House Officers' Perspectives on Dementia: Evaluating the Effectiveness of Dementia Education Program.

Nadia M. Tawfik[1] and Rehab M. Sabry[1]

[1] Department of Family Medicine, Faculty of Medicine, Cairo University, Cairo, Egypt

ABSTRACT

Background: The global elderly population is on the rise, leading to a significant increase in dementia cases. Despite general practitioners play a crucial role in managing dementia, several obstacles hinder their implementation of clinical practice guidelines for dementia diagnosis and management in primary care settings. Consequently, effective medical education programs utilizing impactful educational strategies are essential to overcome these barriers and enhance the dementia management process. **Objective:** This research aimed to evaluate how effectively a dementia education program improves knowledge, attitudes, and practices related to dementia among house officers. **Methods:** This quasi-experimental study was conducted on 116 house officers while their rotation. Knowledge, practice and attitude among the house officers was assessed before and after the dementia education program. **Results**: 116 house officers' responses were analyzed. The house officers demonstrated statistically significant increase in their Perceived competency and knowledge in dementia care before and after the course with the mean ± SD of the total score being 3.64±1.68 before the course and 6.25±1.61 after the course. Total score of practices regarding cognitive evaluation shows statistically significant increase after the course with the mean± SD being 4.33±2.40 and 8.91±2.74 before and after the course respectively. Practices of house officers toward dementia diagnosis and management shows statistically significant increase after the course with the mean± SD being 2.16±1.48and 4.83±1.43 before and after the course respectively. **Conclusions:** Our study highlights the importance of ongoing education and training initiatives in equipping healthcare providers with the necessary skills and knowledge for effective dementia management.

Keywords: Cognitive decline, Geriatrics, Primary care, Program.

INTRODUCTION

The global elderly population is on the rise, leading to a significant increase in dementia cases. (1) According to current estimates, more than 55 million people worldwide are living with dementia, which is expected to increase over the next 35 years. (2)

*Corresponding author: **nadiamostafa@kasralainy.edu.eg**

In Egypt, a comprehensive study revealed that the prevalence of dementia among adults aged 50 and older ranges from 2.01% to 5.07%. [3]

General practitioners play a crucial role in managing dementia from the outset by ensuring timely referrals, coordinating home care, addressing treatment concerns, supporting caregivers, and assisting patients in coping and living well with their condition. [4]

Despite clinical practice guidelines offering recommendations for dementia diagnosis and management, several obstacles hinder their implementation in primary care settings.

These barriers include patient-related factors such as non-compliance with care and medication, GP-related factors like insufficient knowledge about dementia and communication training with patients and families, as well as system-related characteristics such as limited availability of support services. [5] There is evidence indicating that dementia education enhances knowledge, self-confidence, and attitudes towards both dementia and people with dementia. [6, 7, 8, 9, 10]

Consequently, effective medical education programs utilizing impactful educational strategies are essential to overcome these barriers and enhance the dementia management process.

Thus, this research aimed to evaluate how effectively a dementia education program improves knowledge, attitudes, and practices related to dementia among house officers and also to decide whether the dementia education program will be included in the mandatory course of house officer training during their rotation.

Methods

Study design

Quasi-experimental study

Settings, sampling, and participants

This study was performed on House officers while their training in family medicine clinics, Kasralainy hospitals, during the rotation starting from June 2024 to August 2024.

The eligibility criteria were that all house officers, except those who refused to participate, were excluded from the study.

Sample size

Sample size calculated using the prior data by comparing the mean and SD of Attitudes toward dementia before and after intervention as the primary outcome measure. [11] Sample size of 104 calculated using the G Power program 3.1.9.4 with paired t test comparison between pre- and

post-intervention. [12] Assuming 80% power, 0.05 level of significance to achieve an effect size of 0.27(After a 10 %dropout rate, this will be 116). So, the sample size was 116 participants.

Components of Dementia education program [13,14,15]

1. Introduction to Dementia

- Definition and Classification: Comprehensive overview of dementia, including definitions, different types (e.g., Alzheimer's disease, frontotemporal dementia, Lewy body dementia), and epidemiology.
- Etiology and Risk Factors: Discussion on the causes and risk factors, including genetic, environmental, and lifestyle influences.

