Undergraduate Nursing Students' Knowledge and Attitudes Towards Dementia: A Cross-Sectional Study in Iraq

Asmaa Hammooz

Lecture, M.Sc. Community of Nursing Department, College of Nursing, University of Al-Qadisiyah, Iraq

Email: asmaa.hammooz@qu.edu.iq

Abstract. Background: A reduction in cognitive function, or the ability to think, is typically the outcome of dementia, a disorder that can be caused by a number of diseases that progressively harm the brain and break down nerve cells. Objectives: to evaluate the student's knowledge and attitude regarding dementia and to determine the connection between students' demographic traits and their knowledge and attitude. Methods: Undergraduate nursing students participated in a descriptive cross-sectional study. Nonprobability purposive sampling was chosen for (264) students in the College of Nursing University of al-Qadisiyah. In order to engage in the study, the researcher uses an instrument that is divided into three parts: part one is a demographic data form; part two includes information about dementia form includes (30) items, and part three is attitude toward dementia form (9) items. Results: According to the study's findings, students' overall knowledge rating was fair, with a mean score of 0.58. Conclusion: As the student progresses through the academic stages, their knowledge increases and this knowledge is reflected in their attitudes towards dementia, the study showed that the knowledge of the student in the fourth class with, and in the attitudes.

Highlights:

1. Dementia reduces cognitive function due to brain cell damage.
2. Assess nursing students' dementia knowledge, attitude, and demographic influence.
3. Cross-sectional study of 264 students using structured questionnaires.

Keywords: Undergraduate Nursing student, dementia, knowledge, attitude.

Introduction

A reduction in cognitive function, or the ability to think, that surpasses what might be expected from the typical consequences of biological aging is the hallmark of dementia, a disorder that can be caused by several illnesses that gradually harm the brain and deteriorate nerve cells. Changes in mood, emotional control, behavior, and motivation often accompany—and occasionally precede—the decline in cognitive performance, even if there is no effect on consciousness (1).

According to Fymat, et al. dementia and cognitive disorders (2019) age is the biggest and expected risk factor for dementia where the ratio will develop with

increased age followed by family history then other risks hypertension, diabetes, lifestyle factors (including lack of social communication, and mental engagement) (2).

Given that Alzheimer's disease and other forms of dementia ranked third in the Americas and Europe in 2019 and are already among the top 10 causes of death worldwide, dementia is regarded as a global public health priority (3). Women are disproportionately affected: The most current Global Burden of Disease research from the World Health Organization ranks dementia as the fourth most common cause of disability in those aged 75 and over, and women account for 65% of fatalities worldwide from Alzheimer's and other types of dementia (4).

As more people live longer, the 50 million persons with dementia who lived in the world in 2018 are predicted to quadruple to 152 million by 2050 (5). Additionally, international research found that the prevalence of dementia among Macao's elderly population was 4.98%, with approximately 4,000 people suffering from the condition (6). Dementia strikes someone in the world every three seconds.   As of 2020, over 55 million people globally are affected by dementia.   The population will almost double every 20 years, reaching 78 million in 2030 and 139 million in 2050.   Most of the expansion will take place in developing countries.   Currently, 60% of dementia sufferers live in low- and middle-income countries; by 2050, that number will rise to 71%.   The countries that are seeing the fastest increases in the number of elderly people are China, India, and their neighbors in South Asia and the Western Pacific (7).

This study aims to assess undergraduate nursing students' attitudes and knowledge about dementia. Society frequently views dementia as a stigma since the Arab world and curriculum do not provide thorough information about the condition. Nursing students at the undergraduate level are in a unique position to start studying about the illness and feel sufficiently prepared and encouraged to do so. As a result, researching the attitudes and understanding of undergraduate nursing students on dementia care can assist shape public health campaigns, curricular enhancements, and focused educational interventions for future professionals. These results aid in the creation of graduates with dementia qualifications who may spearhead social change, lessen stigma, and enhance care outcomes in an aging society.

Methods

A descriptive cross-sectional study was conducted with undergraduate nursing students. Students' attitudes and understanding regarding dementia are determined using descriptive statistics.

The study period was extended from September 20, 2024, to April 10, 2025. The time for gathering data was extended from December 3, 2024, to February 18, 2025. Nonprobability purposive sampling. The majority of students (N=846) in the College of Nursing University of al-Qadisiyah involved in the study were selected by using the sample size formula which is obtained from Yamane's Formula to determine the sample size (264) regarding the population size.

The sample was selected according to the inclusion criteria including students from educational levels in the college, both genders, and exclusion criteria including the students in the first class.

The researcher created a questionnaire that included statements from the Dementia Care Attitude Scale (DCAS) (9) and the Alzheimer's Disease Knowledge Scale (ADKS) (8) to achieve the goals of the study and took permission from the authors to use English version in the study by emailing the author. It consists of three parts; The students' demographic characteristics are covered in the first section including age, gender, class, are you employing, and marital status.

