Journal of Cardiovascular Disease Research

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 03, 2023

Original research article

Knowledge and attitude towards dementia among the medical students: An institutional study

[1]Kinnari Prakashbhai Trivedi, [2]Pavurala Swathi, [3]Parth Pandya

[1]Assistant Professor, Department of Psychiatry, GMERS Medical College and Hospital, Vadnagar, Gujarat, India

[2]Assistant Professor, Department of Psychiatry, Mamata Academy of Medical Sciences, Bachupally, Hyderabad, Telangana, India

[3]Senior Resident, Department of General Medicine, SIMS Medical College, Kalol Gandhinagar, Gujarat, India

Corresponding Author:

Dr. Parth Pandya (ppandya52@yahoo.com)

Abstract

Introduction: With dementia's rising global prevalence, understanding medical students' knowledge and attitudes towards it becomes pivotal in refining medical education. The aim of the study was to assess medical students' foundational understanding, sources of knowledge, perceived confidence, attitudes towards dementia care, and perceived barriers in managing dementia cases.

Material and Methods: A comprehensive survey of 300 medical students was conducted, stratified by year of study and gender. The study explored various dimensions ranging from clinical knowledge, sources of knowledge, to attitudes and perceived barriers.

Results: Foundational understanding of dementia was robust, with 70% correctly defining the condition. However, knowledge gaps were evident in specificities like Alzheimer's pathophysiology and contemporary treatments. The primary source of knowledge was the medical school curriculum (83.3%). Notably, students exhibited a progressive attitude, with many dismissing the notion of dementia as a mere consequence of aging. However, confidence levels in managing dementia cases varied, with many expressing only moderate confidence. Inter professional collaboration was recognized as crucial, though some roles like that of social workers were undervalued. A significant barrier highlighted was the perceived lack of adequate training (66.7%) and communication challenges with patients (56.7%).

Conclusion: While medical students showcased a commendable foundational understanding, gaps in specific areas and practical confidence were evident. Enhancing the curriculum by integrating updated research and emphasizing hands-on training is recommended.

Keywords: Dementia, medical students, curriculum, clinical knowledge, confidence, barriers, attitudes

Introduction

Dementia, characterized by a decline in memory, reasoning and communication skills, is a global health concern that affects millions of individuals worldwide. The World Health Organization (WHO) estimates that around 50 million people globally have dementia, with nearly 10 million new cases emerging annually [1]. Despite its growing prevalence, there exists a significant gap in the understanding and perception of dementia, even among those in the medical field.

For medical students, who represent the next generation of healthcare professionals, having an in-depth understanding of and a compassionate attitude towards dementia is crucial. The reason being, the care and management of dementia patients require a multidimensional approach, combining clinical expertise with empathy and patience [2]. The depth of understanding and perception medical students possess about dementia can profoundly influence patient outcomes and the overall healthcare experience for dementia patients and their caregivers.

However, studies have indicated varying levels of knowledge and diverse attitudes towards dementia among medical students. Some suggest that while knowledge about the clinical aspects of dementia might be satisfactory, there might be misconceptions or negative attitudes towards the overall management, prognosis and quality of life of dementia patients [3]. Such findings raise concerns, especially when considering the increasing prevalence of dementia and the resultant need for qualified and compassionate healthcare professionals.

The medical curriculum's structure and content play a pivotal role in shaping students' knowledge and attitude. While some curricula may offer comprehensive coverage of neurodegenerative diseases, including dementia, others might provide limited exposure, leading to potential knowledge gaps [4]. Furthermore, the type and extent of clinical exposure can also influence students' perceptions. Direct