2. Diagnosis and Assessment

- Diagnostic Criteria: In-depth review of diagnostic criteria from the DSM-5 and ICD-10, and the criteria for distinguishing between types of dementia.
- Assessment Tools: Hands-on training on various assessment tools, such as:
  - A- Mini-Mental State Examination (MMSE): Administering and interpreting results.
  - B- Montreal Cognitive Assessment (MoCA): Evaluating cognitive function through this test.
  - C- Clock Drawing Test**: Assessing visuospatial abilities and executive function.
- Differential Diagnosis: Case-based discussion on distinguishing dementia from other conditions like delirium, depression, and normal aging.

3. Management and Treatment

- Pharmacological Interventions: Overview of medications such as cholinesterase inhibitors (e.g., donepezil, rivastigmine), NMDA receptor antagonists (e.g., memantine), and their indications, benefits, and side effects.
- Non-Pharmacological Interventions: Training in behavioral and psychological interventions, including cognitive stimulation therapy.
- Care Planning and Management: Developing comprehensive care plans, including coordinating with multidisciplinary teams, managing comorbid conditions such as polypharmacy and frailty management, and planning for end-of-life care.

4. Ethical and Legal Considerations

- Informed Consent: Techniques for obtaining informed consent from patients with cognitive impairments, including legal and ethical challenges.

- Legal Issues: Discussing legal considerations such as capacity assessments, advanced directives, and guardianship.
- Ethical Dilemmas: Exploring common ethical dilemmas in dementia care and strategies for addressing them.
- Case-based scenarios, particularly those relevant to resource-limited settings.

5. Support and Resources

- Community Resources: Information on available local and national resources, such as support groups, respite care options, and community-based organizations.
- Family Support: Strategies for engaging and supporting families, including counseling techniques and caregiver education.
- Self-Care for Caregivers: Resources and strategies to prevent caregiver burnout and promote well-being.

Methods of Delivery

1. Interactive lectures and Presentations.
2. Hands-on training on administering and interpreting cognitive assessments, and designing individualized care plans.
3. Simulation Exercises: Role-playing exercises and simulated patient interactions to practice communication and clinical skills in dementia care.
4. Case-based discussions: Detailed examination of case studies to explore diagnostic and management challenges, with guided discussion on best practices.

Assessment tools:

The data were collected using the following tools:

1- A predesigned structured questionnaire

It was used once before the program to collect general characteristics of house officers, such as gender, whether they received training on dementia, etc.

2- KAP-Primary Dementia Care questionnaire – physicians: [16]

The KAP-Primary Dementia Care Questionnaire was adapted from a previously validated instrument by Arsenault-Lapierre *et al.* (2021). The internal consistency (Cronbach's alpha) of the items within each factor ranged from 0.66 to 0.91, showing moderate to high reliability between the items and factors.

It was anonymous and was used to assess the knowledge, practice, and attitude among the house officers before and after the dementia education program. It consists of 31 questions divided into four sections: 1) Perceived competency and knowledge in dementia care. 2) Practices regarding cognitive evaluation. 3) Attitudes toward collaboration with nurses and other healthcare professionals. 4) Attitudes toward dementia.

A pilot study was conducted on 12 house officers to test the applicability of the study questionnaires. Data generated from the pilot study was not included in the final data analysis. The pilot study revealed that some of the questions were ambiguous or confusing to the house officers, so questions were clarified or rephrased to be more focused and relevant to the house officers' experiences. Dropouts were excluded from all statistical analyses.

3- After the program, the participants were asked to complete a form regarding their opinion about the program to obtain information on the usefulness of the program and whether it had helped them to improve their dementia care skills.

Ethical considerations

Ethical approval and consent to participate: Ethical approvals were obtained from the Research Ethics Committee at Kasralainy School of Medicine, Cairo University. (N-232-2023).

Informed written consent for participation was obtained from patients at the beginning of the study after full explanation of the nature of the study, benefits, and possible harm.

Consent for publication: Written informed consent for publication was obtained.

Study procedures

The dementia education program consisted of 2 sessions (each session consisted of 20-30 house officers) within one week. The program was repeated 5 times. The sessions were delivered face to face.

Each session was about 3 hours in duration and was presented by family medicine lecturers with experience in dementia. The sessions were clearly structured with defined intended learning outcomes. The duration of the study was 5 months.

Informed consent was obtained from all house officers before enrollment in the program.

