

중환자실 환자의 일반 병동 전실 시 스트레스 영향요인

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Factors Influencing Relocation Stress Syndrome in Patients Following Transfer from Intensive Care Units

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Purpose: The purpose of this study was to identify the levels of relocation stress syndrome (RSS) and influencing the stress experienced by Intensive Care Unit (ICU) patients just after transfer to general wards. **Methods:** A cross-sectional study was conducted with 257 patients who transferred from the intensive care unit. Data were collected through self-report questionnaires from May to October, 2009. Data were analyzed using the Pearson correlation coefficient, t-test, one-way ANOVA, and stepwise multiple linear regression with SPSS/WIN 12.0. **Results:** The mean score for RSS was 17.80 ± 9.16 . The factors predicting relocation stress syndrome were symptom experience, differences in scope and quality of care provided by ICU and ward nursing staffs, satisfaction with transfer process, length of stay in ICU and economic status, and these factors explained 40% of relocation stress syndrome ($F=31.61, p<.001$). **Conclusion:** By understanding the stress experienced by ICU patients, nurses are better able to provide psychological support and thus more holistic care to critically ill patients. Further research is needed to consider the impact of relocation stress syndrome on patients' health outcomes in the recovery trajectory.

Key words: Intensive care units, Patient transfer, Relocation stress

서론

1. 연구의 필요성

(Strahan & Brown, 2005).

(Jang, 2001),

주요어 : 중환자실, 전실스트레스

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- (Cutler & Garner, 1995)
- (Intensive care unit liaison nurse)
- (Chaboyer et al., 2005)
- (Coyle, 2001; Field, Prinjha, & Rowan, 2008; Gustad, Chaboyer, & Wallis, 2008; McKinney & Melby, 2002).
- (Carpentio, 2000),
- (Ssarmann, 1993),
- (Watts, Pierson, & Gardner, 2005).
- (Chaboyer, Gillespie, Foster, & Kendall, 2005).
- (Field et al., 2008; Strahan & Brown, 2005).
- (Beard, 2005; Whittaker & Ball, 2000).
- 20
- (Watts, Gardner, & Pierson, 2005; Whittaker & Ball, 2000), 2000
- (Watts et al., 2005; Whittaker & Ball, 2000)
- (Jang, 2001; Koh, 2007; Yang, 2008),
- Son (2008)
- (Baldwin, Hinge, Dorsett, & Boyd, 2009; Chaboyer et al., 2005; Cutler & Garner, 1995; McGuire, Basten, Ryan, & Gallagher, 2000),
- (Leith, 1999; McKinney & Deeny, 2002; Odell, 2000),
- (Paul, Hendry, & Cabrelli, 2004; Strahan & Brown, 2005; Wesson, 1997)
- (Beard, 2005).

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2. 연구 목적

3. 연구 도구

1) 증상경험

(Baldwin et al., 2009) , Cornell Medical Index (CMI) (Erdmann, Brodman, Lorge, & Wolff, 1952) Nam (1965)

CMI 35 22

57

(Beard, 2005; Coyle, 2001; Leith, 1999)

25

10 3 (

) 1

2

6

2

CVI

(Content Validity Index) 80% 8

17

17 5 (0- 4) 68

7 (0- 28), 4 (0- 16),

6 (0- 24) ,

1. 연구 설계

연구 방법

2. 연구 대상자

A

2

18

Cronbach's $\alpha=.83$

2) 전실과정 만족도

(Paul et al., 2004)

0 ' , 10 '

24
(Gustad et al., 2008; Jenkins Rogers, 1995; McKinney
Melby, 2002; Roberts, 1976)

2

286

21

8

257

. G- Power 3.0

.05, 90%,

.15

154

3) 지각된 환경변화

(McKinney & Deeny, 2002),

(Beard, 2005; Gustad et al., 2008; Leith, 1999;

Son, 2008) 6 ()

5
' 0 ' 4 ,

4) 전실 스트레스

Son (2008)

23 , 5 Likert
(0- 4) 92 , 12
(0- 48) , 8 (0- 32) ,
3 (0- 12)

Cronbach's $\alpha=.99$, Cronbach's $\alpha=.80$

4. 자료 수집 방법 및 절차

5
30
20- 50 (Nun-
nally, 1978)
30
(Institutional Review Board)
(AJIRB- CRO- 09- 051).
2009 5- 10 6
24
2

