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Impact of Pediatric Nurses' Nursing Professionalism on Quality of Nursing Care: Double Mediating Effect of Clinical Decision Making and Pediatric Nurse-Parent Partnership

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Purpose: This study explores how nursing professionalism impacts the quality of pediatric nursing care. Specifically, we examine the mediating effects of clinical decision making and pediatric nurse-parent partnership among pediatric nurses. **Methods:** The study involved 133 nurses working in pediatric wards within regions S, C, and D. Data were collected during August 2022 and analyzed using SPSS/WINdows software version 26.0 and PROCESS macro for SPSS version 4.2. **Results:** The double mediating effect of clinical decision making and the pediatric nurse-parent on the relationship between nursing professionalism and the quality of pediatric nursing care was statistically significant. **Conclusion:** Improving nursing professionalism, enhancing clinical decision making, and strengthening the pediatric nurse-parent partnership are valuable strategies for enhancing the quality of pediatric nursing care among such nurses.

Key Words: Child; Professionalism; Nurses; Pediatric; Clinical decision making

INTRODUCTION

1. Background

In the information age, medical information is readily available through a variety of media, and quality healthcare is becoming increasingly important owing to the growing interest in health and the demand for and expectation of medical services. In addition, as a higher quality of care provided increases patient satisfaction, which makes them more likely to return to the hospital, organizations must continue their efforts to improve the quality of care to compete in the rapidly changing healthcare marketplace [1,2]. Therefore, understanding the quality of care provided by a nurse as a human resource that plays a crucial role in improving the quality of healthcare is important [3]. Particularly in pediatric nursing practice, the quality of care perceived by patients and their caregivers is influenced more by the characteristics of the nurse or healthcare provider than by the physical environment or treatment process [4]. In this context, identifying variables related to the quality of pediatric nursing provided by pediatric nurses is necessary.

The quality of pediatric nursing care is determined by the performance of pediatric nurses from the perspective of hospitalized children and their families [5]. In general, the quality of nursing care is determined by the satisfaction of the direct care recipient; however, in pediatric nursing, the child cannot be viewed as an isolated entity but must interact with all members of the child's family within the context of the family [3,6]. In addition, children have different diseases and causes than adults, and quality improvement can be achieved by providing nursing interventions for disease as well as individualized care tailored to the child's growth and developmental characteristics and needs [3]. Therefore, a pediatric nursing-specific approach to understanding the quality of such nursing should be adopted. Previous studies have documented

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that factors such as nursing professionalism [7] and pediatric nurse-parent partnership [8,9] are positively associated with the quality of nursing care. In addition, the clinical decision making of pediatric nurses is a key skill that can have a significant impact on patient outcomes [10]. However, while previous studies in Korea have investigated the perceived quality of nursing care by general hospital nurses [7,11,12], research on the quality of nursing care provided from the perspective of pediatric nurses is relatively lacking.

To improve the quality of nursing care, nurses need to establish values for nursing care. This combination of nursing values and professionalism is known as nursing professionalism [13]. As nurses' values shape their behavioral intentions and ultimate actions, having positive nursing professionalism can help them work effectively and provide quality nursing care [14]. Although, to the best of our knowledge, no research has specifically investigated pediatric nurses, a previous study on general nurses in small and medium-sized hospitals revealed that more clearly established nursing professionalism by cultivating specialized knowledge and skills can improve the quality of nursing services [7].

In nursing practice, nursing professionalism influences nurses' decision making, which can manifest itself in behavior [14]. Clinical decision making is the process of using critical thinking in healthcare settings to select the most appropriate and best alternative [15]. Unlike the cases for adult patients, pediatric nurses' decision making requires accurate identification of the child's condition through cooperation with the family from the perspective of family-centered care and consideration of the child's physical and emotional aspects [3], which requires a high level of clinical decision making for pediatric nurses to improve the quality of care. An association with the quality of nursing care may also exist, as a higher level of nursing professionalism among pediatric nurses leads to higher clinical decision making [16], nurses exercising their clinical decision making have higher nursing performance [17], and they can form good partnerships to provide quality nursing care [16,18].

