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Original Article

# Training Needs Among Healthcare Professionals Managing Patients with Dementia

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## ABSTRACT

**Background/Purpose:** The number of persons living with dementia in Malaysia is increasing rapidly. Training on dementia care among healthcare professionals (HCP), however, remains limited. This study aims to identify current barriers, needs and expectations in training from the perspective of HCP to inform future training developments.

**Methods:** A paper-based survey on demographics, training experience, perceived barriers and training needs was conducted among HCP attending a national geriatric conference in Malaysia.

**Results:** The questionnaire was completed by 202 (84%) respondents, 83 (41.3%) doctors, and all respondents currently cared for older patients. 117 (58.8%) had previously received training on dementia care. Respondents who had no prior dementia training were more likely to think that there was no training courses available [odds ratio, OR (95% confidence interval, CI) =3.429 (1.656-7.099)]. Doctors were more likely to have difficulty taking time off for training [OR (95%CI)=2.667 (1.285-5.536)] and prefer weekend courses [OR (95%CI)=4.108 (2.238-7.542)]. HCP who perceived a lack of courses as a barrier were more likely to prefer 2 to 3-day courses in weekday [OR (95%CI)=2.343 (1.122-4.893)]. HCP who perceived difficulty taking time off from work to attend training as a barrier were more likely to prefer weekend training courses [OR (95%CI)=3.036 (1.442-6.390)].

**Conclusion:** Not all HCP caring for older adults in Malaysia had received prior training in dementia care. Lack of courses and difficulty taking time off from work were common barriers to training. Perceived training barriers influenced training course preference among HCP. Respondents' profession, experience and prior training also influenced perceived barriers and future training preferences. Future studies should explore the outcomes and advantages of various dementia training programmes as well as identify skill gaps in HCP managing persons living with dementia and ways to overcome them.



## 1. INTRODUCTION

Dementia is characterised by chronic, progressive cognitive decline manifesting as impairment of higher cortical function, emotional control, social behaviour or motivation as described by the World Health Organisation (WHO).[1] It is a major cause of disability and dependency among older adults and contributes

greatly to global healthcare costs burden. The number of individuals living with dementia is expected to increase several folds over the next three decades, with the estimated 47.5 million people living with dementia worldwide today expected to increase to 135.5 million by the year 2050.[2] In most countries, dementia awareness is currently low, resulting in stigmatisation and barriers in optimising the diagnosis and management of those affected by this debilitating condition.[1] This stigma affects multiple countries and is not confined to certain parts of a country as a study by Hsiao et al, illustrated that the stigma of dementia was prevalent in both rural and urban areas of China.[3]

The older population in South-East Asian countries, such as Malaysia, is ageing rapidly. Individuals aged 65 years and over currently comprise of 6.7% of the total Malaysia population, but this is projected to increase to 14.5% by 2040.[4,5] With this increase, the prevalence of dementia is also expected to increase, with healthcare professionals (HCP) having the responsible for meeting the increasing healthcare needs of this population. In 2015, approximately 123,000 people lived with dementia in Malaysia and this number is expected to hit 590,000 by the year 2050.[6] Prior to this, awareness regarding dementia among older adults has been low with cognitive decline misconstrued as normal for older persons among society.[7,8]

There is currently no published evidence on whether HCP who care for persons living with dementia (PLWD) have received specific training or the training required by these individuals to ensure that they are adequately equipped to care for PLWD today and in the future. Lack of training may result in poorer outcomes in managing patients with dementia, thus reducing the ability to cope with increasing demands of the older adult population living with dementia.[6] With most studies focussing on training outcomes in long term care settings such as nursing homes and hospices, literature on dementia training in acute hospital settings remains limited. However, a collective case study demonstrated improved dementia care practices with training attendance, reporting observable negative patient experiences when hospital staff lacked the knowledge, skills and attitudes in delivering care for PLWD.[9] A study in a nursing home setting reiterated this notion, establishing that dementia training improves quality of life of PLWD.[10] The aim of this study was, therefore, to establish the training needs of HCP caring for PLWD within a middle-income developing nation in South-East Asia.

## 2. METHODS

### 2.1. Sample Population

A paper-based survey was conducted among HCP during a plenary lecture at a national geriatric conference held in August 2018. Delegates who attended the conference included doctors, nurses, pharmacists, and other allied healthcare professionals in different fields of interest from all over Malaysia.

