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Person-Centeredness, Knowledge and Attitudes of Nurses towards Persons with Dementia

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Abstract
The prevalence of Dementia is a global concern and effective nursing care to improve the lives of the elderly. A cross-sectional study was conducted among nurses in a government hospital. Most respondents had sufficient knowledge of dementia and positive attitudes and perceived a high standard of person-centred dementia care. There was a relationship between dementia knowledge and attitudes, as well as the attitudes and perceived person-centeredness. Training programs for acute care staff should prioritize improving knowledge and attitudes, a goal that hospital administrators can promote through training that develops technical and intellectual skills alongside interpersonal and moral skills in dementia care.

Keywords: nurses, knowledge, attitudes, person-centred dementia care

1.0 Introduction
Dementia, characterized by cognitive function loss, poses challenges in daily tasks, with Alzheimer's disease being its predominant form (Arvanitakis et al., 2019). Persons with Dementia (PwD) face increased vulnerability to abuse and neglect, leading to higher healthcare costs (U.S. National Library of Medicine, 2021). Dementia knowledge is crucial for adequate care, but insufficient understanding hinders advanced planning. Person-centred dementia care, emphasizing positivity and learning, is essential, especially in acute care settings (Rahmi et al., 2021). The World Health Organization (2020) highlights the importance of developing Dementia care-related policies for PwD and their families.

As mentioned by Mat Nuri et al. (2017), The prevalence of Dementia is a global concern, with projections indicating a significant impact on populations, particularly in Malaysia and the United States. Nurses play a vital role in dementia care, but deficiencies in knowledge and attitudes have been observed (Lin et al., 2017; Strom et al., 2019). Scerri et al. (2020) state that challenges in community dementia services contribute to diagnosis delays and access issues. Practical nursing care is crucial for improving the lives of the elderly, especially those with Dementia.

This research aims to evaluate the level of person-centeredness, dementia knowledge, and attitudes among nurses working in a government hospital. The results are anticipated to provide insights for boosting nurses' understanding and perspectives, thus

enhancing dementia care services. The study's importance lies in its capacity to benefit patients and nurses, direct curriculum improvement, and provide insights for formulating policies to enhance healthcare service methods.

2.0 Literature Review

Previous studies reported that nurses had sufficient knowledge of Dementia (Balli et al., 2021; Scerri et al., 2020). However, other studies found nurses' knowledge level about Dementia is low (Chan et al., 2022; Rahmi et al., 2021; Sunaryo et al., 2020). The difference in findings from this study is from the background of the respondents involved. Scerri et al. (2019) study involves full-time staff, which includes charge nurses, staff nurses, nursing aids/care workers, doctors, physiotherapists and occupational therapists, while Balli et al. (2021) study involves caregivers who are indeed exposed and experienced in taking care of PWD which allows their level of knowledge to be better.

However, the study by Chan et al. (2022) and Sunaryo et al. (2020) focused on undergraduate students. On the other hand, the research conducted by Rahmi et al. (2021) involved nurses at the Bandung City Public Health Centre in Indonesia, and it is noteworthy that none of the participating nurses had prior experience in dementia education.

Most of the studies found that the nurses had positive attitudes towards PWD and were influenced by their knowledge, perceived level of person-centred dementia care and their level of job satisfaction experienced when working with PWD (Scerri et al., 2020; Keuning-Plantinga et al., 2022). Attitude towards persons with Dementia predicted a greater sense of competence in aged care staff; it was not related to staff knowledge and training.

Scerri et al. (2020) and Sunaryo et al. (2020) underscore the influential role of attitude in shaping the interplay between dementia knowledge and the implementation of person-centred care practices among healthcare professionals. Despite this, the correlation coefficient score in the present study indicated a weak positive correlation. This finding suggests that enhancing knowledge may improve attitudes and vice versa, emphasizing a potential bidirectional relationship between knowledge and attitude improvement.

3.0 Methodology

This study was conducted using a descriptive cross-sectional study design among 223 nurses working in a public hospital who met the criteria of being permanent nurses and had working experiences for more than six months at the hospital. The data was collected from August to September 2023 after gaining ethical approval from the institution and (FERC/FSK/MR/2023/0033) and the Malaysian Ministry of Health's Medical Research Ethics Committee (MREC: 23-01635-BWM (2); (NMRR ID-23-01635-BWM).

