

Original Research Article

A departing mystery: dementia related knowledge and attitude among dental professionals in Chennai

Parvathy Premnath*, Kutraaleeshwaran Velmurugan, Kirran Vignaraja,
Kalimuthu Ramanathan, Zoha Abdullah

Department of Public Health Dentistry, Asan Memorial Dental College, Chengalpattu, Tamil Nadu, India

Received: 15 May 2021

Accepted: 10 June 2021

*Correspondence:

Dr. Parvathy Premnath,

E-mail: dr.parvathypachat@gmail.com

Copyright: © the author(s), publisher and licensee Medip Academy. This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Improving dentist's knowledge, perceptions and attitudes of dementia is important in the formation of dementia-friendly communities. The aim of the study was to evaluate dentist's knowledge and attitudes of dementia. The purpose of this study was to examine dentist's, interns, postgraduate's knowledge and attitudes towards dementia and to provide basic data for educating about knowledge of dementia and strengthening positive attitudes towards dementia related patients.

Methods: One hundred and ten dentists, dental post graduates, interns aged 22-46 years, from dental schools in Tamil Nadu were invited to complete a series of questions that assessed their dementia knowledge and attitudes.

Results: A total of 110 dentists completed the questionnaire. Out of 24 questions on dementia knowledge and attitude, participants were on average able to answer less than half correctly. Responses to the attitude's questionnaire showed that dentists had both positive and negative attitudes toward dementia.

Conclusions: There is scope for dentists to improve their dementia knowledge and attitudes. Until a validated measure of dementia knowledge has been developed specifically for an dentist sample, researchers should avoid summary statistics (i.e.; total score) and instead focus on interrogating where the gaps in knowledge.

Keywords: Interns, Post graduate, Dental students, Dementia, Knowledge, Dementia related patients

INTRODUCTION

Dementia, as a significant public health problem, has been defined as a degenerative and non-communicable condition commonly occurring in the elder population. It is characterized by progressive impairments in cognitive functioning such as memory, attention, reasoning and problem solving. Behavioral problems such as wandering, depression, delirium and denial of symptoms are also frequently reported.¹ In 2015, an estimated 4.1 million persons aged over 60 years has dementia in India. This is estimated to rise to 6.35 million by 2025 and to 13.33 million by 2050.²

Dementia is aphasia, which are memory and cognitive disorders, a disease that is accompanied by one or more

symptoms of real authentication or performance dysfunction chronically and the patient's social dependence increases over time. It is an increasing disease (American Psychiatric Association, 2000.³ Dementia can be classified into subtypes based on the etiology, but the primary subtypes are dementia related to alzheimer's disease, vascular dementia and dementia with Lewy bodies.⁴ Due to a deterioration in the ability to chew, the number of food options decreases for these patients, leading to a higher risk of malnutrition.⁵ The ability to swallow is also reduced in individuals with cognitive impairment,⁶ thereby increasing the risk of aspiration pneumonia.⁷ Recent geriatric dental research in long-term-care facilities has highlighted the rapid growth in the numbers of institutionalized adults with dementia and their poor oral health status.⁸ The most common

causes of behavioural problems in adults with dementia include medical and physical causes, environmental causes, task-related causes, and communication causes. However, there can be multiple possible aetiologies for specific behavioural problems. Behavioural problems are the outcome of the interaction of the physical environment, social environment, caregiving strategies, and management of the person with dementia's medical conditions. Thus, most behavioural problems can be prevented by focusing on 4 main non-pharmacological interventions related to the person with dementia's personal and environmental systems decreasing environmental stressors, meeting primary self-needs, increasing quality and quantity of social interactions, and balancing inner-retreat time with active time.⁹

In addition to being a public health concern, dementia becomes a significant social and economic challenge that our society is currently facing. Persons with dementia tend to have oral health problems such as dental caries and periodontitis and have been reported to swallow their dentures, causing choking thereby, leads to deterioration in ability to chew, leading to a higher risk of malnutrition. Older adults with dementia suffer from high levels of dental plaque accumulation, root caries, gingival bleeding, periodontitis, stomatitis, mucosal lesions and reduced salivary flow.¹⁰

The persons with dementia are in particular need of oral health treatment and care. The aim of the study was to cover the knowledge and attitude of dentists for wide range of dementia in general adolescents, recent studies examining one's knowledge and attitude are insufficient. Therefore, this study was about the level of knowledge and attitudes of current dentists about dementia and of knowledge and attitudes about dementia according to characteristics. To improve knowledge and strengthen positive attitudes about dementia in the future.