Partnership is an integral part of family-centered care, which is a hallmark of pediatric nursing care. The pediatric nurse-parent partnership is defined as a collaborative relationship in which the nurse and the child's parents set common goals and work together to provide the most appropriate nursing care for the child [19]. From a family-centered care perspective, when nursing care is provided to children in partnership with their families, the children gain psychological stability [20], are better able to adapt to the unfamiliar environment of the hospital and regain health quickly [21], and the family's sense of well-being is enhanced [22]. Higher nursing professionalism among pediatric nurses has been shown to have positive effects, such as better pediatric nurse-parent partnership [18,23]. Moreover, higher perceptions of partnerships among pediatric nurses are associated with higher perceptions of the quality of pediatric nursing care [9]. Given that pediatric nurse-parent partnership is an influential factor in the perceived quality of nursing care by mothers of hospitalized children [8,24], understanding how other variables contribute to the quality of nursing care through partnership from the perspective of pediatric nurses would be meaningful.

As previously demonstrated, a pediatric nurse's nursing professionalism is a factor that influences clinical decision making [16], and the latter has been shown to positively influence the pediatric nurse-parent partnership [18]. Since this partnership is a factor that directly affects the quality of pediatric nursing care [8,24], the mediating effect of clinical decision making and pediatric nurse-parent partnership on the relationship between nursing professionalism and quality of nursing care could be predicted. Therefore, this study identifies the relationship between pediatric nurses' nursing professionalism, pediatric nurse-parent partnership, clinical decision making, and quality of nursing care. This study also investigates how clinical decision making and pediatric nurse-parent partnership play a role in the relationship between nursing professionalism and quality of nursing care, thereby providing a basis for developing strategies to improve the quality of pediatric nursing care.

2. Purpose

The purpose of this study was to determine the relationship between pediatric nurses' nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of nursing care and to identify the double mediating effects of clinical decision making and pediatric nurse-parent partnership on the effect of nursing professionalism on the quality of nursing care.

- Differences in participant characteristics and the quality of nursing care based on participant characteristics are identified.
- The descriptive statistics of key variables of the participants are identified.
- The correlations between key variables in the participants are identified.
- The mediating effects of clinical decision making and

pediatric nurse-parent partnership on the relationship between participants' nursing professionalism and quality of nursing care are identified.

METHODS

1. Study Design

This study is a descriptive survey to determine the relationship between pediatric nurses' perceived nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of nursing care, and to identify the double mediating effects of clinical decision making and pediatric nurse-parent partnership.

2. Participants

This study involved pediatric nurses with more than three months of work experience in pediatric wards at 10 institutions, including three tertiary hospitals in Region S, one tertiary hospitals, one general hospital, four children's hospitals in Region C, and one tertiary hospital in Region D [18]. The number of participants was calculated using the G*power 3.1.9.7 program. Based on a two-sided test, a significance level of .05, a median effect size of .15, a power of .80, and 13 predictors (10 general characteristics, nursing professionalism, clinical decision making, and pediatric nurse-parent partnership) in the multiple regression analysis, the minimum sample size was 133, and 150 were selected considering a dropout rate of approximately 10%.

3. Measures and Scales

1) Characteristics

Participant characteristics included age, marital status, children, religion, education level, total work experience, work experience in pediatrics, position, average number of hospitalized children, and type of hospital.

2) Nursing professionalism

Nursing professionalism was measured using the Nursing Professionalism Scale developed by Yoon et al. [14]. The scale consists of a total of 32 items in five domains: "professional self-concept" (9 items), "social recognition" (8 items), "professional identity in nursing" (5 items), "role of nursing practice" (4 items), and "originality of nursing" (3 items). Each item is scored on a 5-point Likert scale ranging from 1 point for "strongly disagree" to 5 points for "strongly agree," with a higher score indicating a higher level of nursing professionalism. Cronbach's α was .92 at the time of scale development and in the current study.

3) Clinical decision making

After obtaining approval to use the scale, clinical decision making was measured using the Clinical Decision Making in Nursing Scale (CDMNS) developed by Jenkins [15], translated by Baek [25]. The scale consists of a total of 40 items in four domains: 10 items each in "Search for alternatives or opinions," "Canvassing of objectives and values," "Evaluation and re-evaluation of consequences," and "Search for information and unbiased assimilation of new information." Each item is scored on a 5-point Likert scale ranging from 1 point for "strongly disagree" to 5 points for "strongly agree," with a higher score indicating a higher level of clinical decision making. Cronbach's α was .83 at the time of scale development, .77 in Baek [25], and .72 in the current study.