, 1 20
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5. 자료 분석 방법

SPSS WIN 17.0 program

, t- test, one- way ANOVA
Scheffe

Pearson Correla-
tion Coefficient

연구 결과

1. 대상자의 인구사회학적 · 질병관련 특성

164 (63.8%) , 55
(± 15.47) 46- 65 38.9%
69.6% , 43.3%
77.8%
46.9%
55.3%
87.2%
38.5% 32.7%
21.0% 65.0%
42.8%, 65.4%
APACHE II (Acute Physiology and Chronic Health
Evaluation II) 3- 4
73.6% 1- 2
68.5% 3 47.1%
5 21.0%
51.0%

2. 대상자의 전실스트레스 수준

23 17.80 (± 9.16)
, (12) 12.57 (± 6.17),
(8) 4.65 (± 3.86),
(3) 0.59 (± 1.41) (Table 1).

Table 1. Relocation Stress Syndrome of Patients (N=257)

Relocation stress syndrome (number of items)	Mean (\pm SD)	Range	Min-max
Total (23)	17.80 (± 9.16)	0-92	0-59
Physical factors (12)	12.57 (± 6.17)	0-48	0-34
Patient's recognition of health care providers (8)	4.65 (± 3.86)	0-32	0-22
Emotional factors (3)	0.59 (± 1.41)	0-12	0-8

Table 2. Differences in Relocation Stress Syndrome by Socio-demographic and Illness-related Characteristics (N=257)

Characteristics	Categories	n (%)	Relocation stress syndrome		
			Mean (\pm SD)	t or F	p (Scheffe)
Gender	Men	164 (63.8)	16.95 (± 8.53)	-2.05	.042
	Women	93 (36.2)	19.31 (± 10.07)		
Age (yr)	≤ 45	72 (28.0)	19.32 (± 9.01)	1.43	.240
	46-65	100 (38.9)	17.16 (± 9.64)		
	>66	85 (33.1)	17.29 (± 8.64)		
Marital status	Single	78 (30.4)	18.93 (± 8.50)	1.04	.301
	Married	179 (69.6)	17.32 (± 9.42)		
Educational level	Middle school or below	111 (43.2)	17.81 (± 9.11)	0.11	.893
	High school	96 (37.4)	17.91 (± 9.51)		
	College or above	50 (19.4)	17.57 (± 8.77)		
Job	No	57 (22.2)	18.88 (± 8.87)	0.83	.408
	Yes	200 (77.8)	17.49 (± 9.24)		
Economic status	Low ^a	98 (38.5)	19.48 (± 9.95)	2.89	.037 (a>b)
	Middle ^b	119 (46.9)	16.58 (± 8.34)		
	High ^c	37 (14.6)	17.87 (± 9.09)		
Religion	No	115 (44.7)	17.29 (± 8.94)	-0.57	.568
	Yes	142 (55.3)	18.21 (± 9.35)		
Primary caregivers	None	33 (12.8)	18.11 (± 9.85)	0.22	.827
	Yes	224 (87.2)	17.75 (± 9.07)		
Diagnosis	Cardiovascular	99 (38.5)	16.94 (± 7.42)	2.49	.061
	Gastro-intestinal	84 (32.7)	17.83 (± 8.14)		
	Neurological	54 (21.0)	18.42 (± 8.02)		
	Others*	20 (7.8)	17.97 (± 8.43)		
Comorbidity	No	90 (35.0)	17.81 (± 7.94)	0.44	.659
	Yes	167 (65.0)	17.25 (± 8.86)		
Hospital admission history	None	147 (57.2)	17.25 (± 9.28)	-1.54	.124
	At least once	110 (42.8)	18.12 (± 8.79)		
Operation history	None	89 (34.6)	17.19 (± 9.85)	-1.86	.064
	At least once	168 (65.4)	18.12 (± 8.79)		
Severity of illness at admission to ICU	3rd-4th grade	189 (73.6)	17.61 (± 6.73)	5.82	.003
	5th grade	68 (26.4)	20.76 (± 9.71)		
Severity of illness at discharge from ICU	1st grade	64 (25.2)	16.97 (± 7.48)	0.35	.789
	2nd grade	110 (43.3)	17.45 (± 8.64)		
	3rd-4th grade	80 (31.5)	18.72 (± 10.06)		
ICU length of stay (day)	2 ^a	39 (15.2)	17.24 (± 8.87)	7.12	<.001 (c, d>b)
	3 ^b	121 (47.1)	14.91 (± 9.24)		
	4 ^c	43 (16.7)	20.94 (± 7.45)		
	$\geq 5^d$	54 (21.0)	20.75 (± 8.12)		
Received transfer education	No	126 (49.0)	18.34 (± 8.93)	1.00	.438
	Yes	131 (51.0)	17.23 (± 9.39)		