Statistical analysis of data

To be statistically examined, pre-coded data will be entered into a computer using the Statistical Package for Social Science software program, version 21 (SPSS). Mean, SD, median, and IQR will be used to summarize quantitative factors, whereas number and percent will be used for qualitative variables.

The chi-square test will be used to compare qualitative variables, whilst the independent t-test will be used to compare quantitative variables between two groups.

The paired sample T test will be used to compare quantitative measures before and after intervention in normally distributed data, while the Mann-Whitney and Wilcoxon tests will be employed for non-normally distributed quantitative variables. Other statistical tests will be applied when necessary. P-values less than 0.05 will be considered statistically significant.

Results

A total of 116 house officers participated in the study; 87.1% of them reported seeing patients aged 65 years or older in their practice or training. Regarding the percentage of patients aged 65 years or more in their practice monthly, 39(33.6%) house officers reported that 25-50% of their patients were aged 65 years or more. However, only 10.3% of house officers received training in dementia, as shown in Table 1.

Overall, the house officers demonstrated a statistically significant increase in their perceived competency and knowledge in dementia care before and after the course, with the mean (SD) of the total score being 3.64±1.68 before the course and 6.25±1.61 after the course.

Table 2 also shows a statistically significant increase in perceived competency and house officers' belief that having skills to diagnose dementia, develop an appropriate care plan for patients with dementia, educate patients and their families about dementia, inform patients and family of the diagnosis, and involve the caregiver in the diagnosis.

Total score of practices regarding cognitive evaluation shows a statistically significant increase after the course, with the mean±SD being 4.33±2.40 and 8.91±2.74 before and after the course, respectively.

Table 3 displays the practice of house officers to do cognitive testing towards different dementia symptoms and shows that the percentages of right practices rose after the course.

Table 4 illustrates that before the course, 50% of house officers thought that their Collaboration with nurses and other healthcare professionals in their team is essential to diagnose dementia, 30.2 % of them thought that this collaboration is essential to develop care plans for patients with dementia, and 54.3% of them thought that this collaboration is essential to develop care plans for patients with dementia. After the course, those percentages increased significantly to 83.6%, 77.6% and 77.6% for each item, respectively.

Attitudes of house officers toward dementia diagnosis and management are

presented in Table 5. Among house officers, only 37.9% before the course thought that several things could be done to improve the quality of life of a patient with dementia and caregivers, but this percentage rose to more than 80% after the course, and there was a statistically significant difference.

Also, 39.7% of house officers recognize the importance of early diagnosis of dementia, but this percentage rose to 73.3% after the course, with a statistically significant difference.

Generally, most house officers agreed or strongly agreed that the course was useful (91.4%) and increased their ability to work with real patients (80.2%). We evaluated different aspects of the course on a scale from 0 to 5, as shown in Table 6.

Discussion

As the population ages, the prevalence of dementia and dementia-causing neurodegenerative diseases rises. [3] For best long-term patient outcomes, early detection is crucial. [4]

Increasing house officers' awareness and understanding will aid in the early detection and management of mild cognitive impairment, which is frequently the initial sign of dementia. [4]

This study aims to assess the knowledge, practice, and attitudes of house officers about dementia and its associated neurodegenerative diseases. In addition, improve their knowledge and attitude toward dementia patients.

Most of the house officers deal with patients aged 65 years or older in their practice or training. However, only 10.3% of participants reported prior dementia-specific training—a strikingly low figure.

This baseline appears markedly below national estimates for healthcare providers. For example, the Alzheimer's Association 2020 survey reported that 91% of primary care physicians (PCPs) received at least some dementia training in medical school—although two-thirds classified it as 'very little'—and 78% had some residency training, with 65% again noting limited depth. [17]

Moreover, among hospitals in Ireland, just over half (54.5%) of doctors had dementia awareness training in the past year. Thus, our observed 10.3% baseline is substantially lower than these regional and international benchmarks. This suggests a significant training gap in our sample, underscoring the need for stronger educational initiatives tailored to our local context. [18]

As regard competency and knowledge about dementia in house officers of our study

before training, the mean ± SD of total score was 3.64 ± 1.68. This generally low level of knowledge and competency totally improved after the training provided to the house officers as the mean ± SD of total score after training became 6.25±1.61.