Data was collected using an adapted questionnaire from previous studies (Scerri et al., 2020), which consists of four sections: the sociodemographic (gender, nationality, age, nurse position, level of education, dementia training attendance, training organizer, training hours, geriatric/psychiatric experience, a family member with Dementia, caring for persons with Dementia at work, and perceived experience working with Dementia); Section 2, The Dementia Knowledge Assessment Tool 2 (21-item questionnaire used to measure dementia knowledge, including Alzheimer's and vascular dementia characteristics, behavioural, emotional, physiological, functional, and sensory dementia symptoms, and symptoms that were not always associated with Dementia. There were three possible responses for each statement: "Yes," "No," and "Do not know." Answers were rated 1 for precision and 0 for inaccuracy or "do not know"; Section 3, The Dementia Attitude Scale (20 responses ranging from 1 (strongly disagreed) to 7 (strongly agreed) on seven-point Likert scale items that reflected the affective, behavioural, and cognitive components of the attitudes towards individuals with Dementia. The total scores were from 20 to 140, with higher scores indicating a more positive outlook) and the last section was The Person-centred Care of older people with Cognitive Impairment in Acute Care scale (15 items with a 6-point Likert-type scale consisting of three subscales: "using cognitive assessments and care interventions," "using evidence and cognitive expertise," and 'individualizing care." Total scores ranged between 15 and 90, with higher scores indicating a higher degree of person-centeredness).

A pilot study was conducted, and Cronbach's alpha result was between 0.75 to 0.87. The data were analyzed using Statistical Package for Social Sciences (SPSS) Version 28.0 with descriptive and inferential statistics (Spearman's Rank correlation coefficient).

4.0 Results

Table 1 shows the demographic characteristics of the respondents. The mean age of the respondents was 31.74 (SD: 5.14); nearly half of them aged 21–30 (49.8%). Most were clinical nurses (92.4%) with a nursing diploma as their essential nursing qualification (84.3%). Although more than half of them had experiences in geriatric/psychiatric (50.2%) and had cared for PWD at work (66.8%), only 19.3% had attended previous training on Dementia. Only 17.0% had positive perceived experiences of working with Dementia, while only 13.9% had family members with Dementia.

Table 1: Demographics Characteristics of the respondents (*n*=223)

Variable	Category	Frequency (*n*)	Percentage (%)
Gender	Male	34	15.2
	Female	189	84.2
Age	21-30	111	49.8
	31-40	95	42.6
	41-50	15	6.7

	51-60	2	0.9
Nurse Position	U29	196	87.9
	U32 KUP	10	4.5
	U32	17	7.6
Education Level	Diploma	188	84.3
	Advanced Diploma/Post Basic	29	13.0
	Degree	6	2.7
Attended Previous Training on Dementia	Yes	43	19.3
	No	180	80.7
Experience in Geriatric/Psychiatry	Yes	112	50.2
	No	111	49.8
Family members with Dementia	Yes	31	13.9
	No	192	86.1
Cared for PWD at Work	Yes	149	66.8
	No	74	33.2
Perceived Experience of Working with Dementia	Very Negative	4	1.8
	Negative	21	9.4
	Neutral	160	71.7
	Positive	35	15.7
	Very Positive	3	1.3

Table 2 represents the level of nurses' knowledge of PWD. The mean knowledge score was 11.65 (SD=2.47), corresponding to 55% of accurate responses. Most respondents knew of the occurrence of Dementia due to the changes in the brain (97.3%) and were often progressive (91.9%). However, they had minimal knowledge regarding the cause of Dementia that might help to predict its progression (6.7%) and the characteristics of Dementia (10.8%).