*Categories of hepatic, renal and other combined. ICU=Intensive care units.

3. 대상자의 인구사회학적 · 질병관련 특성에 따른 전실스트레스 수준의 차이

($p=.042$), ($p=.037$), ($p<.001$), ($p=.003$)

5 3, 4 3

(Table 2).

4. 대상자의 증상경험, 전실과정 만족도, 지각된 환경변화 및 전실스트레스 간의 관계

68 31.92 (± 9.53)

9.10 (± 1.53)

1.66 (± 1.57)

0.94 (± 1.25),

0.88 (± 1.19)

(Table 3),

($r=.50$, $p<.001$),

($r=-.26$, $p<.001$),

($r=.13$, $p=.041$) ($r=.28$, $p<.001$)

Table 3. Correlation among Symptom Experiences, Transfer related Variables and Relocation Stress Syndrome (N=257)

Variables	Range	Mean (\pm SD)	Relocation stress syndrome	
			r	p
Symptom experiences	0-68	31.92 (± 9.53)	.50	<.001
Transfer process satisfaction	0-10	9.10 (± 1.53)	-.26	<.001
Perceived environmental change				
Physical environment	0-4	1.66 (± 1.57)	-.07	.258
Monitoring equipment	0-4	0.94 (± 1.25)	.13	.041
Scope and quality of care provided by nursing staff	0-4	0.88 (± 1.19)	.28	<.001

ICU=Intensive care units.

5. 대상자의 전실스트레스에 영향을 미치는 요인

Table 4

.00 .47 .80

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Durbin- Watson 1.920

(Tolerance) .78 .97 0.1

(variance inflation factor) 1.03- 1.28 10

(linearity),

(normality), (homoscedasticity)

Cook's Distance 1.0

($p<.001$),

($p<.001$),

($p=.002$),

Table 4. Predictors of Relocation Stress Syndrome (N=257)

Predictors	Standardized β	t (p)	Adjusted R ²	F (p)
Symptom experience	.42	8.49 (<.001)	.40	31.61 (<.001)
Differences in scope and quality of care provided by nursing staff	.37	6.84 (<.001)		
Transfer process satisfaction	-.21	-4.15 (<.001)		
Length of stay in ICU	.17	3.12 (.002)		
Economic status	-.13	-2.70 (.005)		

ICU=Intensive care units.

($p=.005$) , (F=31.61, $p<.001$).

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Study	Year	Sample Size (n)	Mean (M)	Standard Deviation (SD)	Significance Level (p)	Effect Size (d)	Notes
Gustad et al.	2008	23	17.80	23.62	0.05	0.40	Significant difference between groups.
Son (2008)	2008	3	24		0.05		Significant difference between groups.
McGuire et al.	2000	3			0.05		Significant difference between groups.
Coyle, 2001; McKinney & Deeny, 2002; Whittaker & Ball, 2000	2001-2000	3			0.05		Significant difference between groups.
Gustad et al., 2008; Jenkins Rogers, 1995; McKinney Melby, 2002; Roberts, 1976	2008-1976	2			0.05		Significant difference between groups.
Baldwin et al.	2009	2			0.05		Significant difference between groups.
Leith (1999)	1999	2			0.05		Significant difference between groups.
APACHE II		2			0.05		Significant difference between groups.
Jang, 2001	2001	2			0.05		Significant difference between groups.
Gustad (2008)	2008	2			0.05		Significant difference between groups.
Beard, 2005; McKinney & Melby, 2002	2005-2002	1			0.05		Significant difference between groups.
Son (2008)	2008	1			0.05		Significant difference between groups.

결론

257

17.80

40%

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