e. a combination of web-based learning and traditional teaching) may be considered as a way to reach out to busy GPs. Various studies have demonstrated the effectiveness of educational interventions such as decision support software, practice-based workshops and academic detailing as effective tools to improve dementia diagnosis and management.^{43–45} However, training alone may not be adequate to improve dementia diagnosis and management. Additional resources in the form of access to multidisciplinary teams and comanagement of patients with specialist hospitals are also needed to improve the care of dementia patients in community settings.⁴⁶

Male GPs were less likely to perceive the benefits of early diagnosis and treatment of patients with dementia as compared to their female counterparts. Few studies have examined the gender differences in knowledge and attitudes towards dementia. Research from the United Kingdom (UK) showed that the attitudes towards dementia differed significantly between men and women. Women showed higher levels of concern and men had a generally more positive attitude towards dementia. Men were twice as likely as women to regard dementia as being part of normal ageing. On the other hand, women dreaded dementia more and reported direct negative experiences with dementia, and hence, were less convinced that their families could deal with them.⁴⁷ While the UK study was on the general population, it highlighted some of the reasons why there might be gender differences in the attitudes towards dementia. However, these need to be studied in further depth to see if they apply to GPs as well. Secondly, we found that GPs in a solo practice (i.e. those who practised without partners)

perceived lower “benefits of early diagnosis and treatment of patients with dementia” than those who practised in a group. Group practices may be better positioned to deal with the complex healthcare needs of patients. It is also possible that group practices may have access to a multidisciplinary team. Studies have found that physicians in group practice have more resources, access to interdisciplinary care and technological advances, and are easily able to refer patients to their colleagues in the specialised field.⁴⁸ Thus, those in group practice may see more cases of dementia and/or are able to better manage the patients after diagnosis; hence, they may more often see the benefits of early diagnosis to patients and caregivers.

Our study found that GPs who had a MBBS and a Master’s degree showed greater confidence in dealing with patients with dementia and their caregivers than those with only a MBBS. The Master of Medicine in Family Medicine prepares doctors by exposing them to intensive training, ranging from lectures to practical sessions on chronic disease management, geriatrics, mental health, etc.⁴⁹ With the additional knowledge and skills acquired during training, it is plausible that these GPs showed greater confidence in managing complex dementia care than those who had MBBS alone.

The study has some limitations. This study included private and non-government GPs in Singapore and hence, the generalisability of the result to other settings is limited. We were unable to determine if the sociodemographic profile of the GPs was representative of overall GPs in Singapore, although it was similar to that reported in previous studies conducted among GPs.^{50,51} The response rate was just over 50%, thus, responses might not be strongly representative given the low response rate, and the resulting non-response bias may limit the generalisability of the results. However, our response rate of 52% in this mailing study involving GPs was higher than that reported in other similar studies^{17,18} and the results are an important first step towards engaging GPs in dementia care. We were unable to determine how many dementia patients were seen on average by GPs over the past 6 months which could have been a significant factor affecting their attitudes and confidence in managing dementia patients. The study questionnaire was adapted from previous studies^{17,18} and included inputs from local dementia experts and a GP (Alvin Lum) who was involved in the study. This increased the comprehensiveness of data collected. However, there is a need for qualitative studies among GPs, PWD and their caregivers to ensure that locally relevant concepts have not been ignored and to explore some of the concerns expressed in further detail to ensure that they are fully addressed resulting in better care for dementia patients.

The study demonstrated that GPs in Singapore held a generally positive attitude towards the need for early

dementia diagnosis but were not equally confident or comfortable about making the diagnosis themselves and communicating with and managing patients with dementia in the primary care setting. Dementia education and training programmes have shown improvements in early diagnosis and knowledge of the GPs.⁴³ Therefore, a critical first step for dementia care in Singapore should include an enhanced dementia education and training programme for GPs. They also need to form alliances with other healthcare professionals and learn to manage dementia patients as part of shared care teams. Lastly, they need to be familiar with the relevant community services, day care centres and long-term care facilities to incorporate them in the management of patients with dementia.

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