

The Factors Associated with Disaster Nursing Competence among Nurses at Tertiary Hospitals: The Roles of Resilience and Perception of Disaster Management

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BACKGROUND & PURPOSE

- Disaster nursing competence is essential for nurses to provide safe and effective care during disasters and may be influenced by resilience and perception of disaster management. However, limited evidence exists on these factors among nurses in tertiary hospitals, highlighting the need to identify factors associated with disaster nursing competence.
- This study aimed to examine the relationships among resilience, perception of disaster management, and disaster nursing competence and to identify factors influencing disaster nursing competence among nurses working at tertiary hospitals.

RESEARCH MEHTODS

- A descriptive cross-sectional study was conducted with 112 nurses working at two tertiary hospitals in D City, South Korea. Participants were recruited based on predefined inclusion criteria, and data were collected using structured self-report questionnaires. The questionnaires assessed nurses' resilience, perception of disaster management, and disaster nursing competence.
- The collected data were analyzed using SPSS/WIN 27.0. Descriptive statistics were used to summarize participants' characteristics and major study variables.
- Independent t-tests and one-way ANOVA were conducted to examine differences in disaster nursing competence according to general characteristics.
- Pearson's correlation coefficients were calculated to identify relationships among resilience, perception of disaster management, and disaster nursing competence.
- Multiple linear regression analysis was performed to identify factors associated with disaster nursing competence.

RESULTS

- The mean age of the participants was 33.46 years. Disaster nursing competence differed significantly by work department ($F=2.34$, $p=.046$), with emergency department nurses showing higher competence than nurses in other departments.
- Disaster nursing competence was significantly and positively correlated with resilience ($r=.53$, $p<.001$) and perception of disaster management ($r=.63$, $p<.001$), indicating that higher resilience and a more positive perception were associated with greater competence.
- Significant factors associated with disaster nursing competence were perception of disaster management ($\beta=.48$, $p<.001$), resilience ($\beta=.27$, $p=.002$), and work department ($\beta=.19$, $p=.005$). Perception of disaster management was the strongest predictor.
- The regression model explained 47% of the variance in disaster nursing competence, suggesting that these factors collectively contribute substantially to nurses' disaster nursing competence.

Table1. Difference in Disaster Nursing competence according to General Characteristics

Characteristics	Categories	N(%) or M±SD	Disaster Nursing Competence	
			M±SD	t or F(p)
Age	years	33.46±6.07		
Education	Associate Degree	21(18.8)	45.62±10.84	0.58(.560)
	Bachelor's degree	78(69.6)	48.10±10.08	
	master degree	13(11.6)	48.54±5.39	
Marital status	Married	57(50.9)	48.68±9.11	1.10(.748)
	Single	55(49.1)	46.65±10.43	
Religion	Yes	37(33.0)	48.40±9.19	0.27(.265)
	No	75(67.0)	47.33±10.11	
Work experience	below 1 year	1(0.9)	38	0.42(.740)
	1-5 years	29(25.9)	49.96±12.01	
	5-10 years	37(33.0)	47.89±8.4	
	more than 10 years	45(40.2)	48.20±9.45	
Work department	Medical ward	23(20.5)	47.91±11.80	2.34(.046) d<a,b,c,e,f
	Surgical ward	7(6.3)	49.42±5.44	
	other wards	13(11.6)	45.00±11.25	
	Emergency room	25(22.3)	52.72±3.88	
	Intensive care unit	31(27.7)	44.58±10.68	
	others	13(11.7)	46.76±9.28	

Table2. Descriptive Statistics for Outcome Variables

Outcome variables	M±SD	Min	Max	Range
Resilience	87.03 ±13.63	59	119	25~125
Perception of disaster management	70.65 ±7.21	39	92	20~100
Disaster Nursing Competence	47.69 ±9.79	21	69	15~75

Table3. Correlations among Variables

Variables	Resilience	Perception of disaster management
	r(p)	r(p)
Perception of disaster management	.56(<.001)	1
Disaster Nursing Competence	.53(<.001)	.63(<.001)

Table 4. Regression for Disaster Nursing Competence

Variables	B	SE	β	t	p	VIF
(constant)	3.99	1.71		2.09	.039	
Work department	0.11	0.50	.19	2.86	.005	1.00
Resilience	0.19	0.06	.27	3.24	.002	1.45
Perception of disaster management	0.65	0.11	.48	5.76	<.001	1.45
$R^2=.49$, Adjusted $R^2=.47$, $F=34.05$, $p<.001$						

CONCLUSIONS

- Higher resilience and greater perception of disaster management were associated with greater disaster nursing competence among nurses at tertiary hospitals.
- These findings highlight the need for systematic disaster nursing education programs designed to enhance nurses' perception of disaster management and strengthen resilience. Simulation- and scenario-based training reflecting actual disaster situations may be effective strategies for improving nurses' disaster preparedness and competence.

Key words : Disaster Nursing Competence, Resilience, Perception of Disaster Management, Nurses