4) Pediatric nurse-parent partnership

The pediatric nurse-parent partnership was measured using the Pediatric Nurse-Parent Partnership Scale (PNPPS) developed by Choi and Bang [19], which was approved for use by nurses. The scale consists of a total of 34 items in seven domains: "reciprocity" (9 items), "professional knowledge" (7 items), "sensitivity" (6 items), "collaboration" (3 items), "communication" (4 items), "shared information" (3 items), and "cautiousness" (2 items). Each item is scored on a 5-point Likert scale ranging from 1 point for "strongly disagree" to 5 points for "strongly agree," with a higher score indicating a more positive perception of the partnership. At the time of scale development, the reliability, Cronbach's α, was .96 and was .95 in the current study.

5) Quality of pediatric nursing care

The quality of pediatric nursing care was measured using the Quality of Care through the Patients' Eyes for Hospitalized Child (QUOTE-Child) scale developed by Cho et al. [26], which was approved for use. As the original scale was developed for caregivers of hospitalized children, a partially modified scale by Yoo et al. [5] in terms of wording to make it applicable to pediatric nurses was used. The scale consists of a total of 19 items in 4 domains: "respect" (6 items), "explanation" (7 items), "kindness" (3 items), and "skillfulness" (3 items). Each item measures the importance of nursing care and the level of nursing care performance. At the time of scale development, the importance of nursing care was converted from 0 points for "not important at all," 3 points for "somewhat important," 6 points for "important," and 10 points for "very important," and the level of nursing care performance was

converted from 1 point for "strongly disagree," .67 points for "disagree," .33 points for "agree," and 1 point for "strongly agree," enabling considerable variation and factor analysis. Therefore, the importance and performance scores were differentially assigned, and finally, the Quality Index (QI) of nursing care was calculated as "10-(importance score × performance score)". The overall QI was calculated based on the QI score of each item. A higher score on the scale indicates a more positive perception of the quality of pediatric nursing care. In the study by Cho et al. [26], the Cronbach's α for the importance scale was .93 and was .96 for the performance scale. In the current study, the Cronbach's α was .94 and .93 for the importance and performance scales, respectively.

4. Data Collection

The author personally visited the nursing departments of a total of 10 hospitals with wards that primarily admit children, such as tertiary, general, and children's hospitals, and explained the purpose and methodology of this study. The head of the department explained the purpose and methodology of the study to the participants and administered the survey to those who provided voluntary consent. For those who were unable to visit, the purpose and method of the study were explained over the phone, and the online survey (Google Form) was delivered, with additional explanations and consent forms attached. Only those who gave voluntary consent were allowed to complete the online survey. The data were collected from August 1 to 31, 2022. Of the 150 copies distributed, 140 (93%) were returned (102 questionnaires, 38 online), and data from 133 participants were used, excluding seven who did not provide sufficient responses. After receiving informed consent, the questionnaire was self-reported and took about 15 minutes to complete. All participants received a small gift in return for completing the survey.

5. Data Analysis

The collected data were analyzed using the SPSS/WIN 26.0 program, PROCESS macro for SPSS version 4.2 [27]. Participant characteristics were analyzed as frequencies, percentages, means, and standard deviations. The participants' nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of pediatric nursing care were analyzed using descriptive statistics of mean and standard deviation. Differences in nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of pediatric nursing care according to the characteristics of the participants were analyzed by independent t-test and analysis of variance (ANOVA), and the Scheffé test was used for post hoc analysis. In cases where the sample size was small (education level, current position), the Kruskal-Wallis test was used as a non-parametric test. The correlations between subjects' nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of child care were analyzed via Pearson's correlation coefficients. Model 6 of the PROCESS macro for SPSS was utilized to test the double mediating effects of clinical decision making and pediatric nurse-parent partnership between nursing professionalism and quality of nursing care (X-nursing professionalism, Y-child care quality, M1-clinical decision making, and M2-pediatric nurse-parent partnership). To determine the direct and indirect effects of the mediating effect, the bootstrap method was used with a sample size of 10,000, and the confidence interval (CI) was set at 95%.