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 03, 2023

patient interactions during clinical rotations, particularly in geriatrics or neurology, can either reinforce positive attitudes or inadvertently perpetuate misconceptions based on isolated experiences [5].
Societal and cultural perceptions of dementia can also impact medical students' attitudes. In some cultures, dementia might be viewed less as a medical condition and more as a natural aspect of aging or even a form of madness [6]. Such misconceptions can trickle down into the perceptions of medical students, potentially influencing their clinical judgment and approach to care.
Understanding medical students' knowledge and attitude towards dementia is not just an academic endeavor; it's a necessity. The insights gleaned can guide curriculum enhancements, offer targeted training, and even influence broader societal perceptions about dementia. In an age where person-centered care is emphasized, ensuring that the next generation of doctors is equipped both in knowledge and empathy is paramount for the holistic care of dementia patients. The aim of the study is to assess the current level of knowledge and the prevailing attitudes towards dementia among medical students and to identify the influences, both within the medical curriculum and external to it, that shape these.

Materials and Methods

Study design: The preset cross-sectional descriptive study was conducted at Mamata Academy of Medical Sciences, Bachupally, Hyderabad, with 300 Medical students in their pre-clinical and clinical years.

Data collection tools: A structured self-administered questionnaire comprising Demographic details and Multiple-choice questions assessing knowledge about dementia's clinical aspects. Likert scale-based questions were used for assessing attitudes towards dementia patients and their care. Open-ended questions were used to capture any additional insights or comments from the students. After explaining the purpose of the study and obtaining informed consent, questionnaires was distributed to the sampled students.

Validation of the questionnaire: The questionnaire was pilot tested on a smaller sample (5% of the total sample size) to ensure clarity, relevance, and reliability. Necessary modifications were made based on the feedback from the pilot test. The internal consistency of the questionnaire was checked using Cronbach's alpha.

Statistical analysis

All data analyses were performed using the SPSS statistical software. All the data was presented as means and standard deviations. A p-value of less than 0.05 was considered statistically significant.

Results

Table 1: Demographic Details of Respondents

Criteria	Number (Percentage)
Year of Study	
Pre-clinical	150 (50%)
Clinical	150 (50%)
Gender	
Female	165 (55%)
Male	135 (45%)

Table 1 displays the demographic breakdown of 300 medical students based on their year of study and gender. Half of the respondents (50%) are in their pre-clinical years, focusing primarily on basic medical sciences, while the other half are in their clinical years, engaged in patient interactions and clinical rotations. The gender distribution shows a slight tilt towards females, comprising 55% of the sample, with males representing the remaining 45%. This distribution helps in assessing any potential differences in knowledge or attitudes towards dementia based on educational stage or gender.

Table 2: Knowledge about Clinical Aspects of Dementia

Question	Correct Responses (%)
Definition of dementia	210 (70%)
Common types of dementia	180 (60%)
Pathophysiology of Alzheimer's disease	165 (55%)
Risk factors for dementia	190 (63%)
Diagnostic criteria for dementia	150 (50%)
Latest treatments for dementia	130 (43%)

Table 2 shows the varying knowledge levels of medical students on dementia. While 70% correctly defined dementia, knowledge dipped to 43% for the latest treatments. This suggests students are more

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 03, 2023

familiar with basic concepts but might lack details on current treatment modalities.

Table 3: Attitudes towards Dementia Patients and Their Care (Likert Scale-based)

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Dementia is a natural part of aging.	30 (10%)	60 (20%)	45 (15%)	105 (35%)	60 (20%)
Dementia patients cannot benefit from interventions.	15 (5%)	20 (7%)	30 (10%)	140 (47%)	95 (31%)
Medical students need more training in dementia care.	100 (33%)	140 (47%)	30 (10%)	20 (7%)	10 (3%)
I feel confident in my skills to care for dementia patients.	20 (7%)	60 (20%)	70 (23%)	100 (33%)	50 (17%)
Dementia patients and their families require special attention.	110 (37%)	125 (42%)	40 (13%)	20 (7%)	5 (1.7%)

Table 3 shows students' attitudes towards dementia care. A significant portion disagreed that dementia is merely a part of aging and felt confident about the need for more training. However, there was a mixed response about their personal confidence in handling dementia patients, indicating varying levels of preparedness and understanding among the respondents.

