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Article

A Predictive Model for Nursing Students' Person-Centered Care Competency: Focusing on Patients with Dementia

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Abstract

This study aimed to verify a prediction model identifying the causal relationships and paths among factors that affect Korean nursing students' provision of person-centered care to patients with dementia. This was a covariance structure analysis study to establish a hypothetical model of 313 Korean nursing students located in a metropolitan area. IBM SPSS version 18.0(Chicago, IL, USA) and AMOS version 5.0(Chicago, IL, USA) were used to analyze the data. Structural equation modeling analysis was applied to verify convergent and discriminant validity using higher-order factor analysis in the final model analysis. The model fit indices of the research model were as follows: $\chi^2/df=1.83(p<.001)$, GFI=.91, AGFI=.88, NFI=.91, CFI=.90, RMR=.04, and RMSEA=.05. The factors affecting person-centered care, clinical practice adaptation ($\gamma=.02, p=.014$), nursing professionalism ($\gamma=.45, p=.024$), and empathy ($\gamma=.21, p<.001$) had direct effects, whereas clinical practice adaptation ($\gamma=.21, p=.013$) and nursing professionalism ($\gamma=.08, p=.004$) had indirect effects. These factors can explain 40% of the variance in person-centered care. This study is significant because it provides basic data for developing an educational program that can improve the person-centered care capacity of domestic nursing students by confirming that clinical practice adaptation, nursing professionalism, and empathy are essential factors that affect person-centered care.

Keywords: nurse student; person-centered care; empathy; clinical practice adaptation; nursing professionalism

1. Introduction

As life expectancy increases with the development of advanced medical technology, South Korea is becoming a rapidly aging country. Those aged 65 years or older accounted for 15.7% of the total South Korean population in 2020 and are expected to account for 45.9% in 2060 and 46.1% in 2065, creating a super-aged society [1,2]. As South Korea progresses toward becoming a super-aged society, geriatric diseases are increasing in prevalence. The number of patients with dementia was approximately 860,000 in 2020 and is expected to exceed 1.36 million in 2030, 2.2 million in 2040, and 3 million in 2050 [2].

Dementia refers to a group of various symptoms related to a decline of cognitive function and cases in which cognitive dysfunction, including memory impairment without impaired consciousness, appears continuously owing to brain disease or damage [3]. Dementia is a degenerative neurological disease that progresses slowly over time, resulting in cognitive decline and behavioral disorders that make it difficult to maintain one's daily life, live independently, and perform social roles, significantly reducing individuals' quality of life [4]. In addition, unlike general diseases, dementia cannot be cured to allow patients to return to their previous lives but instead results in a loss of cognitive function and the need for continuous care [5]. Therefore, dementia is a disease for which care must be based on not only knowledge of pathological processes or treatment methods but also psychological and emotional understanding of patients with dementia. Thus, person-centered care has been emphasized recently.

Person-centered care refers to providing individualized nursing care to patients with a common meaning of human-centeredness. Specifically, person-centered care refers to the perception and practice of caregivers who not only meet patients' psychological needs but also respect their values, abilities, and desire to maintain autonomy, self-esteem, and independence [6]. Thus, person-centered care is a system that emphasizes the need to understand each person's characteristics and respect and reflect their preferences [7]. It requires more than simply providing patients with what they want, as caregivers must also communicate smoothly with them to find solutions considering the individual's lifestyle and social situation, putting the patient and their family first in all decisions [8]. Person-centered care for patients with dementia is essential because everyone requires individualized nursing care to maintain their physical and mental health as much as possible. Furthermore, families should also be included as targets of care. Person-centered care can positively affect not only the care recipients but also the nurses who provide care, indicating the need for multifaceted research on this topic.

Nurses are the main healthcare professionals who care for patients with dementia, and the demand for nurses is increasing owing to the increase in the number of older adults with dementia. Nursing students will eventually be required to provide nursing services by meeting with dementia patients and their caregivers directly in healthcare settings. Therefore, nursing students must have a correct awareness and positive attitude toward dementia. Going beyond understanding the mind to reach a certain level of empathy is crucial [9]. Empathy is a cognitive element that recognizes the emotions, motivations, and positions of others, allowing one to feel what others do in a similar way [10]. Empathy facilitates therapeutic relationships between nurses and patients and is helpful in providing individualized nursing care. Furthermore, empathy can influence a patient's disease course and outcome, indicating its role as a major influencing factor in person-centered care [9]. Therefore, this study aimed to determine the extent of the influence empathy has as a critical variable in nursing students' person-centered care for patients with dementia.