According to a Korean study conducted in 2019 by Shin & Lee, the impact of a dementia training program on nursing college students' knowledge of dementia and attitudes toward caring for the elderly revealed that, prior to education, the average dementia knowledge score was 12.83 (71.3%), and after education, it increased to 13.25 (73.6%). [11]

Additionally, 1352 general practitioners in Australia who completed a survey about dementia-related awareness, practice, knowledge, and confidence, their mean scores significantly increased between pre and post-program for awareness (M(post-pre) = 0.9, $p < 0.0005$), practice-related items (M (post-pre) = 1.3, $p < 0.0005$), knowledge (M (post-pre) = 2.2, $p < 0.0005$), and confidence (M (post-pre) = 2.1, $p < 0.0005$).

While this study had a different scoring system, it similarly emphasizes that targeted educational programs can significantly boost dementia-related knowledge. [19]

Park *et al.* (2015) studied 172 nursing students' knowledge of dementia in Korea following the implementation of an elderly nursing education program. They found that the education group's knowledge of dementia was higher on average (27.10) and that there was a statistically significant difference. [20]

In our study the knowledge of the house officers about dementia guidelines increased after training to 42% from 18% before training. Also 81% of the participant feel more comfortable in dealing with dementia patient after the course comparing to 19 % before the training, and most of the participant (89%) after training disagree to refer dementia patient to specialist for diagnosis.

Paul *et al.* (2023) conducted a study in Qatar with the aim of evaluating health care professionals' (HCPs) knowledge, awareness, and attitude toward Alzheimer's disease (AD) and dementia in order to identify the need for dementia training programs.

HCPs demonstrated moderate proficiency on seven measures of knowledge regarding dementia, with a mean score of 5.3 ± 1.8 out of 7 (~75%), with doctors displaying the highest proficiency, followed by students, educators, researchers, nursing staff, and other occupations. [21]

While their study focused more on knowledge and attitudes, the improvement in practices observed in our study aligns with the broader objective of training programs to enhance practical skills.

Regarding the practices of cognitive evaluation of dementia patients, the house officers in our study showed improvement after training, as the mean of the total score before the course was 4.33±2.40, which rose to 8.91±2.74 after the course.

This means that the practice of house officers to do cognitive testing towards different dementia symptoms, such as short-term memory, losing or misplacing things, mixing up medication, and behavioral changes, has been improved, which will help in the early detection of dementia cases.

Before the course, house officers' attitudes regarding working together with nurses and other healthcare professionals were measured by a mean total score of 1.34±0.85, which improved to 2.39±0.81.

Together, these efforts contribute to the diagnosis of dementia cases and the development of the best care and management strategies. Therefore, education plays a critical role in developing a team of professionals with the necessary knowledge and a positive attitude to provide dementia nursing services.

In accordance with a 2019 study by Shin and Lee comparing nursing students before and after education, there were favorable changes following education, which is consistent with the findings of this study. [11] This aligns with our findings and suggests that comprehensive, well-structured training can have a substantial impact across different settings.

As regard attitudes of house officers toward dementia diagnosis and management only 37.9% before the course thought that several things can be done to improve the quality of life of a patient with dementia and caregivers, but this percentage rose to more than 80% after the course,

Also, 39.7% of house officers recognize the importance of early diagnosis of dementia, but this percentage rose to 73.3% after the course.

This suggests that the program has a good impact not only on dementia knowledge and attitude, but also on elder care attitude, indicating that the program will influence a deeper awareness of the elderly and lead to a favorable attitude towards the elderly.

In the attitude of dementia, Park *et al.*, 2015 showed that the average of education group was higher on 4.10, and the attitude about dementia in the education group was

more positive and there was a significant statistic difference(P<000). [20]

Their study highlighted improved attitudes, particularly in the context of dementia education, suggesting that education can foster more positive perspectives towards dementia care.

Liu *et al.* (2013) revealed that dementia-trained physicians had significantly more confidence and less negative views regarding dementia care compared to non-trained physicians in Hong Kong, China. [22]

This is consistent with our study, which indicates that training programs not only enhance knowledge but also positively influence attitudes.

In a study of community health service centers in Beijing, China, Wang *et al.* (2020 found that general practitioners had insufficient dementia knowledge and competence but had positive attitudes. [23] This suggests that while attitudes might be favorable, there is often a gap in knowledge and practice that targeted training can bridge.