### 2.2. Survey Questionnaire

The survey instrument was developed based on published articles on qualitative and quantitative studies on the training needs of healthcare professionals and reviewed by an expert panel comprising two consultants, one registrar and one PhD student and pretested in a small pilot group. The questionnaire consisted of 12 multiple choice questions and two open response questions. Information on age, gender, current position, working experience, exposure to older patients and patients with dementia were obtained as part of the survey.

#### 2.2.1. Existing training

To assess prior training experience, respondents were asked to identify the number of training courses on dementia they had either organised or attended throughout their careers. Respondents that had prior training were then asked to choose all topics that had been covered in the past from a list of seven topics. Further questions covered prior training experience, target groups, perceived barriers, willingness to attend future training and expectations of future training courses. Respondents were also asked to indicate their perceived barriers to dementia training. Individuals who answered "yes" to this question were then prompted to select all the barriers that applied from a list of four barriers.

#### 2.2.2. Future training

To assess expectations of future training courses, respondents were asked about their preferences regarding the type of training courses and the topics to be covered in future training courses. Respondents were encouraged to select all that applied from a list of six types of courses and seven common topics. Questions that required respondents to select all that applied included an additional option of "others" for respondents to specify answers that were not on the list. As the conference was conducted in English, participants had adequate English proficiency and the questionnaire was written in short and simple English. All higher education courses in Malaysia is conducted in the English language, and students have to achieve a minimum English language competency in the form of the Malaysian Use of English Test or the International English Language Test as a prerequisite for entry to higher education. To encourage truthfulness, participants were reassured of their anonymity and personal information was only collected if respondents would like to be contacted and personal details could be provided in the open

response section at the end. The study received a favourable ethical opinion from the University of Malaya Medical Centre Medical Ethics Committee.

### 2.3. Statistical Analysis

All statistical analyses were performed using SPSS version 26. Categorical variables were presented as frequencies with percentages. Respondents were categorised according to profession (doctors and non-doctors), years of experience, previous dementia training, perception of course availability, ease of taking time off, and preference for timing of courses. Comparisons were made according to these categories and the data was presented as odds ratio (OR) as well as 95% confidence interval (CI). The Chi-squared ($\chi^2$) test was used to determine statistical significance. A *p*-value of <0.05 was considered statistically significant. Logistics regression was used to adjust for any potential confounders.

## 3. RESULTS

### 3.1. Basic Demographics

A total of 241 delegates attended the plenary lecture during the conference. 202 responses were obtained, with a response rate of 84%. Of the 202 who responded, 150 (74.3%) were women. 83 (41.3%) were doctors, 51 (25.2%) were nurses, 20 (9.9%) were pharmacists, 40 (19.9%) were other allied HCP and 7 (3.5%) were non-clinical staff. 69 (34.2%) respondents were aged between 21-30 years, 93 (46%) between 31-40 years and 40 (19.8%) were above 40 years old. 77 (38.1%) had 6 to 10 years of experience as HCP. 146 (72.6%) respondents were working for the Ministry of Health (MOH) at the time the survey was conducted and 176 (87.6%) worked in a hospital setting. 91 (45%) respondents reported that they saw 11-30 patients over the age of 60 years in a week and 132 (66.3%) managed 1 to 10 dementia patients per week. Table 1 shows an overview of the frequencies of basic demographics enquired in the survey.

### 3.2. Prior Training Experience, Training Preferences and Perceived Barriers

Of all the respondents, 117 (58.8%) respondents stated that they had participated in prior training on dementia and 77 (38.2%) respondents had more than 10 years' experience as a HCP. Using categorical analysis, there was a significant difference in the likelihood of respondents having no prior dementia training and identifying lack of courses as a barrier. Table 2 shows that respondents with no prior dementia training are more likely to perceive the lack of courses as a barrier to dementia training (*p*=0.001).

Preference of future courses was indicated by respondents of whom, 107 (54.6%) were keen to attend a 2 to 3-day weekday course and 83 (41.1%) willing to attend a weekend course. Respondents with a perceived barrier of lack of courses were more likely to prefer 2 to 3-day weekday courses (*p*=0.023). Respondents who attribute difficulty getting time off from work to attend training as an obstacle were more likely to attend weekend courses (*p*=0.003). 7 (4%) participants indicated that they were not willing to participate in future training.