6. Ethical Considerations

This study was conducted with the approval of the Institutional Review Board of the author's institution (IRB No. CBNUH 2022-05-026-003). A study description and consent form were attached to explain the purpose and method of the study, the guarantee of privacy, anonymity, and confidentiality, the benefits and risks of participating, and the right to withdraw at any time. Contacts were collected to check for duplicate responses and provide gifts, and it was stated that these would be deleted immediately after the survey. Questionnaires completed through the survey instructions were placed in a resealable return envelope for privacy purposes and collected by the researcher in person or online. Data were serialized and anonymized, and data cleanup was performed by the researcher alone.

RESULTS

1. Differences in Patient Characteristics and Quality of Nursing Care

The average age of participants was 32.7±8.0, with 62 (46.6%) in their 20s. In terms of marital status, 64 (48.1%) were married, 69 (51.9%) were single, and 82 (61.7%) had no children. A total of 50 (37.6%) had some form of religious belief, and 93 (69.9%) had a four-year degree. Total work experience averaged 8.92±7.20 years, with an average work experience of 4.40±4.36 years in the pediatric unit (Table 1). Analysis of the differences in quality of

Table 1. Quality of Pediatric Nursing Based on Participants' Characteristics (*N*=133)

Characteristics	Categories	n (%)	M±SD	Quality of pediatric nursing care		
				M±SD	t or F or x^2	*p*
Age (yr)	<30	62 (46.6)	32.7±8.0	8.40±0.85	0.97	.381
	30~39	37 (27.8)		8.51±0.88		
	≥40	34 (25.6)		8.65±0.84		
Marital status	Married	64 (48.1)		8.58±0.90	1.04	.301
	Single	69 (51.9)		8.42±0.81		
Children	Yes	51 (38.3)		8.68±0.91	2.04	.043
	No	82 (61.7)		8.38±0.80		
Religion	Yes	50 (37.6)		8.51±0.90	0.15	.881
	No	83 (62.4)		8.49±0.83		
Education †	3-year diploma	31 (23.3)		8.38±0.69	1.53	.456
	4-year bachelor	93 (69.9)		8.50±0.89		
	≥Graduate school	9 (6.8)		8.80±0.99		
Total work experience (yr)	<5	56 (42.1)	8.92±7.20	8.48±0.87	2.40	.071
	5~10	22 (16.5)		8.27±0.75		
	10~15	23 (17.3)		8.31±0.86		
	≥15	32 (24.1)		8.81±0.84		
Work experience in pediatrics (yr)	<3	65 (48.9)	4.40±4.36	8.50±0.85	0.62	.602
	3~6	30 (22.6)		8.38±0.89		
	6~9	19 (14.3)		8.45±0.84		
	≥9	19 14.3)		8.71±0.86		
Position †	Staff nurse	101 (75.9)		8.51±0.80	0.72	.697
	Charge nurse	27 (20.3)		8.38±1.06		
	Others*	5 (3.8)		8.78±0.91		
No. of hospitalization of child	<10	28 (21.1)	15.09±8.71	8.56±0.90	0.69	.506
	10~19	68 (51.1)		8.41±0.90		
	≥20	37 (27.8)		8.60±0.73		
Type of hospital ‡	Children's hospital[a]	31 (23.3)		8.93±0.67	5.83	.004
	General hospital[b]	53 (39.8)		8.43±0.84		(a > b, c)
	Tertiary hospital[c]	49 (36.8)		8.30±0.89		

*Other: Chief nurse, nurse manager, physician assistant nurses; †Kruskal-Wallis test; ‡Scheffé test.

nursing care according to the characteristics of the participants revealed that those with children had significantly higher quality of nursing care scores than those without (t=2.04, *p*=.043), and by type of hospital (F=5.83, *p*=.004), children's hospitals had significantly higher quality of nursing care scores than general and tertiary hospitals (Table 1).

2. Descriptive Statistics of Participants' Key Variables

Participants' nursing professionalism averaged 3.66±0.43, clinical decision making averaged 3.48±0.20, and pediatric nurse-parent partnership averaged 4.04±0.38 out of 5 points. Participants' perceived quality of nursing care averaged 8.50±0.85 out of 10 points (Table 2).

3. Correlations between Key Variables in Participants

The results of the correlations between participants' nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of nursing care are reported in Table 3. The dependent variable, quality of care, had a statistically significant positive correlation with nursing professionalism (r=.38, *p*<.001), clinical decision making (r=.32, *p*<.001), and pediatric nurse-parent partnership (r=.42, *p*<.001).