METHODS

Before the commencement of the study, ethical clearance was taken from the scientific research committee of Asan memorial dental college and hospital, Chengalpattu. This descriptive cross-sectional study was carried out at various dental colleges in Tamil Nadu. The study participants were the dental interns and dentists in Tamil Nadu and the sample size was 110 and a convenience sampling was adapted in the study.

STROBE guidelines were used for this study design. Dental interns, dentists and post graduates from various dental colleges in Tamil Nadu, age group between 22 years and 46 years and the participants active in social media were included in the study. Dental students of 1st year, 2nd year, 3rd year, final year and the dentists who were not active in social media were excluded in the study. A self-explanatory online questionnaire composed of 24- closed ended questions in total and it covers about the knowledge and attitude about dementia related

patients among dentists. All questions assessing dementia knowledge had response options 'correct' and 'incorrect'. Attitudes about dementia was assessed using a five-point Likert scale with response options 1=strongly agree, 2=agree, 3=neither, 4=disagree and 5=strongly disagree. A high score reflected a more positive attitude. All the questions are selected from the previous studies with few modifications. The online questionnaire was created in google form and sent to participants through social media and request the participants for the honest response. The study was conducted during the duration from 10 December 2020 to 28 February 2021.

The data was collected in organized manner from the participants and tabulated in excel sheet and transferred to SPSS version 25 and statistical analysis performed. Descriptive statistics were done. Using the Analysis of Variance (ANOVA) hypothesis testing for age and designation and student t-test for gender were done.

RESULTS

The characteristics of the study subjects' majority of study subjects (81.8%) belong to age group of 20 to 25 years. While 10.1%, 3.6%, 0.9%, 3.6% belong to the age group of 26-30, 31-35, 36-40, >40 respectively. About 43.6% were male and 56.4% were female study subjects. Most of the participants were dental interns (75.5%), followed by the dentists (21.8%), then the post graduates (2.7%) (Table 1).

The age which was analysed using ANOVA shows that it was statistically not significant (p=0.273) (Table 2).

Table 1: Demographic characteristics of the participants.

Demographic characteristics	N (%)	
Age (years)	20-25	90/110 (81.8)
	26-30	11/110 (10.1)
	31-35	4/110 (3.6)
	36-40	1/110 (0.9)
	>40	4/110 (3.6)
Gender	Male	48/110 (43.6)
	Female	62/110 (56.4)
Designation	Intern	83/110 (75.5)
	Postgraduate	3/110 (2.7)
	Dentist	24/110 (21.8)

Table 2 Shows the relationship between age and the mean knowledge scores.

Age	N	Mean±SD	P value
20-25	90	11.63±2.33	0.273
26-30	11	10.36±1.80	
31-35	4	10.25±1.50	
36-40	1	13.0	
40<	4	10.50±3.31	
Total	110	11.42±2.31	

Note: ANOVA

The gender which was analysed using student t-test shows that it was statistically not significant (p=0.845) (Table 3).

The designation which is analysed using ANOVA shows that it was statistically significant (p=0.00). This was only highly significant of interns (11.90±2.19), dentists (9.87±2.19), post graduate (10.66±0.577) (Table 4).

The number of responses in percentage per question on attitudes towards dementia. The attitude question- Q1. There comes a time when all you can do for someone with dementia is to keep them clean, healthy and safe- shows high positive response of 92.7% agreeing with the statement. As far as Q8.

For people with really bad dementia, 'I don't think life is worth living' shows high negative response of 69.1% disagreeing with the statement (Table 5).

Table 3: Shows the relationship between mean knowledge score and gender.

Gender	N	Mean±SD	P value
Male	48	11.70±2.37	0.845
Female	62	11.20±2.26	
Total	110	11.42±2.31	

Note: t-test

Table 4: shows the relationship between mean knowledge score and designation.

Designation	N	Mean±SD	P value
Intern	48	11.70±2.19	0.00
Postgraduate	62	10.66±0.57	
Dentist	110	9.87±2.19	
Total		11.42±2.31	

Note: ANOVA

Table 5: Attitude regarding dementia among dental personnel.