Generally, most house officers agreed or strongly agreed that the course was useful (91.4%) and increased their ability to work with real patients (80.2%).

Hobday *et al.* (2017) from Minneapolis, USA, discovered that an online, four-module dementia training program for nursing staff and other hospital professionals significantly improved dementia care knowledge and was assessed to be beneficial, acceptable, practical, and efficient.

It was also highlighted that medical professionals and nursing students had to work hard to enhance dementia knowledge and acquire a positive attitude. [24] Our study supports this by demonstrating that practical training can lead to improved competency in managing dementia symptoms, suggesting that both theoretical knowledge and practical skills are essential for effective dementia care.

Study limitation

We acknowledge several limitations in our study. First, we did not include a control group. This was due to logistical and institutional challenges. Instead, we used a pre-post design to track changes within the same group, which still provides useful insights. Second, the study took place at a single institution.

This may limit how well the results apply to other settings. We recommend that future studies include multiple centers to improve generalizability. Third, participation was voluntary. Excluding those who declined to join may have caused selection bias.

We could not collect data from non-participants because of ethical restrictions.

Finally, we relied on self-reported data. This may not reflect actual clinical behavior. Future studies should consider using objective tools like OSCEs or chart reviews to verify results.

Conclusion

In conclusion, our study emphasizes the necessity of ongoing education and training initiatives to equip healthcare providers with the necessary skills and knowledge for effective dementia management.

Recommendations

We recommend integrating structured dementia education programs into the training curriculum for house officers and other healthcare professionals. Clinical practice guidelines for dementia should be easily accessible and embedded in routine primary care practice.

Future studies should include follow-up evaluations, ideally 3–6 months post-intervention, to assess knowledge retention and sustained changes in behavior. This will help determine the long-term effectiveness of dementia education.

Additionally, future research should go beyond house officer outcomes and examine patient-related metrics. These could include caregiver satisfaction, rates of accurate diagnosis, and patient quality of life. Such measures would provide a clearer picture of the program's impact on clinical practice and patient care.

Furthermore, incorporating qualitative methods, such as interviews or open-ended responses, in future studies is recommended to gain deeper insight into participants' experiences, perceptions, and the contextual factors influencing the effectiveness of dementia training programs.

Program Feasibility and Scalability

Implementing the dementia education program required specific resources, including trained faculty, structured sessions, and dedicated time within the house officers' rotation schedule.

Each session was approximately three hours long and involved a combination of interactive lectures, hands-on training, and case-based discussions. Faculty involvement, classroom space, and preparation of materials were essential components that added to the logistical complexity.

For scaling up, institutions could adopt digital delivery of some components, such as recorded lectures or interactive e-learning modules, that may reduce faculty burden and increase reach. Finally, collaboration across institutions could standardize the content and ensure consistency while enabling large-scale implementation across various training settings.

Declarations

Competing interest: The Authors declare no conflict of interest.

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References

1. Prince, M., Ali, G., Guerchet, M., *et al.* Recent global trends in the prevalence and incidence of dementia, and survival with dementia. Alzheimer's Research & Therapy, 2016; 8: 23.
2. World Health Organization. Geneva, Switzerland: World Health Organization; 2021. Fact sheets of dementia [Internet] [cited 2022 Apr 13]. Available from: https:// www.who.int/news-room/fact-sheets/detail/dementia.
3. Elshadidi M, Elhadidi M, Sharaqi A, *et al.* Prevalence of dementia in Egypt: a systematic review. Neuropsychiatr Dis Treat. 2017; 13: 715-720
4. Schoenmakers B, Buntinx F, Delepeleire J. What is the role of the general practitioner towards the family caregiver of a community-dwelling demented relative? A systematic literature review. Scand J Prim Health Care. 2009; 27(1):31-40. doi: 10.1080/02813430802588907. PMID: 19040191; PMCID: PMC3410474.
5. Mansfield E., Noble N., Sanson-Fisher R., *et al.* Primary care physicians' perceived barriers to optimal dementia care: A systematic review. The Gerontologist, 2018; 59(6), e697-e708. DOI: 10.1093/geront/gny067.
6. Birthe Marie Rasmussen, Pernille Tanggaard Andersen, Frans Boch Waldorff, Gabriele Berg-Beckhoff, (2023). Effectiveness of dementia education for professional care staff and factors influencing staff-related outcomes: An overview of systematic reviews. International Journal of Nursing Studies, 142.ISSN 0020-7489, https://doi.org/10.1016/j.ijnurstu.2023.104469.
7. Moehead A, DeSouza K, Walsh K, Pit SW. A Web-Based Dementia Education Program and Its Application to an Australian Web-Based Dementia Care Competency and Training Network: Integrative Systematic Review. J Med Internet Res. 2020 Jan 22; 22(1):e16808. doi: 10.2196/16808. PMID: 32012077; PMCID: PMC7003124.
8. Surr, C. A., Gates, C., Irving, D., *et al.* Effective Dementia Education and