Students' understanding of dementia is tested in the second component, which consists of thirty questions about the disease's effects on daily life, diagnosis and evaluation, symptoms, progression, caregiving, therapy and management, and risk factors. Each question was evaluated as follows: 1 for now, and 0 for don't know. The cut-off point of overall knowledge to this scale is Poor = 0 – 0.33, Fair= 0.34 – 0.67, and Good=≥ 0.68.

The third section consists of nine questions about attitudes toward dementia care. The questions address issues like how much can be done to improve the quality of life for those who care for family members who have dementia, how much can be done to improve the quality of life for those who have dementia, how diagnosing dementia is usually more beneficial than detrimental, how specialist services are the best way to diagnose dementia, how patients with dementia can be a burden on resources with few benefits, how it is preferable to speak to the patient in euphemistic terms, how managing

dementia is more often frustrating than rewarding, and why it is useless to refer families to services because they do not want to use them. Each question was assessed as five items (strongly agree, agree, neutral, disagree, and strongly disagree) and scored as (4 for Strongly Agree, agree 3, 2 for Neutral, disagree 1, and 0 for Strongly Disagree). The cut-off points of the overall of this scale were as negative = $0 - 2$, Positive=≥ 2.1. The questionnaire takes roughly twenty-five to thirty minutes to complete.

The Cronbach's alpha (10) approach was used to assess the instrument's reliability for 30 questions, and the analysis of Cronbach alpha indicates that questionnaires had an adequate level of internal consistency that is accepted for knowledge questions at 0.71 and for attitudes questions at 0.75. Seven experts with over five years of experience in their field evaluated the validity of the questionnaire by examining its lucidity, relevance, and sufficiency in achieving the objectives of the current study. These experts were provided a copy of the study tool.

To determine the discrepancies between the student's demographic factors and their knowledge and attitudes, statistical inferential analysis and descriptive statistics were employed in the data analysis. Version 25.0 of the SPSS software was used to analyze the data. The independent Chi-square is used in inferential data analysis.

Ethical Considerations:

Verbal consent was obtained from the students to take part in the study. Along with outlining the basic goal of the study and providing instructions on how to complete the questionnaire, Participants were informed by the researcher that participation in the study was completely optional and that they might leave at any moment. The researcher gave participants the assurance that during and after their involvement in the study, the confidentiality of their data would be protected and securely maintained. The researcher also assured the study participants that their names would not be revealed in the presentation reporting or any future study publications.

Result and Discussion

This chapter extensively introduces the outcomes of the research in tables and these refer to the objectives of this report, which are as follows:

Table (1) Study Sample Demographic Data

Demographic Data	Rating and Intervals	Frequency	Percent
Age/years	18-23	221	83.71
	24-29	27	10.22
	30-35	9	3.4
	36 and more	7	2.65
	Total	264	100.0
Gender	Male	86	32.57
	Female	178	67.42
	Total	264	100.0
Class	2nd	75	28.4
	3rd	84	31.81
	4th	105	39.77
	Total	264	100.0
You are Employing	Yes	25	9.46
	No	239	90.53
	Total	264	100.0
Marital Status	Single	244	92.42
	Married	20	7.57
	Divorced	0	0
	Widower	0	0
	Total	264	100.0

Table (2) Distribution Overall Assessment of Knowledge among Students.

Level of Student' Knowledge	Frequency	Percent	Mean	Std. Deviation
Poor	55	20.83		
Fair	134	50.75	0.58	0.149
Good	75	28.4		
Total	264	100.0		

M.S.= Mean of score, cut off point (.33), Poor (M. S=0-.33), Fair (M. S= .34-.67), Good (M.S ≥ .68)

Table 3: Chi-square Analysis Relationship between Overall Assessment of knowledge among Students and demographics data

Dem. Data	Rating & intervals	Level of Student' Knowledge			Total	d.f	Sig	
		Poor	Fair	Good				
Age	18-23	45	110	66	221	6	p-value= .627	Sig=N.S
	24-29	6	16	5	27			
	30-35	2	6	1	9			
	36 and more	2	2	3	7			
	Total	55	134	75	264			
Gender	Male	15	51	20	86	2	p-value=.155	Sig=N.S
	Female	40	83	55	178			
	Total	55	134	75	264			
Class	2nd	20	38	17	75	4	p-value=.000	Sig=N
	3rd	11	55	18	84			
	4th	24	41	40	105			
	Total	55	134	75	264			
Marital Status	Single	52	123	69	244	2	p-value= .799	Sig=N.S
	Married	3	11	6	20			
	Total	55	134	75	264			
You are employing	Yes	4	18	3	25	2	p-value= .068	Sig=N.S
	No	51	116	72	239			
	Total	55	134	75	264			

M.S.= Mean of the score cut-off point (2), negative (M.S.= 0-2), positive (M. S=≥ 2.01).