Table 2: The Level of Knowledge of Dementia Among Nurses in a Government Hospital (*n*=223)

Questions	Frequency (%)	
	Correct	Incorrect
1. Dementia occurs because of changes in the brain.	217 (97.3)	6 (2.7)
2. Brain changes causing Dementia are often progressive.	205 (91.9)	18 (8.1)
3. Alzheimer's disease is the main cause of Dementia.	183 (82.1)	40 (17.9)
4. Blood vessel disease can also cause Dementia.	117 (52.4)	106 (47.5)
5. Confusion in an older person is almost always due to Dementia.	40 (17.9)	183 (82.1)
6. Only older adults develop Dementia.	99 (44.4)	124 (55.6)
7. Knowing the likely cause of Dementia can help to predict its progression.	15 (6.7)	208 (93.3)
8. Incontinence always occurs in the early stages of Dementia.	50 (22.4)	173 (77.6)
9. Dementia is likely to limit life expectancy.	136 (61.0)	87 (39.0)
10. When a person has late-stage Dementia, families can help others to understand that Person's needs.	194 (87.0)	29 (13.0)
11. People who have Dementia may develop problems with visual perception (understanding or recognizing what they see).	183 (82.1)	40 (17.9)
12. Sudden increases in confusion are characteristic of Dementia.	24 (10.8)	199 (89.2)
13. Uncharacteristic distressing behaviours may occur in people who have Dementia (e.g., aggressive behaviour in a gentle person).	177 (79.4)	46 (20.6)
14. Difficulty swallowing occurs in late-stage Dementia.	117 (52.5)	106 (47.5)
15. Movement (e.g., walking, moving in a bed or chair) is limited in late-stage Dementia.	167 (74.9)	56 (25.1)
16. Changing the environment (e.g., putting on a CD, opening or closing the blinds) will make no difference to a person who has Dementia.	64 (28.7)	159 (71.3)
17. When a person who has Dementia is distressed, it may help to talk to them about their feelings.	154 (69.1)	69 (30.9)
18. It is important to always correct a person who has Dementia when they are confused.	43 (19.3)	180 (80.7)
19. A person who has Dementia can often be supported to make choices (e.g., what clothes to wear).	182 (81.9)	41 (18.4)
20. It is impossible to tell if a person who is in the later stages of Dementia is in pain.	54 (24.2)	169 (75.8)
21. Exercise can sometimes be of benefit to people who have Dementia.	177 (79.4)	46 (20.6)

Table 3 represents the nurses' attitude towards Persons with Dementia. This study revealed a positive attitude towards PWD among the nurses in this government hospital, with a mean score of 85.96 (SD=10.48). They had a positive attitude towards the importance of knowing the history of people with Alzheimer's Disease-Related Dementia (ADRD), their needs, and the way to improve the lives of people with ADRD. The highest mean score of nurses' attitudes towards PWD was related to the importance of knowing the history of people with ADRD (Mean: 5.42; SD:1.32); the nurses agreed that every Person with ADRD has different needs (Mean: 5.15; SD:1.25); and they decided that there was a lot to do to improve the lives of people with ADRD (Mean: 4.98; SD:1.18). The

respondents disagreed that they were afraid of people with ADRD, showing a positive attitude toward PWD, although the mean score was the lowest.

Table 3: The Attitude Towards People with Dementia Among Nurses in a Government Hospital (*n*=223)

Questions	Mean Score	Standard Deviation
It is rewarding to work with people who have ADRD.	4.04	1.16
I am afraid of people with ADRD	3.15	1.27
People with ADRD can be creative	4.03	1.31
I feel confident around people with ADRD	3.80	1.20
I am comfortable touching people with ADRD.	4.45	1.34
I feel uncomfortable being around people with ADRD.	3.45	1.36
Every Person with ADRD has different needs	5.15	1.25
I am not very familiar with ADRD.	3.70	1.33
I would avoid an agitated person with ADRD.	3.71	1.41
People with ADRD like having familiar things nearby	4.80	1.37
It is important to know the past history of people with ADRD	5.42	1.32
It is possible to enjoy interacting with people with ADRD.	4.77	1.27
I feel relaxed around people with ADRD.	3.82	1.13
People with ADRD can enjoy life.	4.59	1.26
People with ADRD can feel when others are kind to them.	4.94	1.16
I feel frustrated because I do not know how to help people with ADRD	4.16	1.36
I cannot imagine taking care of someone with ADRD	3.63	1.35
I admire the coping skills of people with ADRD	4.54	1.19
We can do a lot now to improve the lives of people with ADRD	4.98	1.18
Difficult behaviors may be a form of communication for people with ADRD	4.83	1.08
Total Mean	**85.96**	**10.48**

Table 4 illustrates the perceived level of person-centred dementia care (POPAC) among the nurses in this study. The total mean score of POPAC was 63.14 (SD: 9.68), indicating a predominant self-perception of practising person-centred care among the nurses in this study. They showed excellent and active engagement with family members. They evaluated the cognitive condition of the older patients upon admission by using evidence-based instruments, such as the MMSE, SPMSQ, and CAM, with a mean score of more than 4.7.