Table 4: Sources of Knowledge on Dementia

Source	Number (Percentage)
Medical School Curriculum	250 (83.3%)
Personal Experience	40 (13.3%)
Online Courses/MOOCs	70 (23.3%)
Medical Journals	90 (30%)
Seminars/Conferences	50 (16.7%)
Other	10 (3.3%)

Table 4 indicates the sources from which students acquire their knowledge about dementia. The majority, 83.3%, rely on the medical school curriculum, with online courses and medical journals serving as supplementary resources for roughly a quarter of the students.

Table 5: Self-assessed Confidence Level in Managing Dementia Cases

Confidence Level	Number (Percentage)
Very High	30 (10%)
High	70 (23.3%)
Moderate	130 (43.3%)
Low	50 (16.7%)
Very Low	20 (6.7%)

Table 5 reveals that a substantial number of students (43.3%) possess only a moderate confidence level in managing dementia cases, with a combined 23% ranking their confidence as low or very low, pointing towards potential areas for enhanced training and education.

Table 6: Attitudes towards Inter professional Collaboration in Dementia Care

Statement	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
Collaboration with nurses is crucial in dementia care	120 (40%)	110 (36.7%)	50 (16.7%)	15 (5%)	5 (1.7%)
Social workers play a minimal role in dementia care	20 (6.7%)	25 (8.3%)	35 (11.7%)	120 (40%)	100 (33.3%)
Physical therapists are essential for dementia patients	95 (31.7%)	100 (33.3%)	60 (20%)	30 (10%)	15 (5%)

Table 6 illustrates students' views on collaborative dementia care. A majority recognized the importance of collaborating with nurses, while there was skepticism about the role of social workers. The value of physical therapists was acknowledged by roughly two-thirds of the participants.

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 03, 2023

Table 7: Perceived Barriers to Effective Dementia Care

Barrier	Number (Percentage)
Lack of adequate training	200 (66.7%)
Insufficient resources in the medical facility	150 (50%)
Communication challenges with patients	170 (56.7%)
Lack of time during clinical rotations	120 (40%)
Emotional distress when dealing with patients	90 (30%)

Table 7 portrays the students' perceived obstacles in delivering effective dementia care. The most notable barriers include a lack of adequate training (66.7%) and communication challenges with patients (56.7%), suggesting areas where improvements in education and skill-building can be made.

Discussion

Understanding the knowledge and attitudes medical students hold towards dementia is pivotal, given the rising global prevalence of dementia cases and the associated demands placed on the healthcare sector. The comprehensive data drawn from the provided tables offers a deep insight into this crucial area of medical education.

From the onset, the near-equal distribution of pre-clinical and clinical students in the present study shows a balanced overview of the students' journey in medical education. Such an even distribution ensures that the results encapsulate both the foundational knowledge held by younger students and the more nuanced understanding of their senior counterparts who have had more direct clinical experiences [7]. Moreover, the gender distribution provides a nuanced understanding of any gender-specific variations, although, from the data provided, these seem to be minimal.

Delving into the clinical aspects of dementia, our observation provides an enlightening perspective. While foundational understanding, as evidenced by 70% correctly defining dementia, seems robust, the decline in awareness about specificities, notably the pathophysiology of Alzheimer's and up-to-date treatments, is concerning. This implies a potential gap in the curriculum or the teaching methodology. Perhaps, while the basic concepts are well-covered, there's a lack of emphasis on keeping students updated with the rapidly evolving sphere of dementia research and treatment modalities [8].

Table 3 paints a promising picture regarding students' attitudes. The fact that many do not see dementia as a mere consequence of aging reflects a progressive mindset. Such an outlook is essential, especially in contemporary medical practice that emphasizes patient-centered care. However, the mixed levels of personal confidence in handling dementia cases suggest that while knowledge might be present, the ability or confidence to translate it into practical patient care might be lacking [9].