**Table 1.** Demographics of respondents

| Variable | | Frequency (n) | Percentage (%) |
|---|---|---|---|
| Age | 21-30 | 69 | 34.2 |
| | 31-40 | 93 | 46.0 |
| | Above 40 | 40 | 19.8 |
| | Total | 202 | 100.0 |
| Gender | Male | 52 | 25.7 |
| | Female | 150 | 74.3 |
| | Total | 202 | 100.0 |
| Current position | Doctor | 83 | 41.3 |
| | Nurse | 51 | 25.4 |
| | Pharmacist | 20 | 10.0 |
| | Allied Healthcare Professional | 40 | 19.9 |
| | Non-clinical Staff | 7 | 3.5 |
| | Total | 201 | 100.0 |
| Years of experience | 0-5 | 48 | 23.8 |
| | 6-10 | 77 | 38.1 |
| | 11-15 | 30 | 14.9 |
| | More than 15 | 47 | 23.3 |
| | Total | 202 | 100.0 |
| Type of organisation | Ministry of Health Hospital | 146 | 72.6 |
| | Ministry of Education Hospital | 21 | 10.4 |
| | Private Hospital | 9 | 4.5 |
| | Private Clinic | 9 | 4.5 |
| | Health Clinic | 6 | 3.0 |
| | Institute of Higher Learning | 6 | 3.0 |
| | Nursing Home and Welfare Organisation | 4 | 2.0 |
| | Total | 201 | 100.0 |
| Work setting | Hospital | 176 | 87.6 |
| | Community | 25 | 12.4 |
| | Total | 201 | 100.0 |
| Number of older patients/ week | 0-10 | 42 | 20.8 |
| | 11-30 | 91 | 45.0 |
| | More than 30 | 69 | 34.2 |
| | Total | 202 | 100.0 |
| Number of dementia patients/week | None | 39 | 19.6 |
| | 1-10 | 132 | 66.3 |
| | More than 10 | 28 | 14.1 |
| | Total | 199 | 100.0 |

### 3.3. Multivariate Analysis

Figure 1 summarises the barriers reported by HCP who acknowledged the presence of training barriers. The three most identified barriers to dementia training among HCP are: lack of funding [81 (62%)], lack of courses [61 (47%)] and difficulty getting time off to attend [50 (38%)]. Table 3 summarises the perceived barriers based on respondents' profession, years of experience and prior dementia training. As participants could choose multiple answers, the total exceeds 100%. Doctors were more likely to report difficulty taking time off to attend training ($p$=0.008). Respondents with no prior dementia training were more likely to perceive lack of courses as a barrier ($p$=0.001).

Figure 2 summarises the future training preferences among HCP who were willing to attend future training programmes. The three most preferred course types were: 2 to 3-day weekday courses [107 (55%)], weekend courses [83 (42%)] and certificate courses [78 (40%)]. Table 4 summarises the training preferences based on respondents' profession, years of experience and prior dementia training. The results indicate that doctors were significantly more likely to prefer weekend courses ($p$ <0.001).

### 3.4. Open Responses

There were some recurring suggestions and challenges voiced by participants in the open response section. Amongst the trained personnel, the main concerns raised were the gap in knowledge of junior staff managing PLWD, citing that important clinical care issues may be overlooked due to lack of awareness. Some trained personnel highlighted issues on inadequate oral hygiene and nutrition managements among HCP. Untrained HCP found communication with carers and PLWD challenging in their clinical practice. These participants have also reported that they lacked knowledge on guidelines and assessment tools.

**Figure 1.** Number of respondents based on perceived barriers

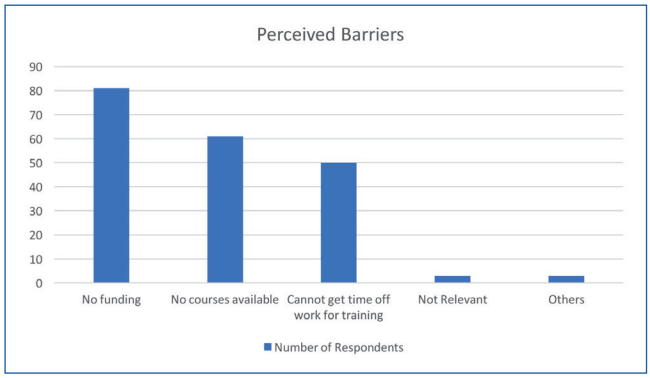
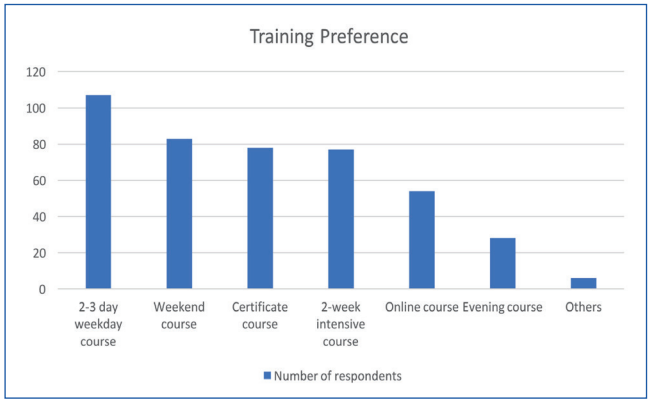