Questions	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)	Total (%)
Q1. There comes a time when all you can do for someone with dementia is to keep them clean, healthy and safe:	42.7	50	3.6	3.6		100
Q2. Once they have dementia the person you knew eventually disappears:	18.2	47.3	16.4	15.5	2.7	100
Q3. As soon as someone is diagnosed with dementia, they are not treated like a thinking human being anymore:	12.7	21.8	15.5	36.4	13.6	100
Q4. There is no point talking to someone with dementia as they won't be able to understand	18.2	22.7	14.5	34.5	10	100
Q5. It is better for people with dementia and their families if they are cared for in a residential or nursing home:	12.7	48.2	17.3	15.5	6.4	100
Q6. People with dementia should be involved in activities in the community:	18.2	52.7	16.4	11.8	0.9	100
Q7. People with dementia are like children and need to be cared for as you would for a child:	32.7	51.8	13.6	1.8		100
Q8. For people with really bad dementia, I don't think life is worth living:	4.5	15.5	10.9	32.7	36.4	100

Note: 1-strongly agree, 2-agree, 3-neither, 4-disagree, 5-strongly disagree.

DISCUSSION

The aim of this survey was to assess the current knowledge and attitude towards dementia in dentists. Dementia is a syndrome in which there is deterioration in memory, thinking, behaviour and the ability to perform everyday activities. Alzheimer's disease is the most common form of dementia and may contribute to 60-70% of cases. Although dementia mainly affects older people, it is not a normal part of ageing. Worldwide, around 50 million people have dementia, and there are nearly 10 million new cases every year. Older people with dementia has much plaque and many oral health problems related to oral soft tissues, such as gingival bleeding, periodontal pockets, stomatitis, mucosal lesions, and reduced salivary flow.¹⁰ The present

sample consisted of dentists from the surrounding colleges all over from Tamil Nadu. The World Bank has classified India as a lower middle-income country and it is projected to be a high middle-income country by 2047. India spends just over 1% of its gross domestic product (GDP) on health and only a mere 1-2% of the health budget is spent on mental health. However, the Government of India has recently committed to spending 2.5% of its GDP on health by 2025. The results show there is scope for adolescent students to improve their dementia knowledge, with adolescents accurately answering less than half of the questions correctly.² Indeed, memory clinics have been successfully run-in primary care by primary care physicians. However post-diagnostic continuing care for dementia through primary care remains an area of research.¹² Previous studies in a wider adult population

have shown that increased contact with dementia resulted in better dementia knowledge.^{13,14,17}

Reid et al (2015) though these findings are not always consistent. It is therefore possible that spending time with a person with dementia as part of an education programme maybe a simple yet effective way to improve knowledge in adolescents.¹⁷ Kwok et al (2011) most of the occupational and social workers, medical students knew the correct way of managing patients with difficulties in performing self-care activities so that they could remain as independent as possible.¹⁶

The most common causes of behavioural problems in adults with dementia include medical and physical causes, environmental causes, task-related causes, and communication causes. This study allows us to gain knowledge and attitude towards dementia treatment protocols for dementia related patients e.g., techniques such as rescuing, distraction, bridging, hand-over-hand, chaining and also other pharmacological management of behavioural problems is required for some cognitively impaired adults and can be effective.¹⁵ Out of 110 participants, 48 participants were male and 62 participants were female. Majority of the participants were dental interns (75.5%), followed by the dentists (21.8%), then the post graduates (2.7%).

The student's willingness to treat these patients correlated with their advance through the educational program and their attitudes about dementia, but not with their knowledge of the disease, the study conducted in Japan and Taiwan, Japanese students had a more positive attitude towards persons with dementia and less ageism as compared to Taiwanese students.¹¹

Dentist's attitudes toward dementia were slightly more mixed. Participants generally responded positively to statements that reflect people with dementia as a person. For example, participants generally felt that individuals' life was still worth living and that you should talk to them. However, there were more negative responses towards the progression and care for people with dementia, with close to 1/4th of participants agreeing that the person will eventually disappear (20% of responses) where, 4.5% of participants strongly agree and that they are better off in a residential or nursing home (61.9% of responses).