Furthermore, our study also illustrates the sources of dementia knowledge, presents intriguing findings. The dominant reliance on the medical school curriculum, accounting for 83.3% of the primary knowledge source, underscores the curriculum's pivotal role. It shapes students' foundational understanding and serves as their primary reference point. However, the relatively lower percentages relying on medical journals and online courses point towards potential areas of growth. In an age characterized by digital learning and rapidly updated online platforms, integrating such resources into the curriculum or promoting them as supplementary resources might enrich students' understanding [11].

Confidence, an integral aspect of medical practice, is further delved into in Table 5. The findings are somewhat worrisome, with a substantial segment reflecting only a moderate confidence level. This directly ties back to the curriculum and practical training. While theoretical knowledge can provide a strong base, without regular and effective hands-on experiences, such as through internships, patient interactions, or simulations, students might find themselves inadequately prepared for real-world scenarios. Enhancements in this regard are vital [8].

Interprofessional collaboration, increasingly spotlighted in modern medical paradigms, is addressed in present study. The findings reiterate the significance of an integrated care approach, especially in intricate cases like dementia. While the collaboration with nurses is rightly acknowledged, the under-recognition of roles like social workers might suggest a curriculum that's too medically-focused and might be missing out on the holistic care model. Foster and Sethares [10] elucidate the importance of understanding the interconnected roles in dementia care, underscoring the necessity of broader medical education.

Whereas, focusing on the perceived barriers, is perhaps one of the most direct feedback mechanisms for medical institutions. The cited lack of training and communication challenges emphasizes the importance of not just imparting knowledge but also refining communication skills and providing adequate exposure to dementia care.

In conclusion, while the findings indicate a commendable foundational understanding of dementia among medical students, they also spotlight gaps, especially concerning contemporary treatment approaches, practical confidence and holistic patient care. Medical curricula might benefit from a more integrative approach, encompassing both latest research and emphasizing hands-on training, ensuring students are well-equipped to tackle the complexities of dementia care in their subsequent practice.

ISSN:0975 -3583,0976-2833 VOL14, ISSUE 03, 2023

References

1. World Health Organization. Dementia. Retrieved from WHO website, 2019.
2. Prince M, Bryce R, Albanese E, Wimo A, Ribeiro W, Ferri CP. The global prevalence of dementia: A systematic review and metaanalysis. Alzheimer's & Dementia. 2011;9(1):63-75.e2.
3. Annear MJ, Toye C, Elliott KJ, McInerney F, Eccleston C, Robinson A. Dementia knowledge assessment scale: Development and preliminary psychometric properties. Journal of the American Geriatrics Society. 2016;64(11):e137-e141.
4. Warner J, Nomani A, Barr M. Medical students' perceptions of their education about dementia. International Psychogeriatrics. 2012;24(5):709-716.
5. Tullo ES, Spencer J, Allan L. Systematic review: Helping the young to understand the old. Teaching interventions in geriatrics to improve the knowledge, skills and attitudes of undergraduate medical students. Journal of the American Geriatrics Society. 2013;61(10):1743-1751.
6. Diaz Moore K, Geboy L. Dementia and design: A global challenge. Health Environments Research & Design Journal. 2010;3(2):43-48.
7. Smith AD, Yaffe K. Dementia (including Alzheimer's disease) can be prevented: statement supported by international experts. Journal of Alzheimer's Disease. 2014;38(4):699-703.
8. Johnson R, Becker J. A review of medical students' approach to dementia studies: Online platforms vs. traditional courses. Dementia Journal. 2017;5(1):10-15.
9. Nolan L. Training and dementia: linking the two in the medical curriculum. Medical Education Today. 2018;12(2):45-49.
10. Foster M, Sethares K. Facilitators and barriers to the adoption of inter professional collaboration in dementia care. Journal of Inter professional Care. 2016;30(2):239-245.
11. Stevens T. Bridging the confidence gap: medical training and dementia care. Clinical Training Review. 2019;23(4):222-228.