Table 2. Descriptive Statistics of Main Variables (*N*=133)

Variables	Item	M±SD	Min	Max	Range
Nursing professionalism	29	3.66±0.43	2.62	4.72	1~5
Professional self-concept	9	3.79±0.46	2.56	4.89	
Social recognition	8	3.36±0.58	1.75	4.75	
Professional identity in nursing	5	3.89±0.49	2.40	5.00	
Role of nursing practice	4	3.88±0.47	2.50	5.00	
Originality of nursing	3	3.42±0.72	1.33	5.00	
Clinical decision making	40	3.48±0.20	2.88	4.00	1~5
Search for alternatives or opinions	10	3.06±0.20	2.30	3.50	
Canvassing of objectives and values	10	3.55±0.28	2.60	4.30	
Evaluation and re-evaluation of consequences	10	3.66±0.33	2.80	4.70	
Search for information and unbiased assimilation of new information	10	3.64±0.29	3.00	4.50	
Pediatric nurse-parent partnership	34	4.04±0.38	3.15	5.00	1~5
Reciprocity	9	3.94±0.47	2.67	5.00	
Professional knowledge	7	4.09±0.42	3.14	5.00	
Sensitivity	6	4.21±0.42	3.17	5.00	
Collaboration	3	3.92±0.56	2.33	5.00	
Communication	4	3.89±0.53	2.50	5.00	
Shared information	3	4.22±0.43	3.33	5.00	
Cautiousness	2	4.03±0.58	2.00	5.00	
Quality of pediatric nursing care	19	8.50±0.85	6.18	10.00	0~10
Respect	6	8.32±0.97	6.13	10.00	
Explanation	7	8.65±1.03	5.47	10.00	
Kindness	3	8.62±1.25	3.30	10.00	
Skillfulness	3	8.35±1.08	5.57	10.00	

Table 3. Correlations between Main Variables (*N*=133)

Variables	Nursing professionalism	Clinical decision making	Pediatric nurse-parent partnership	Quality of pediatric nursing care
	r (*p*)	r (*p*)	r (*p*)	r (*p*)
Nursing professionalism	1			
Clinical decision making	.48 (<.001)	1		
Pediatric nurse-parent partnership	.57 (<.001)	.55 (<.001)	1	
Quality of pediatric nursing care	.38 (<.001)	.32 (<.001)	.42 (<.001)	1

4. Mediating Effects of Clinical Decision Making and Pediatric Nurse-Parent Partnership on the Relationship between Participants' Nursing Professionalism and Quality of Nursing Care

Model 6 of Hayes' [27] PROCESS macro was used to analyze the direct and mediating effects of each variable. In step 1, the effect of the nursing professionalism of pediatric nurses on the mediating variable clinical decision making was analyzed. In step 2, the effect of nursing professionalism on pediatric nurse-parent partnership and of clinical decision making on pediatric nurse-parent partnership were analyzed. In step 3, the effect of nursing professionalism on the quality of nursing care and of the mediating variables of clinical decision making and pediatric nurse-parent partnership on the quality of nursing care were analyzed. Analyses revealed that nursing professionalism had a positive effect on clinical decision making in step 1 (β=.23, p<.001) and that nursing professionalism (β=.35, p<.001) and clinical decision making (β=.66, p<.001) had a positive effect on pediatric nurse-parent partnership in step 2. In step 3, the effect of nursing profes-

sionalism on the quality of nursing care (β=.75, p<.001) was statistically significant, but when clinical decision making and partnership were added, nursing professionalism no longer had an effect (β=.36, p=.067), suggesting that clinical decision making and pediatric nurse-parent partnership mediated the relationship between nursing professionalism and quality of nursing care.

To verify the significance of the mediating effect, an effect analysis was conducted with a CI of 95% and a sample size of 10,000. The mediating effects of clinical decision making and pediatric nurse-parent partnership on the relationship between nursing professionalism and quality of nursing care were tested, and the total mediating effect was significant (SE=.12 95% CI=.15 to .64). Simple mediation tests revealed that the indirect effect of clinical decision making on the pathway from nursing professionalism to quality of nursing care was not significant (SE=.10, 95% CI=-.09 to .30), that of partnership on the pathway from nursing professionalism to quality of nursing care was significant (SE=.09, 95% CI=.03 to .41). In the relationship between nursing professionalism and quality of nursing care, the pathways from clinical decision making and pediatric nurse-parent partnership to quality of care were significant, suggesting a double mediating effect (SE=.05, 95% CI=.01 to .20) (Table 4, Figure 1).