**Figure 2.** Number of respondents based on training preferences




## 4. DISCUSSION

Three out of five HCPs surveyed in this study had previously received training in dementia. However, two out of three indicated the perceived presence of barriers to receiving training of whom one in two expressed a shortage of courses to attend while one in four found it difficult to obtain time off to attend training courses. Nearly all respondents indicated a willingness to attend future training in the form of 2 to 3-day courses or weekend courses. This survey revealed valuable information on dementia training needs and preferences among HCP who regularly care for older persons and PLWD in an upper-middle income developing nation in South-East Asia.

With the prevalence of dementia in the overall population on the rise as a result of the unprecedented rate of population ageing, HCP in developing countries must receive adequate and regular training to equip them with the necessary skills and knowledge to handle PLWD. Furthermore, this study has also illustrated that not all HCP are aware of the current barriers affecting dementia training and a small proportion of respondents are even unwilling to attend training. A survey by Schneider et al, comparing Germany and Greece, also demonstrated low participation rates in dementia training but strong willingness to participate in future training among hospital staff in both countries.[11] Providing training could enhance knowledge and consequently lead to positive attitudes, deconstructing attitudinal barriers towards training.[12-14]

This study found that doctors were more likely to report difficulty getting time off for training and preferred weekend courses. Doctors may find it hard to allocate extra time outside working hours as clinical work usually takes precedence over training. Most doctors have ward rounds, clinics and meetings to attend during working hours and this may contribute to doctors preferring to attend weekend courses that do not clash with their working hours. Professional-development activities have traditionally used face-to-face strategies, incorporating didactic lectures and small group activities. However, several studies have shown that alternative professional development

**Table 2.** Factors determining prior training, perceived barriers and training preferences

| N=196 | OR (95% CI) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Doctors | >10 years' experience | No prior training | Barriers present | Lack of courses | Difficulty getting time off | 2-3-day weekday course | Weekend course |
| Doctors | | 1.439 (0.808-2.560) | 0.616 (0.344-1.106) | 1.967 (1.069-3.620)* | 0.534 (0.266-1.073) | 2.667 (1.285-5.536)* | 1.058 (0.595-1.879) | 4.108 (2.238-7.542)* |
| >10 years' experience | 1.439 (0.808-2.560) | | 0.601 (0.333-1.086) | 0.918 (0.504-1.673) | 1.089 (0.534-2.221) | 0.721 (0.343-1.514) | 0.456 (0.252-0.825)* | 0.571 (0.312-1.045) |
| No prior training | 0.616 (0.344-1.106) | 0.601 (0.333-1.086) | | 1.465 (0.801-2.680) | 3.429 (1.656-7.099)* | 0.988 (0.484-2.016) | 0.852 (0.478-1.519) | 0.731 (0.407-1.313) |
| Barriers present | 1.967 (1.069-3.620)* | 0.918 (0.504-1.673) | 1.465 (0.801-2.680) | | 2.258 (0.421-12.106) | 4.114 (0.480-35.272) | 2.020 (1.111-3.670)* | 1.511 (0.827-2.762) |
| Lack of courses | 0.534 (0.266-1.073) | 1.089 (0.534-2.221) | 3.429 (1.656-7.099)* | 2.258 (0.421-12.106) | | 0.242 (0.112-0.523)* | 2.343 (1.122-4.893)* | 0.638 (0.315-1.294) |
| Difficulty getting time off | 2.667 (1.285-5.536)* | 0.721 (0.343-1.514) | 0.988 (0.484-2.016) | 4.114 (0.480-35.272) | 0.242 (0.112-0.523)* | | 1.039 (0.500-2.162) | 3.036 (1.442-6.390)* |
| 2-3-day weekday course | 1.058 (0.595-1.879) | 0.456 (0.252-0.825)* | 0.852 (0.478-1.519) | 2.020 (1.111-3.670)* | 2.343 (1.122-4.893)* | 1.039 (0.500-2.162) | | 0.974 (0.551-1.721) |
| Weekend course | 4.108 (2.238-7.542)* | 0.571 (0.312-1.045) | 0.731 (0.407-1.313) | 1.511 (0.827-2.762) | 0.638 (0.315-1.294) | 3.036 (1.442-6.390)* | 0.974 (0.551-1.721) | |