Table (4) Distribution Overall Assessment of Attitude among Students.

Level of Student' attitude	Frequency	Percent	Mean	Std. Deviation
Negative	135	51.13	1.891	.149
Positive	129	48.86		
Total	264	100.0		

Table 5: Chi-square Analysis Relationship between Overall Assessment of attitude among Students and demographics data

Dem. Data	Rating & intervals	Level of Student' Knowledge		Total	d.f	Sig
		Negative	Positive			

Age	18-23	118	103	221	3	p-value=.399	Sig=N.S
	24-29	10	17	27			
	30-35	4	5	9			
	36 and more	3	4	7			
	Total	135	129	264			
Gender	Male	43	43	86	1	p-value=.797	Sig=N.S
	Female	92	86	178			
	Total	135	129	264			
Class	2nd	34	41	75	2	p-value=.007	Sig=N
	3rd	56	28	84			
	4th	45	60	105			
	Total	135	129	264			
Marital Status	Single	125	119	244	1	p-value= .916	Sig=N.S
	Married	10	10	20			
	Total	135	129	264			
You are employing	Yes	11	14	25	1	p-value= .453	Sig=N.S
	No	124	115	239			
	Total	135	129	264			

Discussion

These findings indicate that the study sample's age ranged from 18 to 25 years old. These findings are in line with a number of research (11–16) that demonstrate that the majority of the study population was under 25.

According to this result, most of the sample were female (67.42%). These findings are in line with a number of research (17–24) that indicate the majority of the study sample consisted of women.

Most of the study samples were from the 4th stage (39.77%). These findings are in line with many research (25–28) that indicate the majority of students were in the fourth stage.

To many adults in the world suffering from dementia and its complications, someone in the world develops dementia every 3 seconds (7). Through Table (2) related to the knowledge of nursing students about dementia, in our study, the finding indicated that the knowledge about dementia was fair in a percentage (50.75%), then good knowledge in a percentage (28.4%), and poor knowledge in a percentage (20.83%). The fair knowledge because of the lack of an integrated educational

curriculum, as most of the curriculum in the College of Nursing is about common diseases in Iraqi societies and not an integrated curriculum about one disease.

As a result, even though they comprehend the problem on a basic level, their knowledge is either lacking or superficial. These results may indicate students might know that dementia impairs memory, but they might not be entirely aware of its causes, signs, course, or how it differs from aging normally.

Given their level of expertise, further in-depth training is necessary to fill in the gaps and increase their understanding. This is concerning since ignorance can lead to stigma, misinterpretations, or a lack of empathy for people with dementia If students are unable to recognize the early warning signs of dementia or understand its consequences on individuals and families, they may find it challenging to help affected persons in their personal or professional lives.

Our study was approximate to the Ugandan study (29) with a mean score of (65.5%), and opposite to the Jordanian undergraduate nursing students' study which has a mean score (of 18.3%) (30).

Table 3 shows that nursing students' knowledge and educational levels differ significantly (p-value =.007). This is comparable to a study conducted in Uganda (29) that found that students enrolled in Students in senior classes (years three, four, and five) or health-related programs were more likely to know a lot about dementia (p-value = <001), another study was conducted in Malaysia (31) fourth-year students have a piece of high knowledge about dementia, the researcher sees the cause of the knowledge relating the highest number of samples are students in the fourth class, and to what they have of the psychiatrist diseases (dementia) in the curriculum during their class.

According to Table 4 of our survey, less than half of students (48.86%) had a good attitude about dementia, while more than half (51.13%) had a negative attitude toward dementia care, this is related to the curriculum has little knowledge about dementia and the practical training is insufficient and the students do not have attrition with the nurses who specialize in dementia treatment units so their attitude was lower than a study reported in Uganda (29) favorable views of those suffering from dementia, as well as the findings of our study, which revealed that two-thirds of the participants in

the first three classes, and there attitude toward dementia less than those in the senior class because they don't know about dementia so they don't have a positive attitude.

According to Table 5's findings, there are significant differences between students' attitudes and their educational attainment (p-value = 0.007). These findings are consistent with our findings that a more positive attitude is significantly correlated with clinical experience and older age when students studied dementia in the mental health course in the fourth year of college, their passion took them towards learning about dementia as a disease that harms people socially, economically, and morally. For this reason, their attitudes toward dementia were positive, as their intentions to learn about the disease were and they did not consider it a disease with a stigma because the person with dementia could be in the home of any of the students. In our study, which differs from (32) conducted in Malta in 2012, students showed positive attitudes towards dementia, with a mean score of 103.51±13.43 (range 20-140) on the DAS.

Conclusion

1. Most of the study participants were women in terms of gender and fourth-year students in terms of academic levels.
2. As the student progresses through the academic stages, their knowledge increases and this knowledge is reflected in their attitudes towards dementia, the study showed the knowledge of the students in the fourth class and in their attitudes.

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