Previous studies have reported that the capability to practice person-centered care must be sufficiently fostered in nurses before graduation through a systematic curriculum starting in undergraduate nursing programs [9,10]. Despite the emphasis on fostering person-centered care among nursing students so they can perform high-quality nursing in the care field, the participants in previous studies on person-centered care published in Korea have been nurses in nursing hospitals or working in cancer wards. Thus, research that identifies the influential relationships between variables that affect the ability of nursing students in Korea to provide person-centered care is lacking. Moreover, no systematic prediction model that can be comprehensively understood has been developed. Nursing students must be prepared to provide quality nursing care to patients with dementia. Therefore, nursing students must first develop positive attitudes toward dementia, nursing professionalism, and empathy and provide person-centered care to patients with dementia and their families. To address this need, this study constructed a hypothetical model of person-centered care for patients with dementia based on the social cognitive career theory of Lent, Brown, and Hackett [11], targeting Korean nursing students who will provide nursing care in the future. Accordingly, this study considered nursing students' attitudes toward dementia and clinical practice training environments as personal and environmental factors, respectively, and clinical practice adaptation and nursing professionalism were included as learning experiences. Empathy was the mediating variable, and person-centered care was the dependent variable. Thus, this study aimed to identify factors that can affect nursing students' person-centered care capabilities and construct a model showing the specific paths and effects of the variables.

This study established a theoretical framework based on social cognitive career theory [11] to identify the causal relationships and degrees of influence among factors affecting Korean nursing students' provision of person-centered care to patients with dementia. Social cognitive career theory posits that various personal (e.g., gender, individual characteristics, personality, and status) and environmental factors (e.g., economic means, social support, and role models) interact to affect individual development and cognitive and behavioral attitude formation. Thus, social cognitive

career theory explains the process of career development and career choice based on personal, cognitive, and environmental factors, such that the path and influence may vary depending on the factors relevant to the research participants. Therefore, the hypothetical model proposed in this study comprises two exogenous variables, three mediating variables, and one dependent variable based on previous studies to provide a multifaceted and clear explanation. Specifically, attitudes toward dementia were set as an exogenous personal factor, and clinical practice training environments were set as environmental factors. Learning experience was used as the mediating variable set as clinical practice adaptation, and expectation was set as nursing professionalism. Previous studies have reported that empathy is a major influencing factor of person-centered care; therefore, empathy was set as an additional variable and person-centered care as a dependent variable (Figure 1).

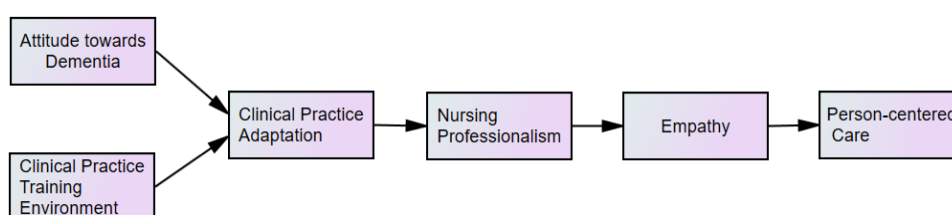


Figure 1. Theoretical framework.

2. Materials and Methods

2.1. Design

This was a covariance structure analysis study to establish a hypothetical model of attitudes toward dementia, clinical practice training environment, clinical practice adaptation, nursing professionalism, empathy, and person-centered care among Korean nursing students. The appropriateness and hypotheses were also verified.

2.2. Participants

This study was conducted from October 1 to December 31, 2023, after receiving approval from the institutional review board to ensure ethicality. The participants were 313 nursing students located in a metropolitan area. All participants voluntarily agreed to participate in the study. Five to ten times the number of parameters is the recommended sample size for structural modeling research. Based on this standard, the acceptable range for the number of samples in this study was 225 to 500, which was an appropriate number of samples for this study [12].

2.3. Research Tools

2.3.1. Attitude Toward Dementia

The attitude toward dementia scale developed by O'Connor and McFadde [13] and adapted for use with a Korean population by Choi et al. [14] was used in this study. Participants' attitudes toward dementia were assessed using 20 items, with scores ranging from 1 to 7. Higher scores indicated a more positive attitude toward dementia. Regarding reliability, Cronbach's α was .85 at the time of development [13] and .83 in the present study.

2.3.2. Clinical Practice Training Environment

In this study, the clinical practice training environment was assessed using a tool developed by Dunn [15] and revised and supplemented in Korean by Han [16]. The measure comprises 19 items across five subfactors: three items on the relationship between staff and students, three items on the ward atmosphere, five items on the performance of nursing managers, four items on relationships

with patients, and four items on student satisfaction. The scores ranged from 1 to 5, with a higher score indicating a more favorable clinical practice training environment. Cronbach's α was .84 in Han [16] and .82 in this study.