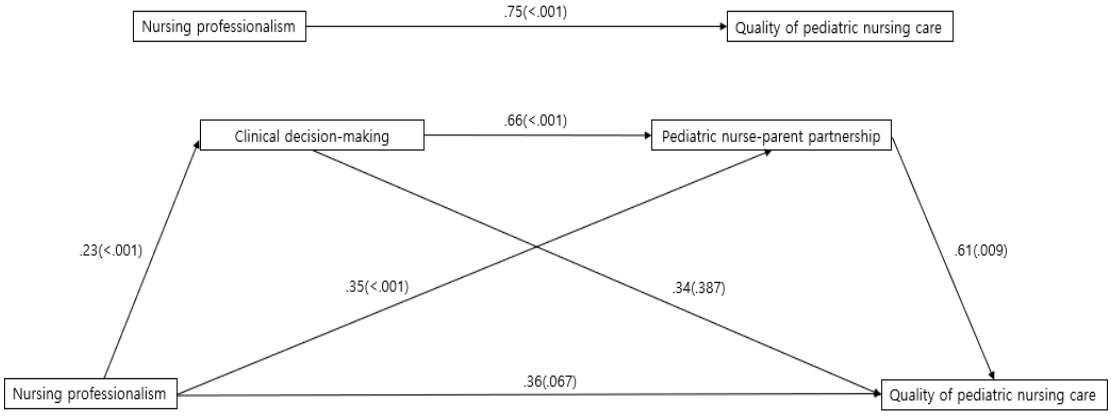

Figure 1. Mediating effects of clinical decision making and pediatric nurse-parent partnership in the association between nursing professionalism and quality of pediatric nursing care among pediatric nurses.

Table 4. Path Coefficients (*N*=133)

Direct effect	β	SE	t	*p*	F	*p*	R^2	95% CI	
								LLCI	ULCI
NP → CDM	.23	.03	6.28	<.001	39.46	<.001	.23	.15	.30
NP → PNPP	.35	.06	5.29	<.001	48.43	<.001	.42	.22	.48
CDM → PNPP	.66	.14	4.72	<.001				.38	.93
NP → QPNC	.36	.19	1.84	.067	11.46	<.001	.21	-.02	.74
CDM → QPNC	.34	.40	0.86	.387				-.44	.14
PNPP → QPNC	.61	.23	2.63	.009				.15	.07
Total effect	.75	.16	64.67	<.001	21.80	<.001	.14	.43	.07

Indirect effect	Effect	SE	95% CI	
			LLCI	ULCI
NP → CDM → QPNC	.08	.10	-.09	.30
NP → PNPP → QPNC	.21	.09	.03	.41
NP → CDM → PNPP → QPNC	.09	.05	.01	.20
Total indirect effect	.39	.12	.15	.64

CDM=Clinical decision making; LLCI=Lower limit confidence interval; NP=Nursing professionalism; PNPP=Pediatric nurse-parent partnership; QPNC=Quality of pediatric nursing care; ULCI=Upper limit confidence interval.

DISCUSSION

This study investigated the mediating effects of clinical decision making and pediatric nurse-parent partnership on the effect of nursing professionalism on the quality of nursing care among pediatric nurses and provides basic data for developing strategies to improve the quality of such care.

Pediatric nurses had an average nursing professionalism score of 3.66 out of 5 points. This was somewhat higher than the score of 3.39 points reported by Choi and Kim [18] and 3.40 points reported by Jung and Jeong [28], who used the same scale for pediatric nurses. Among the domains of nursing professionalism in the current study, "professional identity in nursing" had the highest score of 3.89 points, and "social recognition" had the lowest score of 3.36 points. Previous studies [23,28] also reported that "professional identity in nursing" was high and "social recognition" was relatively low, which was in line with our results. This may have been because nurses themselves recognize the importance of professional identity in nursing but perceive that it is still not sufficiently recognized by society. A study [29] on the image of nurses via an analysis of major daily newspapers in Korea revealed that, although the role of nurses has been highlighted since COVID-19 and perceptions of the role of nursing have expanded, the media still provides a limited image of nurses and creates an environment where they are not recognized as professionals. As a result, nurses may feel unrecognized by society; therefore, an appropriate public relations strategy to improve the social recognition of nurses among the general public is needed.