Training for the Health and Social Care Workforce: A Systematic Review of the Literature. Review of Educational Research, 2017; 87(5): 966-1002. https://doi.org/10.3102/0034654317723305

9. Parveen S, Smith SJ, Sass C, *et al.* Impact of dementia education and training on health and social care staff knowledge, attitudes, and confidence: a cross-sectional study. BMJ Open 2021; 11:e039939. doi: 10.1136/bmjopen-2020-039939
10. Modupe Adewuyi, Kathleen Morales, Anna Lindsey (2022), Impact of experiential dementia care learning on knowledge, skills and attitudes of nursing students: A systematic literature review, Nurse Education in Practice, 62, ISSN 1471-5953,

https://doi.org/10.1016/j.nepr.2022.103351.

11. Shin EH, Lee HK. The Effect of the Training Program on Dementia on the Knowledge and Attitude of Nursing College Students towards Dementia and Attitude towards the Caring of the Elderly. Medico-Legal Update. 2019 Jan 1;19
12. Faul, F., Erdfelder, E., Lang, A.G., *et al.* G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. Behavior Research Methods, 2007; 39(2): 175–191. https://doi.org/10.3758/BF03193146
13. Alzheimer's Association. (2023). Alzheimer's Disease Facts and Figures. Alzheimer's & Dementia.
14. National Institute for Health and Care Excellence (NICE). (2022). Dementia: Assessment, Management and Support for People Living with Dementia and Their Carers. NICE Guidelines.
15. Spector, A., & Orrell, M. (2016). Cognitive Stimulation Therapy for Dementia: A Systematic Review and Meta-Analysis. Journal of the American Geriatrics Society, 64(2): 213-223.
16. Arsenault-Lapierre, G., Sourial, N., Pakzad, S., *et al.* Validation of a questionnaire for family physicians: Knowledge, attitude, and practice regarding dementia care. Canadian Journal on Aging/La Revue canadienne du vieillissement, 2021; 40(2): 238-247.
17. Alzheimer's Association (2020). On the front lines: Primary care physicians and Alzheimer's care in America [Special report]. Alzheimer's Association. Available at https://www.alz.org – March 11, 2020
18. Timmons S, O'Shea E, O'Neill D, *et al.* Acute hospital dementia care: results from a national audit. BMC Geriatr.

2016 May 31; 16:113. Doi: 10.1186/s12877-016-0293-3. PMID: 27245979; PMCID: PMC4886443.

19. Casey, A. N., Islam, M. M., Schütze, H., *et al.* GP awareness, practice, knowledge and confidence: evaluation of the first nation-wide dementia-focused continuing medical education program in Australia. BMC family practice, 2020; 21:1-16.
20. Park, S. J., Park, K. S., Kim, Y. J. The effects of geriatric nursing education on nursing students' attitudes, perceptions toward dementia, and dementia policy. Journal of the Korea Academia-Industrial Cooperation Society, 2015; 16(7): 4467-4477.
21. Paul, P., Mahfoud, Z. R., Malik, R. A., *et al.* Knowledge, Awareness, and Attitude of Healthcare Stakeholders on Alzheimer's Disease and Dementia in Qatar. International Journal of Environmental Research and Public Health, 2023; 20(5): 4535.
22. Liu, J. Y. W., Lai, C., Dai, D., *et al.* Attitudes in the management of patients with dementia: comparison in doctors with and without special training. East Asian archives of psychiatry, 2013; 23(1): 13-20.
23. Wang, M., Xu, X., Huang, Y., *et al.* Knowledge, attitudes, and skills of dementia care in general practice: a cross-sectional study in primary health settings in Beijing, China. BMC Family Practice, 2020; 21(1): 1-9.
24. Hobday, J. V., Gaugler, J. E., & Mittelman, M. S. (2017). Feasibility and utility of online dementia care training for hospital staff: The CARES® Dementia-Friendly Hospital™ Program. Research in Gerontological Nursing, 10(2): 58-65.