2.3.3. Clinical Practice Adaptation

This study used the tool Park [17] developed to measure clinical practice adaptation. It includes 12 items and two subfactors: five items on emotional reactions to clinical practice and four items on understanding majors through clinical practice. Scores ranged from 1 to 5, with higher scores indicating greater adaptation to clinical practice. Cronbach's α was .73 in Park [17] and .88 in this study.

2.3.4. Nursing Professionalism

Nursing professionalism was assessed using a measure developed by Yeun, Kwon, and Ahn [18] and modified and supplemented by Han, Kim, and Yun [19]. It consists of 18 items and five subfactors: six items on professional self-concept, five items on social awareness, three items on nursing professionalism, two items on nursing roles, and two items on nursing independence. The scores ranged from 1 to 5, with a higher score indicating a higher level of nursing professionalism. Cronbach's α was .86 in Han et al. [19] and .85 in this study.

2.3.5. Empathy

The Interpersonal Reactivity Index (IRI) developed by Davis [20], as translated into Korean by Kang et al. [21], was used in this study. The reliability and validity of the Korean-version IRI were previously verified. This scale comprises 28 items and four subfactors: seven items on perspective taking, seven items on imagination, seven items on empathic concern, and seven items on personal distress. The scores ranged from 1 to 5, with higher scores indicating higher levels of empathy. Cronbach's α was .72 in Kang et al. [21] and .70 in this study.

2.3.6. Person-Centered Care

The Korean version of the Person-centered Care Assessment Tool (P-CAT) developed by Edvardsson et al. [7] and translated by Tak, You, and Kim [22], which has previously shown good reliability and validity, was used in this study. This P-CAT consists of 13 items and two subfactors: seven items on individualized care and six on organizational and environmental support. Scores range from 1 to 5 points, and higher scores indicate a greater capacity for positive person-centered care capacity. Cronbach's α was .72 in Tak et al. [22] and .81 in this study.

2.4. Data Collection and Analysis Methods

From October 1 to December 20, 2023, self-report questionnaires were distributed to 450 Korean nursing students enrolled in nursing colleges located in a metropolitan area for data collection. Of those 450 questionnaires, 382 were returned, and 313 were used for actual analysis data, with 67 excluded because of insufficient responses.

SPSS 18.0 for Windows and AMOS 5.0 were used to analyze the data. Structural equation modeling analysis was applied to verify convergent and discriminant validity using higher-order factor analysis in the final model analysis. First, SPSS was used to analyze the participants' demographic characteristics and the validity and reliability of the questionnaire, and exploratory factor analysis was performed to confirm its construct validity. Second, the hypothetical model was used to verify the validity of the factors for constructing a structural equation model of person-centered care. A hypothetical model was developed using confirmatory factor analysis with AMOS 5.0. Third, convergent validity was used to verify the degree of consistency of multiple scales measuring the same concept; factor loading, squared multiple correlations, construct reliability, and average variance extracted (AVE). Discriminant validity was used to verify the extent to which the

scales measured each concept differently. Correlation coefficients and values were used. Fourth, the factors in this study were analyzed using high-, first-, and second-order factor analyses. Finally, χ^2 , χ^2/df (≤ 3.00), adjusted goodness of fit index (AGFI $\geq .90$), goodness of fit index (GFI $\geq .90$), comparative fit index (CFI $\geq .90$), normal fit index (NFI $\geq .80$), and root mean square error of approximation (RMSEA $\leq .10$) were used to verify model fit. The values of NFI and CFI, which are relative fit indices, were considered to indicate good fit if they were .90 or higher. RMSEA, which considers the model's parsimony of the model, indicates a very good fit when $< .05$, a good fit when $< .08$, a fair fit when $< .10$, and a poor fit when $> .10$ [12].

3. Results

3.1. General Participant Characteristics

To determine participants' general characteristics, data were collected on gender, age, grade, religion, personality, and satisfaction with major as well as whether they had taken courses related to dementia, participated in dementia-related training, had experience with social service programs related to older adults, and had a family history of dementia. Participants' experiences caring for patients with dementia were also investigated and analyzed.

The participants comprised 266 (85%) female and 47 (15%) male students (15%), and their average age was 23.75 years. The sample included 184 third-year students (58.8%) and 129 fourth-year students (41.2%), and the majority reported they were not religious (206, 65.8%). Regarding personality traits, 150 (47.9%) participants had mixed traits, 107 (34.2%) were introverted, and 56 (17.9%) were extroverted. Furthermore, 249 (85.9%) participants had taken courses related to dementia, whereas 164 (52.4%) had no experience with dementia-related training. A total of 193 (61.7%) participants had experience with social service programs for older adults, 52 (16.6%) had a family history of dementia, and 98 (31.3%) had experience caring for patients with dementia.

3.2. Validity Verification and Modification

The fit of the initial model with variables included was modified by verifying the convergent validity by removing measurement items and factors with low validity based on confirmatory factor analysis. Discriminant validity was verified to determine whether the factors each measured separate concepts.