Table 4: The Perceived Level of Person-Centred Dementia Care Among Nurses in a Government Hospital (*n*=223)

Questions	Mean score	Standard deviation
We assess the cognitive status of our older patients on admission.	**4.76**	1.08
We make environmental adjustments to avoid over-stimulation in older people with cognitive impairment (single rooms, noise reductions, etc.)	**3.85**	1.13
We diagnose symptoms of cognitive impairment (dementias, delirium etc.)	**4.25**	1.13
We spend more time with older patients with cognitive impairments as compared to cognitively intact patients.	**4.15**	0.99
We leave older people with cognitive impairments alone in the ward.	**2.00**	1.34
We use evidence-based tools to assess cognitive status of older patients	**4.66**	1.13
We consult specialist expertise (psychologist, neurologist, geriatrician) if we find that a patient has cognitive impairment.	**4.61**	1.13
We use evidence-based care guidelines in the care of older cognitively impaired patients.	**4.47**	1.11
We use biographical information about older patients' (habits, interests and wishes etc.) to plan their care.	**4.38**	0.97
We involve family members in the care of older patients with cognitive impairment.	**4.86**	0.97
We provide staff continuity for older patients with cognitive impairments (the same nurses providing care to these patients as often as possible).	**3.92**	1.29
We systematically evaluate whether or not older patients with cognitive impairment receive care that meets their needs.	**4.36**	1.01
We involve older patients with cognitive impairment in decisions about their care (examinations, treatments etc.)	**4.09**	1.21
We ensure that older patients with cognitive impairment have tests/ consultations in the unit rather than having to go to another department	**4.32**	1.08
We discuss ways to meet the complex care needs of people with cognitive impairment.	**4.44**	1.01

Table 5a portrays the relationship between the level of dementia knowledge and attitudes towards PWD, indicating a weak and positive correlation (rs: 0.15; p-value: 0.03). The increase in knowledge affects the nurses' attitude towards PWD.

Table 5a: Relationship Between Level of Dementia Knowledge and Attitudes Towards People with Dementia Among Nurses in a Government Hospital

Variable	Correlation Coefficient	Sig. (2-tailed)
Level of Knowledge of Dementia Attitudes towards people with Dementia	0.15	0.03

A weak and positive relationship was found between attitudes towards PWD and the perceived level of person-centredness (rs: 0.03; p-value: 0.63). Indicated that the more knowledgeable the nurses regarding PWD, their practices and care to meet the needs associated with old age and cognitive impairment will also be increased (Table 5b).

Table 5b: Relationship Between Attitudes Towards People with Dementia and The Perceived Level of Person-Centredness Among Nurses in a Government Hospital

Variable	Correlation Coefficient	Sig. (2-tailed)
Attitude towards people with Dementia Perceived level of person-centered dementia care	0.25	0.01

However, there was no relationship between dementia knowledge and the perceived level of person-centredness among nurses in a government hospital with a significance value of more than 0.05 (Table 5c).

Table 5c: Relationship Between the Level of Dementia Knowledge and The Perceived Level of Person-Centredness Among Nurses in a Government Hospital

Variable	Correlation Coefficient	Sig. (2-tailed)
Level of Knowledge of Dementia Perceived level of person-centered dementia care	0.03	0.63

5.0 Discussion

The satisfactory level of knowledge among nurses regarding Dementia, as revealed in the present study, aligns with the conclusions drawn from prior research by Balli et al. (2021) and Scerri et al. (2020). However, this result contradicted previous studies, which found that the overall dementia knowledge among their respondents was low (Chan et al., 2022; Rahmi et al., 2021; Sunaryo et al., 2020). This observed alignment can be attributed to the specific context of the current study, which concentrated on nurses functioning within a medical ward, offering direct care to adult and senior patients. Corroborating this contextual influence, a study by Afolabi et al. (2020) demonstrated that nurses engaged in caring for older patients exhibit a heightened awareness of Dementia.