Table 1: General Characteristics of Study Participants.

Characteristics	**Categories**	**N (%)**
Gender	Male	56 (48.3%)
	Female	60 (51.7%)
Managing patients aged 65 or older	Yes	101(87.1%)
	No	15 (12.9%)
Percentage of patients aged 65 or older	0-25%	65(56%)
	26-50%	39(33.6%)
	51-75%	12(10.3%)
Received training on dementia	Yes	12(10.3%)
	No	104(89.7%)

Table 2: Perceived competency and knowledge in dementia care among house officers before and after the course.

Items of evaluation	Agree or somewhat agree.				P. value
	Before the course		After the course		
	N	%	N	%	
Competency to diagnose dementia	41	35.3	96	82.8%	0.000
Competency to elaborate a care plan	21	18.1	91	87.4%	0.000
Competency to educate patients/family	50	43.1	94	81%	0.000
Competency to disclose diagnosis	55	47.4	96	82.2%	0.000
Competency to involve the caregiver in diagnosis	40	34.5	100	86.2%	0.000
Knowledge about diagnostic criteria	87	75	90	77.6%	0.742
Knowledge about guidelines	21	18.1	49	42.2%	0.000
Feeling comfortable in prescribing	22	19	95	81.9	0.000
	Disagree or Somewhat disagree				
Referral to a specialist for diagnosis	40	34.5	98	84.5	0.000
Referral to a specialist for management	10	8.6	98	84.5	0.000
Specialists had better make a diagnosis	28	24.1	104	89.7	0.000
Total score of perceived competency and knowledge in dementia care among house officers					
Total score	**Before the course(Mean±SD)**		**Before the course(Mean±SD)**		**P value**
	3.64±1.68		6.25±1.61		0.000

Table 3: Practices regarding cognitive evaluation among house officers before and after the course.

Items of evaluation	Agree or Somewhat agree.				P. value
	Before the course		After the course		
	N	%	N	%	
Cognitive testing is used when patients seem to have a short memory	90	77.6	95	81.9%	0.486
Cognitive testing is used when patients lose or misplace things	74	63.8	98	84.5%	0.001
Cognitive testing when patients have subjective complaints	84	72.4	98	84.5%	0
Cognitive testing when the family has complaints	64	55.2	102	87.9%	0
Cognitive testing is used when patients mix up their medications	62	53.4	102	87.9%	0
Cognitive testing occurs when patients repeat themselves	56	48.3	97	83.6%	0.002
Cognitive testing is conducted when the family reports behavior changes	77	66.4	99	85.3	0.026
Total score of practices regarding cognitive evaluation among house officers					
Total score	**Before the course(Mean±SD)**		**Before the course(Mean±SD)**		**P value**
	4.33±2.40		8.91±2.74		0.000

Table 4: Attitudes toward collaboration with nurses and other healthcare professionals among house officers before and after the course.

Items of evaluation	Agree or Somewhat agree.				P. value
	Before the course		After the course		
	N	%	N	%	
Collaboration with nurses and other healthcare professionals is essential for diagnosis	58	50	97	83.6%	0.000
Collaboration with nurses and other healthcare professionals is essential for developing care plans	35	30.2	90	77.6%	0.000
Collaboration with nurses and other healthcare professionals is essential for case management	63	54.3	87	77.6%	0.001
Total score of Attitudes toward collaboration with nurses and other healthcare professionals among house officers					
Total score	**Before the course (Mean±SD)**		**Before the course (Mean±SD)**		**P value**
	1.34±0.85		2.39±0.81		0.000

Table 5: Attitudes toward dementia among house officers before and after the course.

Items of evaluation	Agree or Somewhat agree.				P. value
	Before the course		After the course		
	N	%	N	%	
Improving patients' quality of life is possible	44	37.9%	96	82.8%	0.000
Improving caregivers' quality of life is possible	44	37.9	97	83.6%	0.000
In the presence of symptoms, early diagnosis is important	46	39.7	85	73.3	0.000
The family prefers early diagnosis	25	21.6	102	87.9	0.000
	Disagree or Somewhat disagree.				
If no effective treatment, diagnosis isn't a priority [INVERTED]	18	15.5	98	84.5%	0.000
Early diagnosis is harmful [INVERTED]	72	62.1	83	71.6	0.074
Total score of attitudes toward dementia among house officers					
Total score	Before the course(Mean±SD)		Before the course(Mean±SD)		P value
	2.16±1.48		4.83±1.43		0.000

Table 6: Course evaluation.