For convergent validity, items with standardized factor loadings (λ) less than 0.6 and significance (t) less than 1.96 were removed through the first confirmatory factor analysis. After removing these items, the concept reliability was high, at .70 or above. The model was then determined to have no problem with convergent validity and was used in the analysis without further changes.

Correlation coefficients and AVE values were used to verify discriminant validity. The correlation coefficients between each factor should be less than the square root of the value. The discriminant validity results verified that the correlation coefficients of all factors ranged from .11 to .61, which was smaller than the $\sqrt{\text{AVE}}$ range of .61 to .91, indicating good discriminant validity (Table 1).

Table 1. The Correlation and Discriminant Validity of the Model.

Variables	Attitude towards Dementia	Clinical Practice Training Environment	Clinical Practice Adaptation	Nursing Professionalism	Empathy	Person-centered Care
Attitude towards Dementia	.61					
Clinical Practice Training Environment	.11	.82				
Clinical Practice Adaptation	.60	.31	.89			
Nursing Professionalism	.57	.40	.60	.91		
Empathy	.46	.36	.57	.65	.87	
Person-centered Care	.37	.40	.40	.61	.52	.78

Cronbach's α	.83	.82	.88	.85	.70	.81
CCR	.75	.89	.94	.93	.86	.86
AVE	.38	.68	.80	.82	.75	.61

3.3. Validity Verification and Modification

3.3.1. Research Hypotheses

Based on the results of a preliminary study, 14 hypotheses were proposed, with the exogenous variables of attitude toward dementia, clinical practice training environment, and clinical practice adaptation as mediating variables of nursing professionalism and empathy and person-centered care as the outcome variable. The model fit indices of the research model were as follows: $\chi^2/df=1.83(p<.001)$, GFI=.91, AGFI=.88, NFI=.91, CFI=.90, RMR=.04, and RMSEA=.05. Therefore, the research model was deemed suitable for the sample data, and an analysis was conducted. Based on the results of the hypothesis verification tests, 8 out of 14 hypotheses were accepted (Table 2).

Table 2. Result of Fit Statistics of Measurement Model.

Variables	χ^2/df	p	GFI	AGFI	NFI	CFI	RMR	RMSEA
Hypothetical	3.12	<.00	.81	.74	.72	.76	.08	.10
Model - fit	1.83	<.00	.91	.88	.91	.90	.04	.05

GFI=Goodness of fit index; AGFI=Adjusted goodness of fit index; NFI=Normed fit index; CFI=Comparative fit index; RMR=Root mean residual; RMSEA=Root mean squared error of approximation.

3.3.2. Analysis of the Model's Direct, Indirect, and Total Effects

Structural equation modeling has the advantage of being able to derive direct, indirect, and total effects easily among variables. The bootstrapping method was used to determine the significance of the indirect effect, and the results are as follows (Table 3). First, when examining the factors affecting clinical practice adaptation, attitude toward dementia ($\gamma=.58, p<.001$) and clinical practice training environment ($\gamma=.25, p<.001$) had direct effects on increased clinical practice adaptation. The explanatory power of these factors was 43%. Second, clinical practice adaptation ($\gamma=.29, p<.001$) had a direct effect on nursing professionalism. Attitude toward dementia ($\gamma=.17, p=.004$) and clinical practice training environment ($\gamma=.07, p=.003$) had indirect effects on nursing professionalism through clinical practice adaptation as a complete mediator. The direct effect of clinical practice adaptation and indirect effects of attitude toward dementia and the clinical practice training environment explained 49% of the variance in nursing professionalism. Third, when examining the factors affecting empathy, nursing professionalism ($\gamma=.44, p<.001$) had a direct effect, explaining 48% of the variance. Fourth, examining the factors affecting person-centered care, clinical practice adaptation ($\gamma=.02, p=.014$), nursing professionalism ($\gamma=.45, p=.024$), and empathy ($\gamma=.21, p<.001$) had direct effects, whereas clinical practice adaptation ($\gamma=.21, p=.013$) and nursing professionalism ($\gamma=.08, p=.004$) had indirect effects. These factors can explain 40% of the variance in person-centered care.

Table 3. Effects of Predictor Variables in Model.