However, it is noteworthy that the observed knowledge level in this study was comparatively lower than that reported in both studies above (Balli et al., 2021; Scerri et al., 2019), but it closely aligns with the results of the survey conducted by Urashima et al. (2022). This discrepancy is attributed to the diverse backgrounds of the respondents in the current study.

Many respondents demonstrated awareness of the occurrence of Dementia, attributing it to changes in the brain that are often progressive. Nevertheless, their understanding of the specific causes of Dementia, which could aid in predicting its progression, and the distinctive characteristics of Dementia remained limited. This was supported by a study by Balli et al. (2021).

Most studies indicated that nurses exhibited a positive attitude towards individuals with Dementia. This attitude was influenced by factors such as their knowledge, perceived level of person-centred dementia care, and job satisfaction when working with individuals with Dementia (Scerri et al., 2020; Sunaryo et al., 2020; Keuning-Plantinga et al., 2022). While a positive attitude towards persons with Dementia predicted a heightened sense of competence in aged care staff, it showed no correlation with staff knowledge and training.

Regarding the perceived level of person-centred dementia care (POPAC), the study's findings suggested a prevailing self-perception among nurses actively engaging in person-centred care. This was manifested through their positive interactions with family members and their dedication to assessing the cognitive condition of older patients upon admission, employing established, evidence-based instruments such as the MMSE, SPMSQ, and CAM. Consistent with these observations, previous studies by Scerri et al. (2020) and Hayward et al. (2022) have supported the notion of nurses actively embracing person-centred care practices.

The provision of person-centred care for individuals with Dementia within a hospital environment poses a substantial challenge in the healthcare industry. Addressing this challenge requires organizations to adopt indicators that effectively measure person-centeredness, facilitating continuous improvement. This approach can be instrumental in enhancing quality, disseminating knowledge, and promoting education, particularly in situations where nurses play a pivotal role as primary caregivers for individuals with Dementia, as highlighted in the study by Grealish et al. (2018).

This study unveiled a weak yet positive relationship between dementia knowledge and nurses' attitudes and between attitudes and the provision of person-centred care for individuals with Dementia. The findings underscore the significant impact of attitude on nurses' knowledge about Dementia and their approach to person-centred care for individuals with Dementia. This observation aligns with previous research conducted by Scerri et al. (2020) and Sunaryo et al. (2020), highlighting the influential role of attitude in shaping the interplay between dementia knowledge and the implementation of person-centred care practices by healthcare professionals.

6.0 Conclusion and Recomendation

The study findings indicate that hospital nurses require additional training and support to enhance their knowledge and attitudes towards persons with Dementia, enabling them to deliver quality dementia care and person-centred practices. Comprehensive dementia knowledge is crucial for nurses to recognize the importance of evidence-based care guidelines. At the same time, a positive attitude towards Dementia facilitates the implementation of interpersonal person-centred care. Training programs for acute care staff should prioritize improving knowledge and attitudes, a goal that hospital administrators can promote through training that develops technical and intellectual skills alongside interpersonal and moral skills in dementia care.

Although this is the initial attempt to examine the relationship between hospital staff knowledge and attitudes with the perceived level of person-centred dementia care, the sample consisted of a homogeneous convenience in one acute hospital. This limits the generalizability of the findings. Moreover, due to social-desirability bias, perceptions of person-centred care practices reported by staff may not correspond to the observed practices.

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Paper Contribution to Related Field of Study

Fatimah Sham carried out the quality of work-life study by carrying out the research general supervision of the research, making substantial contributions to conception and design, acquisition of data, and analysis and interpretation of data, was involved in drafting the manuscript and revising it critically for important intellectual content. Adni Hazuanis contributes to the data collection process, analysis, and interpretation. PM Dr Zamzalida Abd Mulud and Li Shuzen anchored the review, edited the final manuscript, and approved the article submission.