Pediatric nurses' clinical decision making averaged 3.48 out of 5 points. This was higher than the 3.24 points reported by Shin and Kim [16] and the 3.14 by Choi and Kim [18], both of which used the same scale in their studies on pediatric nurses. Previous studies have documented that advanced practice nurses have significantly higher clinical decision making than general nurses [30], with scores ranging from 3.42 to 3.51 points, in line with our results [17,31,32]. Clinical decision making for pediatric nurses differs from that of nurses in charge of adult patients, requiring collaboration with the child's family to understand the patient's condition and critical thinking to select the best alternative [33]. Therefore, the relatively high level of clinical decision making of pediatric nurses, which was similar to that of advanced practice nurses, may have been a desirable result of the fact that the participants working in pediatric wards or children's specialty have obtained specialized knowledge in pediatric nursing. This study also intended to examine pediatric nurses separately but had difficulty securing participants. As of 2021, there were a total of 130 advanced practice nurses in pediatrics, the lowest number of any of the 13 specialties [34]. Therefore, policy support should be provided to increase the number of advanced practice nurses in pediatrics as well as educational institutions and to establish placement criteria and roles to enhance nurses' ability to make clinical decisions that lead to optimal outcomes for children.

Pediatric nurse-parent partnership perceived by pediatric nurses averaged 4.04 out of 5 points. In the domain of pediatric nurse-parent partnership, "shared information" and "sensitivity" were scored higher at 4.22 and 4.21 points, respectively, whereas "collaboration" and "communication" were scored lower at 8.35 and 8.32 points, respectively. A study conducted with the same participants as the current research [35] also found high levels of "sensitivity" and "shared information" and low levels of "collaboration" and "communication," in line with our results. a previous study [36] that explored pediatric nurse-parent partnerships among mothers of hospitalized children also found that "Communication" in particular was low. While the pediatric nurse-parent partnership is defined as a relationship in which nurses and parents communicate and collaborate [19], the low scores in the areas of "collaboration" and "communication" indicate the need for improvement. Therefore, the fact that collaboration in pediatric nursing care means that pediatric nurses provide nursing care together in an equal relationship with parents should be recognized [19]. Furthermore, based on previous studies that demonstrate that communication skills and partnership are positively correlated [37,38] and that pediatric nurse-parent partnership is higher when informative and friendly communication is used [38], it would be beneficial to develop and implement a communication training program for pediatric nurses to improve their ability to use informative and friendly communication.

In this study, the quality of nursing care perceived by pediatric nurses averaged 8.50 out of 10 points. A previous study [9] of pediatric nurses using the same scale reported an average score of 8.07, which is similar to ours. In the domains of the quality of nursing care, "explanation" scored the highest at 8.65 points, followed by "kindness" at 8.62, "skillfulness" at 8.35, and "respect" at 8.32. However, a study comparing the quality of nursing care perceived by pediatric nurses and mothers of hospitalized children [5] established that the perceived quality of care scores by mothers was significantly lower than the scores by nurses in the "explanation" domain. The fact that "explanation" scored highest in this study but was lower among mothers

of hospitalized children in previous studies suggested that the perspectives of care providers and receivers could be different. Therefore, it is necessary to improve the quality of child care and reduce the gap in perceptions of the quality of pediatric nursing care between pediatric nurses and patient caregivers through repeated studies.

In this study, the quality of nursing care perceived by nurses was higher when they had children, and it was significantly higher in children's hospitals than in general or tertiary hospitals. This study only investigated nurses in pediatrics, except those in specialty units, and such results may have been because children's hospitals have more ongoing relationships with patients and families. Regarding the higher quality of nursing care in children's hospitals than in general or tertiary hospitals, a direct comparison is difficult as, to the best of our knowledge, no previous studies have examined the quality of nursing care by type of hospital. In a study on the quality of nursing care among nurses in general hospitals [12], those in intensive care units had lower perceived quality of nursing care scores than those in general pediatric wards, which suggests that the quality of nursing care perceived by nurses may be lower when patients require attentive and diverse nursing care depending on the severity of their condition. However, given the relative lack of studies on the quality of nursing care among pediatric nurses, repeated research will be required, considering various characteristics such as department and region.