It is therefore possible that spending time with a person with dementia as part of an education programme maybe a simple yet effective way to improve knowledge in adolescents.¹⁸ A key limitation of this study is the use of a non-validated measure of dementia knowledge and attitudes. Whilst the majority of questions were derived from established questionnaires.^{14,19}

CONCLUSION

There is scope for dentists to improve their dementia knowledge and attitudes. Until a validated measure of

dementia knowledge has been developed specifically for a dentist sample, researchers should avoid summary statistics (i.e. total score) and instead focus on interrogating where the gaps in knowledge.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Ballard C, Howard R. Neuroleptic drugs in dementia: benefits and harm. *Nat Rev Neurosci*. 2006;7(6):492-500.
2. Nulkar A, Paralikar V, Juvekar S. Dementia in India- a call for action. *J Global Health Reports*. 2019;3:2019078.
3. Hwang E, Bokyung K. A Study on Dementia-related Knowledge and Attitudes in Adolescents. *Korean J Rehabilitation Nursing*. 2013;16(2):133-40.
4. Isobe A, Izumi M, Akifusa S. Attitudes towards people with dementia: a cross-sectional study comparing dental hygiene students with registered dental hygienists. *Gerodontology*. 2019;36(1):45-54.
5. Eda Hiro A, Hirano H, Yamada R, Chiba Y, Watanabe Y, Tonogi M, et al. Factors affecting independence in eating among elderly with Alzheimer's disease. *Geriatr Gerontol Int*. 2012;12(3):481-90.
6. Furuta M, Komiya NM, Akifusa S, Shimazaki Y, Adachi M, Kinoshita T, et al. Interrelationship of oral health status, swallowing function, nutritional status, and cognitive ability with activities of daily living in Japanese elderly people receiving home care services due to physical disabilities. *Community Dent Oral Epidemiol*. 2013;41(2):173-81.
7. Sato E, Hirano H, Watanabe Y, Eda Hiro A, Sato K, Yamane G, Katakura A. Detecting signs of dysphagia in patients with Alzheimer's disease with oral feeding in daily life. *Geriatr Gerontol Int*. 2014;14(3):549-55.
8. Gordon SR, Lain D. Dental needs related to primary cause for institutionalization. *Spec Care Dentist*. 1991;11(2):49-54.
9. Kovach CR. Late-stage dementia care: a basic guide. Washington, DC: Taylor & Francis; 1997.
10. Delwel S, Binnekade TT, Perez R, Hertogh C, Scherder EJA, Lobbezoo F. Oral hygiene and oral health in older people with dementia: a comprehensive review with focus on oral soft tissues. *Clin Oral Investig*. 2018;22(1):93-108.
11. Oh C, Morris RJ. Attitudes toward people with dementia among communication science and disorders students. *Gerontol Geriatr Educ*. 2021;42(1):96-113.
12. Prince M, Comas HA, Knapp M, Guerchet M, Karagiannidou M. World Alzheimer Report 2016 Improving healthcare for people living with dementia. Coverage, Quality and costs now and in the future. *Alzheimer's Disease International (ADI)*, 2016. Available at <https://www.alz>.

- co.uk/research/wor2016. Accessed on 27 March 2021.
13. Dowds L, Parland P, Devine P, Gray AM. Attitudes to and knowledge of dementia in Northern Ireland 2010, 2012. Available at <https://www.dementia-research.ie/content/attitudesknowledge-dementia-northern-ireland> accessed on 12 April 2021.
 14. Parland P, Devine P, Innes A, Gayle V. Dementia knowledge and attitudes of the general public in Northern Ireland: an analysis of national survey data. *Int Psychogeriatr*. 2012;24(10):1600-13.
 15. Chalmers JM. Behavior management and communication strategies for dental professionals when caring for patients with dementia. *Spec Care Dentist*. 2000;20(4):147-54.
 16. Kwok T, Lam KC, Yip A, Ho F. Knowledge of dementia among undergraduates in the health and social care professions in Hong Kong. *Soc Work Ment Health*. 2011;9:287-301.
 17. Reid S, Waterton J, Wild A. Attitudes to dementia: Scottish Social Attitudes 2014, 2014. Available at: <https://www.bl.uk/collection-items/attitudedementia-scottish-social-attitudes-2014#>. Accessed on 24 April 2021.
 18. Isaac MGEKN, Isaac MM, Farina N, Tabet N. Knowledge and attitudes towards dementia in adolescent students. *J Ment Health*. 2017;26(5):419-25.
 19. Dieckmann L, Zarit SH, Zarit JM, Gatz M. The Alzheimer's disease knowledge test. *Gerontologist*. 1988;28(3):402-7.

Cite this article as: Premnath P, Velmurugan K, Vignaraja K, Ramanathan K, Abdullah Z. A departing mystery: dementia related knowledge and attitude among dental professionals in Chennai. *Int J Community Med Public Health* 2021;8:3551-5.