References

Afolabi, A. O., Eboiyehi, F. A., & Afolabi, K. A. (2020). Gender analysis of nurses' attitude towards care of the elderly with dementia in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria. Journal of women & aging, 32(2), 203–219. https://doi.org/10.1080/08952841.2019.1682488.

Arvanitakis, Z., Shah, R. C., & Bennett, D. A. (2019). Diagnosis and Management of Dementia: Review. Journal of the American Medical Association, 322(16), 1589-1599

Balli, F. N., Unsal, P., Halil, M. G., Dogu, B. B., Cankurtaran, M., & Demirkan, K. (2021). Effect of clinical pharmacists' interventions on dementia treatment adherence and caregivers' knowledge. Geriatrics and Gerontology International, 21(6), 506–511. https://doi

Chan, C., Ong, M.J., Zakaria, A. et al. Assessment of dementia knowledge and its associated factors among final year medical undergraduates in selected universities across Malaysia. BMC Geriatr 22, 450 (2022). https://doi.org/10.1186/s12877-022-03148-7

Grealish, L., Simpson, T., Soltau, D., & Edvardsson, D. (2018). Assessing and providing person-centred care of older people with cognitive impairment in acute settings: threats, variability, and challenges. Collegian. doi: 10.1016/j.colegn.2018.03.009

Hayward, J. K., Gould, C., Palluotto, E., Kitson, E., Fisher, E. R., & Spector, A. (2022). Interventions promoting family involvement with care homes following placement of a relative with dementia: A systematic review. Dementia (London, England), 21(2), 618–647. https://doi.org/10.1177/14713012211046595

Keuning-Plantinga, A., Roodbol, P. F., Krijnen, W. P., & Finnema, E. J. (2020). Nurses' Perceptions in Caring for People with Dementia in Dutch Acute Hospitals. Journal of Clinical Nursing, 11.

Lin, P. C., Hsieh, M. H., Chen, M. C., Yang, Y. M., & Lin, L. C. (2017). Knowledge Gap Regarding Dementia Care among Nurses in Taiwanese Acute Care Hospitals: A Cross- Sectional Study. Geriatrics & Gerontology International, 18(2), 276-285

Mat Nuri, T. H., Hong, Y. H., Ming, L. C., Mohd Joffry, S., Othman, M. F., & Neoh, C. F. (2017). Knowledge on Alzheimer's Disease among Public Hospitals and Health Clinics Pharmacists in the State of Selangor, Malaysia. Frontiers in Pharmacology, 8, 739.

Rahmi, U., Andriyani, S., Supriatin, E., & Rahmayati, E. (2021). Nurses' Knowledge About Dementia Care: A Cross-sectional Survey. Malaysian Journal of Medicine and Health Sciences, 17(8), 60–65.

Scerri, A., Innes, A., & Scerri, C. (2020). Person-centered dementia care in acute hospital wards—the influence of staff knowledge and attitudes. Geriatric Nursing, 41(3), 215–221. https://doi.org/10.1016/j.gerinurse.2019.09.001

Sunaryo, S. R. A., Saifullah, A. D., & Mulyani, S. (2020). Belitung Nursing Journal, 6(6), 196-202. https://belitungraya.org/BRP/index.php/bnj/index

Strom, B. S., Engedal, K., & Andreassen, L. (2019). Nursing Staff's Knowledge and Attitudes toward Dementia: A Pilot Study from an Indian Perspective. Dementia and Geriatric Cognitive Disorders Extra, 9(3), 352-361.

Urashima, S., Greiner, C., Ryuno, H., & Yamaguchi, Y. (2022). Factors affecting the quality of dementia care at acute care hospitals: A cross-sectional study. Journal of clinical nursing, 31(15-16), 2198–2207. https://doi.org/10.1111/jocn.16036

U.S. Department of Health and Human Services. (2021). What is dementia? symptoms, types, and diagnosis. National Institute on Aging. Retrieved October 25, 2022, from https://www.nia.nih.gov/health/what-is-dementia

World Health Organization. (2022). Dementia. World Health Organization. Retrieved October 25, 2022, from https://www.who.int/news-room/fact-sheets/detail/dementia