In the current study, nursing professionalism was significantly and positively related to clinical decision making, pediatric nurse-parent partnership, and quality of nursing care, and clinical decision making ability and pediatric nurse-parent partnership had a dual mediating effect on the relationship between nursing professionalism and quality of nursing care. This means that nursing professionalism does not directly influence the quality of care but does so indirectly through their clinical decision making and pediatric nurse-parent partnership. For nursing professionalism to translate into the quality of nursing care, the mediating roles of clinical decision making and pediatric nurse-parent partnership are critical. These findings partially support studies that have documented that professional attitudes and values are necessary for nurses to make the most appropriate choices through critical thinking in clinical practice [15], and that nursing professionalism, a sense of professional calling, can influence clinical decision making [39], that clinical decision making for optimal care influences the pediatric nurse-parent partnership [18], and that such partnership, as perceived by mothers of hospitalized children, influences the quality of nursing care [40]. Although the lack of research on the relationship between nursing professionalism and the quality of nursing care among pediatric nurses limited the comparison, Yeo and Song [7] used different scales to determine the relationship between the variables and found that nursing professionalism affected the quality of nursing care. Kaya and Boz's [41] Professional Values Model in Nursing demonstrates that increasing nurses' professional values can increase their job satisfaction and the satisfaction of patients receiving nursing care, thereby improving the quality of nursing care.

In addition, pediatric nurse-parent partnership has a direct impact on the quality of nursing care. Furthermore, the findings that nursing professionalism and clinical decision making can have a significant impact on the quality of nursing care through pediatric nurse-parent partnership suggest that such partnership is an important factor in improving the quality of pediatric nursing care. A good nurse-patient relationship can shorten hospital stays and increase patient satisfaction, which in turn can improve the quality of nursing care [42]. Shin and Kim [16] confirmed the mediating effect of pediatric nurse-parent partnership on the effect of clinical decision making by pediatric nurses on job satisfaction. The pediatric nurse-parent partnership is a collaborative relationship for appropriate care [19], and the nurse should involve and collaborate with the person in clinical decision making to accurately identify the patient's care needs before providing nursing care [43]. Furthermore, since partnerships and quality of nursing care are a two-way street between nurses and their clients, educational programs and interventions that take both the nurse and the child and family into account should be designed to enhance partnerships.

Based on these findings, to improve the quality of pediatric nursing care, measures to improve the clinical decision making of pediatric nurses and the pediatric nurse-parent partnership should be provided so that they can establish their nursing professionalism.

This study has the following limitations. The data collection method was a mixture of questionnaires and online surveys, which may have caused differences. Additionally, this study was conducted only among nurses in general pediatric wards, excluding special units such as pediatric intensive care units, pediatric emergency departments, and neonatal intensive care units. However, this study is significant in that it investigated the effects of pediatric nurses' characteristics and nursing professionalism on the quality of pediatric nursing care through the mediation effect of clinical decision making and pediatric nurse-parent partnership. To this end, this study focused on pediatric

nurses in various types of hospitals, such as tertiary, general, and children's hospitals. It was also meaningful to check the quality of pediatric nursing care, whose relationships with each variable had not yet been identified. These findings can serve as a basis for developing programs to improve the quality of nursing care by reflecting the characteristics of pediatric nurses in pediatric nursing practice.

CONCLUSION

This study is a descriptive survey conducted among pediatric nurses to determine the relationship between nursing professionalism, clinical decision making, pediatric nurse-parent partnership, and quality of nursing care, and to determine the impact of nursing professionalism on the quality of nursing care and the mediating effects of clinical decision making and pediatric nurse-parent partnership in the process. The results indicated that the establishment of good nursing professionalism led to the development of clinical decision making and pediatric nurse-parent partnerships, which improved the quality of pediatric nursing care. Therefore, to improve the quality of care for hospitalized children by pediatric nurses working in pediatric wards, nursing intervention programs that take their nursing professionalism, clinical decision making, and the pediatric nurse-parent partnership into account should be developed.

Based on our results, we present the following suggestions. First, this study was conducted only with nurses in general pediatric wards, which limits the generalizability of the findings. Therefore, a future replication study with nurses working in healthcare organizations or departments of different sizes will be needed. In addition, as the data collection method was split between online surveys and questionnaires, it is important to consider this when interpreting the results. Second, research should be conducted to identify additional variables related to the quality of nursing care for hospitalized children as perceived by pediatric nurses and to identify factors that affect the quality of such nursing care.

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