Exogenous variable	Endogenous variables	Estimate	S.E	C.R (t)	Direct effect (p)	Indirect effect (p)	Total effect (p)	Hypothesis	SMC (%)
Attitude towards Dementia	Clinical Practice Adaptation	.38	.05	8.12	.58 (<.001)	-	.58 (<.001)	Accept	.43
Clinical Practice Training Environment		.28	.07	4.30	.25 (<.001)	-	.25 (<.001)	Accept	
Attitude towards Dementia	Nursing Professionalism	.20	.04	4.65	.36 (.007)	.17 (.004)	.53 (.007)	Accept	.49

Clinical Practice Training Environment		.25	.06	4.51	.27 ($<.001$)	.07 (.003)	.34 ($<.001$)	Accept	
Clinical Practice Adaptation		.24	.06	3.82	.29 ($<.001$)	-	.29 ($<.001$)	Accept	
Attitude towards Dementia		.04	.05	.70	.06 (.059)	.37 (.510)	.43 (.059)	Reject	
Clinical Practice Training Environment		.10	.07	1.51	.10 (.115)	.21 (.162)	.31 (.115)	Reject	
Clinical Practice Adaptation	Empathy	.21	.07	2.81	.24 (.709)	.13 (.071)	.37 (.709)	Reject	.48
Nursing Professionalism		.46	.10	4.83	.44 ($<.001$)	-	.44 ($<.001$)	Accept	
Attitude towards Dementia		.01	.06	.24	.02 (.050)	.31 (.055)	.33 (.028)	Reject	
Clinical Practice Training Environment		.08	.07	1.09	.07 (.037)	.21 (.101)	.29 (.007)	Reject	
Clinical Practice Adaptation	Person-centered Care	-.02	.08	-.25	-.02 (.014)	.21 (.013)	.18 (.104)	Reject	.40
Nursing Professionalism		.53	.13	4.19	.45 (.024)	.09 (.004)	.54 (.007)	Accept	
Empathy		.23	.11	2.10	.21 ($<.001$)	-	.21 ($<.001$)	Accept	

4. Discussion

Person-centered care is considered a competency nursing students must develop during their undergraduate studies and is important for providing high-quality nursing care to patients in actual clinical settings. Therefore, this study examined the factors affecting person-centered care for patients with dementia using a sample of domestic nursing students. The findings verified the fit between the hypothetical model of person-centered care for Korean nursing students and actual data. Accordingly, the effects of nursing students' attitudes toward dementia and clinical practice training environments on person-centered care through clinical practice adaptation, nursing professionalism, and empathy are discussed below.

First, nursing students' attitudes toward dementia and the clinical practice training environment had direct positive effects on clinical practice adaptation. No previous research has analyzed this specifically, making it difficult to compare the results of this study with the current literature. However, a previous study conducted with a sample of male nursing students in Korea reported that clinical practice adaptation varies depending on attitude [23]. Furthermore, the clinical practice training environment has been shown to affect clinical practice stress and anxiety [24,25]. Therefore, it can be assumed that nursing students' attitudes toward dementia and the clinical practice training environment can affect their clinical practice adaptation. Attitudes toward dementia are cognitive attitudes that perceive dementia and patients with dementia either negatively or positively and are the basis for behavioral attitudes when working with patients with dementia [26,27]. A previous study reported that nurses' positive attitudes toward dementia can improve their empathy in understanding patients with dementia and increase the quality of nursing services [27]. Thus, a positive attitude toward dementia can also affect Korean nursing students' adaptation to clinical practice. The clinical practice of Korean nursing students is designated as hospital-level medical institutions with more than 300 beds, specialized hospitals such as children's hospitals, geriatric hospitals, women's hospitals, integrated nursing and care service operation wards, public health centers, public health subcenters, and community institutions such as industrial sites. To improve clinical practice effectiveness and help students adapt to clinical practice, it is necessary to secure a practice site with a systematic practice environment, appoint field leaders with educational capabilities, and provide students with videos or field trips to clinical sites to reduce tension and aid adaptation in an unfamiliar clinical practice environment. Furthermore, aspects of pre-clinical practice education, such as a detailed introduction and orientation to clinical practice institutions, simulation practice, and step-by-step clinical performance ability evaluation, need to be

strengthened. Nursing students' knowledge, skills, attitudes, beliefs, values, ethical standards, and nursing environments affect their adaptation to clinical practice, and these factors are shaped as part of their behavior when preparing to become a nurse [25]. Therefore, a positive attitude and qualitative improvements in the clinical practice training environment are important for nursing students' active adaptation to clinical practice.