Items of evaluation	Percentage of scores (%)				
	1 (strongly disagree)	**2 (disagree)**	**3 (Neutral)**	**4 (agree)**	**5 (strongly agree)**
Clarity of course content	4.3	5.2	6.9	41.4	42.2
Motivation by the teaching staff	0.9	3.4	12.1	42.2	41.4
Helpfulness of learning materials	2.6	5.2	9.5	45.7	37.1
Increasing ability to work with real patients	0.9	0.9	18.1	48.3	31.9
Theoretical information is applicable	1.7	0	20.7	42.2	35.3
Providing practical information	4.3	1.7	19.8	42.2	31.9
Learning new things	0.9	0	7.8	18.1	73.3
Enhancing skills to work with patients with dementia	0.9	1.7	16.4	40.5	40.5
Benefits of a fully offline course	4.3	2.6	6.9	48.3	37.9
Meeting house officers' expectations	4.3	0	11.2	46.6	37.9
Overall usefulness	0	1.7	6.9	44.8	46.6
Overall satisfaction	0	1.7	17.2	34.5	46.6

الملخص العربى

تحويل وجهات نظر أطباء الامتياز بشأن الخرف: تقييم فعالية برامج التثقيف الخاصة بالخرف

نادية مصطفي توفيق [١]، رحاب محمد صبري [١]

قسم طب الأسرة بكلية الطب جامعة القاهرة، مصر

الخلفية: يتزايد عدد كبار السن على مستوى العالم، مما يؤدي إلى زيادة كبيرة في حالات الخرف. وعلى الرغم من أن ممارسي العموم يلعبون دورًا حاسمًا في الخطة العلاجية للخرف، إلا أن العديد من العقبات تعيق تنفيذهم للخطة العلاجية للخرف في مراكز الرعاية الأولية. وبالتالي، فإن برامج التعليم الطبي الفعالة التي تستخدم استراتيجيات تعليمية مؤثرة ضرورية للتغلب على هذه الحواجز وتعزيز الخطة العلاجية الفعالة للخرف. **الهدف:** يهدف هذا البحث إلى تقييم مدى فعالية برنامج تعليم الخرف في تحسين المعرفة والمواقف والممارسات المتعلقة بالخرف بين أطباء الامتياز. **الطرق:** أجريت هذه الدراسة شبه التجريبية على ١١٦ طبيب امتياز أثناء تدريبهم . تم تقييم المعرفة والممارسة والموقف بين أطباء الامتياز قبل وبعد برنامج تعليم الخرف. **النتائج**: تم تحليل استجابات ١١٦ طبيب امتياز و أظهروا زيادة ذات دلالة إحصائية في كفاءتهم ومعرفتهم المتصورة في رعاية الخرف قبل وبعد الدورة مع متوسط ± الانحراف المعياري للنتيجة الإجمالية ٣,٦٤ ± ١,٦٨ قبل الدورة و ٦,٢٥ ± ١,٦١ بعد الدورة. تُظهر النتيجة الإجمالية للممارسات المتعلقة بالتقييم المعرفي زيادة ذات دلالة إحصائية بعد الدورة مع متوسط ± الانحراف المعياري ٤,٣٣ ± ٢,٤٠ و ٨,٩١ ± ٢,٧٤ قبل وبعد الدورة على التوالي. تُظهر ممارسات أطباء الامتياز تجاه تشخيص وعلاج الخرف زيادة ذات دلالة إحصائية بعد الدورة مع متوسط ± الانحراف المعياري ٢,١٦ ± ١,٤٨ و ٤,٨٣ ± ١,٤٣ قبل وبعد الدورة على التوالي. **الاستنتاجات**: تؤكدالدراسة على ضرورة مبادرات التعليم والتدريب المستمرة لتزويد مقدمي الرعاية الصحية بالمهارات والمعرفة اللازمة لعلاج الخرف بشكل فعال.