*Significant at $p$ <0.05

**Table 3.** Perceived barriers based on profession, experience and prior dementia training

| Perceived barriers | N, total (%) | | Profession | | | Experience | | | Prior training | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Doctor | Non-doctor | $p$ | >10y | ≤10y | $p$ | No | Yes | $p$ |
| No funding | 81 (62) | N (%) | 43 (54) | 37 (46) | 0.194 | 30 (37) | 51 (63) | 0.905 | 30 (38) | 49 (62) | 0.076 |
| | | OR (95% CI) | 1.605 (0.787-3.275) | | | 1.046 (0.503-2.176) | | | 0.522 (0.254-1.069) | | |
| Lack of courses | 61 (47) | N (%) | 25 (41) | 36 (59) | 0.078 | 23 (38) | 38 (62) | 0.814 | 36 (60) | 24 (40) | 0.001* |
| | | OR (95% CI) | 0.534 (0.266-1.073) | | | 1.089 (0.534-2.221) | | | 3.429 (1.656-7.099) | | |
| No time off | 50 (38) | N (%) | 32 (64) | 18 (36) | 0.008* | 16 (32) | 34 (68) | 0.387 | 22 (44) | 28 (56) | 0.973 |
| | | OR (95% CI) | 2.667 (1.285-5.536) | | | 0.721 (0.343-1.514) | | | 0.988 (0.484-2.016) | | |
| Not relevant | 3 (2) | N (%) | 1 (33) | 2 (67) | 0.584 | 1 (33) | 2 (67) | 0.904 | 2 (67) | 1 (33) | 0.444 |
| | | OR (95% CI) | 0.508 (0.045-5.744) | | | 0.862 (0.076-9.761) | | | 2.582 (0.228-29.213) | | |
| Others | 3 (2) | N (%) | 0 (0) | 2 (100) | 0.980 | 0 (0) | 3 (100) | 0.653 | 2 (67) | 1 (33) | 0.540 |
| | | OR (95% CI) | 1.021 (0.203-5.145) | | | 1.452 (0.286-7.375) | | | 0.547 (0.080-3.762) | | |

*Significant at $p$ <0.05

**Table 4.** Future training preferences based on profession, experience and prior dementia training

| Perceived barriers | N, total (%) | | Profession | | | Experience | | | Prior training | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Doctor | Non-doctor | $p$ | >10y | ≤10y | $p$ | No | Yes | $p$ |
| Two to three-day weekday course | 107 (55) | N (%) | 44 (41) | 63 (59) | 0.849 | 30 (28) | 77 (72) | 0.009* | 41 (39) | 65 (61) | 0.588 |
| | | OR (95% CI) | 1.058 (0.595-1.879) | | | 0.456 (0.252-0.825) | | | 0.852 (0.478-1.519) | | |
| Weekend course | 83 (42) | N (%) | 49 (60) | 33 (40) | <0.001* | 24 (29) | 59 (71) | 0.069 | 30 (36) | 53 (64) | 0.294 |
| | | OR (95% CI) | 4.108 (2.238-7.542) | | | 0.571 (0.312-1.045) | | | 0.731 (0.407-1.313) | | |
| Certificate course | 78 (40) | N (%) | 28 (36) | 49 (64) | 0.341 | 24 (31) | 54 (69) | 0.197 | 27 (36) | 48 (64) | 0.320 |
| | | OR (95% CI) | 0.751 (0.416-1.354) | | | 0.671 (0.366-1.231) | | | 0.739 (0.407-1.341) | | |
| Two-week intensive course | 77 (39) | N (%) | 25 (33) | 51 (67) | 0.084 | 25 (32) | 52 (68) | 0.379 | 28 (37) | 48 (63) | 0.415 |
| | | OR (95% CI) | 0.590 (0.324-1.074) | | | 0.763 (0.417-1.394) | | | 0.782 (0.432-1.414) | | |
| Online course | 54 (28) | N (%) | 26 (49) | 27 (51) | 0.139 | 20 (37) | 34 (63) | 0.884 | 19 (35) | 35 (65) | 0.357 |
| | | OR (95% CI) | 1.617 (0.855-3.057) | | | 1.050 (0.548-2.011) | | | 0.736 (0.384-1.413) | | |
| Evening course | 28 (14) | N (%) | 16 (57) | 12 (43) | 0.057 | 9 (32) | 19 (68) | 0.628 | 8 (29) | 20 (71) | 0.172 |
| | | OR (95% CI) | 2.201 (0.978-4.954) | | | 0.810 (0.345-1.900) | | | 0.543 (0.226-1.304) | | |
| Others | 6 (3) | N (%) | 1 (33) | 2 (67) | 0.664 | 1 (20) | 4 (80) | 0.524 | 5 (100) | 0 (0) | 0.384 |
| | | OR (95% CI) | 1.218 (0.500-2.969) | | | 1.337 (0.547-3.271) | | | 1.511 (0.597-3.826) | | |