Second, the clinical practice training environment and clinical practice adaptation had direct effects on nursing professionalism and attitudes toward dementia, while the clinical practice training environment had an indirect positive effect on nursing professionalism through clinical practice adaptation. These results are similar to those reported in previous studies conducted among nursing students and nurses [28,29]. Nursing professionalism is formed and gradually developed through major theories and practical education from nursing students and continues to change after becoming a nurse under the influence of various environmental factors [30]. Practical education has shown a particularly strong effect on nursing students' nursing professionalism and facilitates the formation of positive nursing professionalism as they adapt to clinical practice [29]. In this study, nursing professionalism was directly and indirectly affected by clinical practice training environment and adaptation. Therefore, to develop appropriate nursing professionalism, a high-quality clinical practice training environment should be provided, and clinical practice adaptation should be increased. Many nursing students experience stress caused by unexpected situations, role ambiguity, and various relationships with medical personnel, patients, and guardians during clinical practice and cannot adapt to clinical practice when experiencing difficulties. Therefore, a clinical practice training environment that reflects the position and needs of nursing students should be created. Multifaceted efforts driven by schools, clinical practice institutions, clinical practice instructors, and clinical practice field instructors are necessary for clinical practice adaptation. A continuous exchange of opinions and agreements between clinical practice institutions and schools should be provided to improve the clinical practice training environment. Schools should secure appropriate clinical practice institutions for each clinical practice participant. Furthermore, clinical practice institutions should understand nursing students' lack of knowledge and skills, recognize that clinical practice is part of the education students should receive as part of the curriculum, and consider it necessary to help students adapt to clinical practice institutions. This improved clinical practice training environment and adaptation of nursing students is posited to lead to the formation of positive nursing professionalism.

Third, nursing professionalism had a direct effect on empathy. These results are similar to those of previous studies conducted among nursing students [31,32]. Empathy is an emotional response that considers others' situations more than one's own, and empathy in nursing is a basic prerequisite for providing high-quality nursing and includes behavioral empathy beyond internal empathy [33]. Therefore, patients can only be approached the patient when nurses are providing empathy-based interventions. When nursing is driven by an altruistic motivation to understand and alleviate patients' difficulties, person-centered nursing based on empathy can be provided. According to previous studies, empathy can be improved through nursing education, and learning strategies regarding care should be included in a healthcare environment that increasingly emphasizes technology [34]. Therefore, to improve nursing students' empathy toward patients with dementia, empathy should be strengthened through multifaceted educational methods rather than simple knowledge-based education.

Fourth, the clinical practice training environment, clinical practice adaptation, nursing professionalism, and empathy directly affected increased person-centered care. In contrast, clinical practice adaptation and nursing professionalism indirectly affected increased person-centered care through mediation. These results are similar to those reported in previous studies [27,35]. The main factors affecting nurses' person-centered care were classified into personal and organizational factors. Jang and Shin [35] analyzed organizational factors related to nurses' working environment and found them to be a major factor influencing person-centered care, which aligns with the results of this study. The nursing working environment requires sufficient resources, time, and human resources as

perceived by nurses, as well as the physical environment, interactions between members of the organization, organizational aspects that affect the content and method of nurses' work performance, and policy aspects that have a great impact on patient nursing. Therefore, nursing students need to improve their clinical practice training environment, an organizational element, and their clinical practice adaptation.

Nursing professionalism was found to have a direct positive effect on person-centered care, while clinical practice adaptation was found to have an indirect positive effect on person-centered care through nursing professionalism and empathy. These results are consistent with those reported in previous research [36]. Nursing professionalism is the core of holistic nursing practice and provides nurses with appropriate beliefs about the essence of nursing, a systematic view of nursing, and a professional understanding of nursing work. Furthermore, since nursing professionalism develops through not only theoretical education during undergraduate courses but also clinical practice and extracurricular activities [37], a multifaceted educational environment must be created that can foster appropriate nursing professionalism. Previous studies have reported that the formation of appropriate nursing professionalism affects nursing students' person-centered care before the high or low level of nursing professionalism; therefore, both specific and diverse analyses of nursing students' nursing professionalism need to be performed. These results indicate the need to develop and operate various job creation/entrepreneurship and extracurricular programs to encourage professional nursing attitudes, thereby providing opportunities for nursing students to enhance their capabilities and theoretical knowledge.

Empathy is an important factor that improves the ability to guess a patient's behavior, helps assess the patient's subjective experience, and provides individualized nursing care, resulting in improved patient well-being and quality of care [33]. Previous studies have reported that empathy improves through education [10,38]. Therefore, before nursing students enter the field to care for patients with dementia, education that can improve empathy, a complex and dynamic concept, and core competency is required. This will help nurses recognize the individual needs of patients with dementia, who experience various symptoms such as a decline in cognitive function and communication difficulties, and provide empathetic patient-centered nursing care. However, few studies have investigated factors related to empathy, such as working with patients with dementia and targeting domestic nursing students who have clinical practice experience. Therefore, future studies should consider various personal and social factors. Furthermore, because nursing students have not yet provided direct nursing care to patients with dementia, repeated and multifaceted analyses of person-centered care are needed.

5. Conclusion

This study constructed a model to explain and predict the factors that affect domestic nursing students' person-centered care of patients with dementia. Based on previous studies and a literature review, the hypothetical model was constructed using Lent, Brown, and Hackett's [11] social cognitive career theory, and its suitability for explaining the collected data was tested.

In a group of Korean nursing students, person-centered care was found to be directly affected by the clinical practice training environment, clinical practice adaptation, nursing professionalism, and empathy, while clinical practice adaptation and nursing professionalism had indirect effects, such as mediation. Specifically, clinical practice adaptation and nursing professionalism were found to be mediating factors. This study is significant because it provides basic data for developing an educational program that can improve the person-centered care capacity of domestic nursing students by confirming that clinical practice adaptation and nursing professionalism are essential factors that affect person-centered care.

This study has some limitations. First, participants' competency was assessed based on a self-report questionnaire rather than more objective measures. Furthermore, given the lack of previous studies on the relationship between empathy and person-centered care among Korean nursing students, there are limitations in presenting the basis for the results of this study; therefore, additional

research is needed. This study's findings suggest that person-centered care can be strengthened and evaluated through various educational factors related to nursing students' capabilities in providing care for patients with dementia, such as the clinical practice training environment, clinical practice adaptation, nursing professionalism, simulation practice reflecting empathy, roleplay, standardized patient use, and mutual filming and feedback.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki and approved by the Institutional Review Board of Korea National Institute for Bioethics Policy (approval number P01-202310-01-064; approval date: October 26, 2023).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available owing to the information contained that could compromise the privacy of research participants.

Conflicts of Interest: The author declares no conflict of interest.

References

1. Kim, E.Y.; Chang, S.O. Qualitative meta-synthesis of nurses' caring experience for people with dementia. *J. Korean Acad. Fundam. Nurs.* 2021, 28, 272–283. <https://doi.org/10.7739/jkafn.2021.28.3.372>
2. Central Dementia Center. *Dementia Status in Korea 2022*; Ministry of Health and Welfare: Seoul, Korea, 2022.
3. Alzheimer's Association. *Alzheimer's and dementia facts and figures*. Available online: <https://www.alz.org/alzheimers-dementia/facts-figures> (accessed on 23 March 2021).
4. Min, H.G.; Chang, J.K. Meta-analysis of the effects of dementia prevention program for Korean elderly. *Korean J. Gerontol. Soc. Welf.* 2020, 75, 85–119. <https://doi.org/10.21194/KJGSW.75.3.202009.85>
5. Kim, C.G.; Lee, Y.H. Nurses' moral distress on caring for older adults with dementia. *J. Korean Gerontol. Nurs.* 2020, 22, 236–246. <https://doi.org/10.17079/jkgn.2020.22.3.236>
6. Kim, S.; Tak, S.H. Validity and reliability of the Korean version of person-centered practice inventory. *J. Korean Acad. Nurs.* 2021, 51, 363–379. <https://doi.org/10.4040/jkan.21027>
7. Edvardsson, D.; Fetherstonhaugh, D.; Nay, R.; Gibson, S. Development of PCAT. *Int. Psychogeriatr.* 2010, 22, 101–108. <http://dx.doi.org/10.1017/s1041610209990688>
8. Lee, M.K.; Jung, H.M. Relationship between knowledge and person-centered care. *J. East-West Nurs. Res.* 2019, 25, 128–137. <https://doi.org/10.14370/jewnr.2019.25.2.128>
9. Brown, E.L.; Agronin, M.E.; Stein, J.R. Interventions to enhance empathy. *Res. Gerontol. Nurs.* 2020, 13, 158–168. <https://doi.org/10.3928/19404921-20191028-01>
10. Mirzaei, M.A.; Abazari, F.; Miri, S. Effectiveness of empathy training. *J. Res. Nurs.* 2020, 25, 722–731. <https://doi.org/10.1177/174498712090282>
11. Lent, R.W.; Brown, S.D.; Hackett, G. Social cognitive theory. *J. Vocat. Behav.* 1994, 45, 79–122. <https://doi.org/10.1006/jvbe.1994.1027>
12. Han, S.S.; Lee, S.C. *Nursing and Health Statistics Analysis Using SPSS/AMOS*; Hannarae: Seoul, Korea, 2022.
13. O'Connor, M.L.; McFadden, S.H. Dementia attitudes scale validation. *Int. J. Alzheimers Dis.* 2010, 1–10. <https://doi.org/10.4061/2010/454218>
14. Choi, J.Y.; Jeong, H.J.; Park, J.Y.; et al. Attitudes toward dementia. *J. Korean Geriatr. Psychiatry.* 2015, 19, 24–31.
15. Dunn, S.V. Clinical learning environment scale. *J. Adv. Nurs.* 1995, 22, 1166–1173. <https://doi.org/10.1111/j.1365-2648.1995.tb03119.x>
16. Han, J.Y. Nursing students' perceptions of CLE. *J. Korean Data Anal. Soc.* 2010, 12, 2595–2607.