*Significant at $p$ <0.05

activities have become increasingly available with benefits of its own. For example, online learning has greater flexibility in training times, improved accessibility and cost savings for learners compared to traditional delivery methods.[15-16] In medical settings, online learning can eliminate issues relating to clinic cancellations or arranging for staff cover when attending meetings.[17]

The most common training barriers identified by HCP were the lack of funding, difficulty getting time off work to attend training and lack of courses. This study showed that individuals with no prior dementia training were more likely to perceive a lack of courses. Individuals with no prior training may be subconsciously attributing their lack of training attendance to a lack of courses. The number of official courses annually and awareness towards these courses may currently also be low. Therefore, this could have been perceived among HCP as a relative lack of courses being organised. Access to funding is essential to providing resources to organise training programmes. Therefore, it is unsurprising that respondents would associate the lack of training opportunities with the lack of funding provided. Furthermore, busy work schedules that do not allocate time for training could have also contributed to the perceived difficulty in getting time off work for training. However, further studies should explore the reasons HCP identify these factors as barriers to dementia training.

The preferred timing of future training courses was 2 to 3-day weekday courses, weekend courses and certificate courses. Other studies have proposed various other training methods that were not discussed in this survey. These include micro training methods, such as doctor–nurse conversations, workshops, role play, train-the-trainer models, and in-service training.[18,19] This survey also shows that there is an association between the barriers perceived by HCP and their preference for future types of training courses. HCP who feel that the lack of courses is a hindering factor tend to prefer two to three-day weekday courses. The authors inferred that these HCP are willing to attend weekday courses, provided the courses are available. Additionally, two to three-day weekday courses were widely favoured among respondents. Besides that, HCP who perceived difficulty taking time off work to attend training preferred weekend courses. This could be due to busy schedules that do not allocate time for staff training, which was not explored in this study. Awareness about the importance of regular training among HCP may be low. For example, senior HCP may feel that junior staff gain more experience on the job rather than training programmes and thus allocate more time at work, reducing formal training opportunities obtained from attending regular courses. Further studies can explore various reasons HCP have difficulty allocating time from work to attend training courses. This is important as exploring HCP preferences and expectations regarding dementia training is beneficial in addressing educational needs for future training programs.[20]

Online teaching materials and clinical practice guidelines (CPG) are available on governmental websites in Malaysia surrounding caring for older persons and PLWD. These materials include clinical guidance and training modules about dementia care. Apart for governmental guidance, there are also various non-governmental organisations (NGO) providing carer information, hotlines, support networks and websites to educate and support individuals caring for PLWD. There is limited official governmental regulation surrounding carers and the Mental Capacity Act 2005 is the main regulation in place to safeguard PLWD. However, the CPG recommends routine evaluation of carers and multicomponent interventions such as psychoeducation, psychotherapy, supportive intervention, respite and care recipient training.[21]

In conclusion, over 40% of HCP attending a geriatric conference had no previous training in dementia care despite over 80% of them having regular encounters with persons living with dementia in their workplace. Perceived barriers to training included lack of training courses and difficulty obtaining time off for training. Individuals with no prior training were more likely to perceive a lack of training courses, while those who report difficulties obtaining time-off for training are more likely to indicate a preference for weekend courses, though two to three-day weekday courses are preferred overall. Future studies should further explore innovative solutions to accelerate the availability of courses as well as reasons underlying difficulty obtaining time-off for training, which will be vital for ensuring that HCPs who regularly care for PLWD receive requisite training to ensure the delivery of quality care while minimising the potential for harm.

## CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

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