17. Park, S.Y. Development of College Life Adjustment Instrument for Nursing Students; Dankook University: Korea, 2016.
18. Yeong, K.Y.; Cho, I.Y.; Park, S.J. Mediation effects of nursing professionalism. *J. Next-Gener. Converg. Technol. Assoc.* 2022, 6, 718–729. <https://doi.org/10.33097/JNCTA.2022.06.04.718>
19. Han, S.S.; Kim, M.H.; Yun, E.K. Factors affecting nursing professionalism. *J. Korean Acad. Soc. Nurs. Educ.* 2008, 14, 73–79. <https://doi.org/10.5977/JKASNE.2008.14.1.073>
20. Davis, M.H. Measuring empathy. *J. Pers. Soc. Psychol.* 1983, 44, 113–126. <https://doi.org/10.1037/0022-3514.44.1.113>
21. Kang, I.; Kee, S.W.; Kim, S.E.; et al. Korean IRI validation. *J. Korean Neuropsychiatr. Assoc.* 2009, 48, 352–358.
22. Tak, Y.R.; You, S.Y.; Kim, J.H. PCAT validation in Korea. *J. Korean Acad. Nurs.* 2015, 45, 412–419. <http://dx.doi.org/10.4040/jkan.2015.45.3.412>
23. Song, C.S.; Kim, J.J. Male nursing student adaptation. *J. Learner-Cent. Curric. Instr.* 2017, 17, 191–214. <https://doi.org/10.22251/jlcci.2017.17.23.191>
24. Kim, S.Y.; Shin, Y.S. Clinical practice adaptation. *J. Korea Acad.-Ind. Coop. Soc.* 2018, 19, 234–242. <https://doi.org/10.5762/KAIS.2018.19.9.234>
25. Panda, S.; Dash, M.; John, J.; et al. Challenges in clinical learning. *Nurse Educ. Today* 2021, 101, 104875. <https://doi.org/10.1016/j.nedt.2021.104875>
26. Adewuyi, M.; Morales, K.; Lindsey, A. Dementia care learning. *Nurse Educ. Pract.* 2022, 62, 103351. <https://doi.org/10.1016/j.nepr.2022.103351>
27. Jang, S.H.; Shin, H.H. Person-centered care in LTC hospitals. *J. Health Inform. Stat.* 2023, 48, 306–313. <https://doi.org/10.21032/jhis.2023.48.4.306>
28. Kim, C.H.; Kim, J.Y. Nursing professionalism factors. *J. Korean Acad. Soc. Nurs. Educ.* 2019, 25, 5–16. <http://dx.doi.org/10.5977/jkasne.2019.25.1.5>
29. Je, N.J.; Kim, J.S. Caring efficacy in convergence era. *J. Korea Acad.-Ind. Coop. Soc.* 2020, 18, 469–479. <https://doi.org/10.14400/JDC.2020.18.12.469>
30. Vázquez-Calatayud, M.; Errasti-Ibarrondo, B.; Choperena, A. Professional development. *Nurse Educ. Pract.* 2021, 50, 102963. <https://doi.org/10.1016/j.nepr.2020.102963>
31. Lee, M.H. Dementia attitude and empathy. *J. Korean Gerontol. Nurs.* 2019, 21, 41–49. <https://doi.org/10.17079/JKGN.2019.21.1.41>
32. Jun, W.H. Nursing professionalism factors. *J. Learner-Cent. Curric. Instr.* 2020, 20, 25–40. <https://doi.org/10.22251/jlcci.2020.20.19.25>
33. Wu, Y. Empathy in nurse–patient interaction. *BMC Nurs.* 2021, 20, 1–6. <https://doi.org/10.1186/s12912-021-00535-0>
34. Schuler, M.S.; Horowitz, J.A. Substance use disorder empathy. *J. Nurs. Educ.* 2020, 59, 149–153. <https://doi.org/10.3928/01484834-20200220-05>
35. Jung, T.M.; Kim, K.A. Person-centered care in COVID-19 hospitals. *J. Korean Acad. Soc. Home Care Nurs.* 2022, 29, 165–174. <http://dx.doi.org/10.22705/jkashcn.2022.29.2.165>
36. Yeong, K.Y.; Cho, I.Y.; Park, S.J. Nursing professionalism mediation. *J. Next-Gener. Converg. Technol. Assoc.* 2022, 6, 718–729. <https://doi.org/10.33097/JNCTA.2022.06.04.718>
37. Cao, H.; Song, Y.; Wu, Y.; et al. Nursing professionalism concept analysis. *BMC Nurs.* 2023, 22, 34. <https://doi.org/10.1186/s12912-022-01161-0>
38. Cheon, H.G. Nurses' Empathy for Dementia Residents; Korea University: Seoul, Korea, 2023.

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