26TH INTERNATIONAL
NURSING RESEARCH
CONGRESS

Changes in Health Related Quality of Life, Symptom Experience and Functional Status in ICU Survivors

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This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korean government(MSIP) (22010-0025461)

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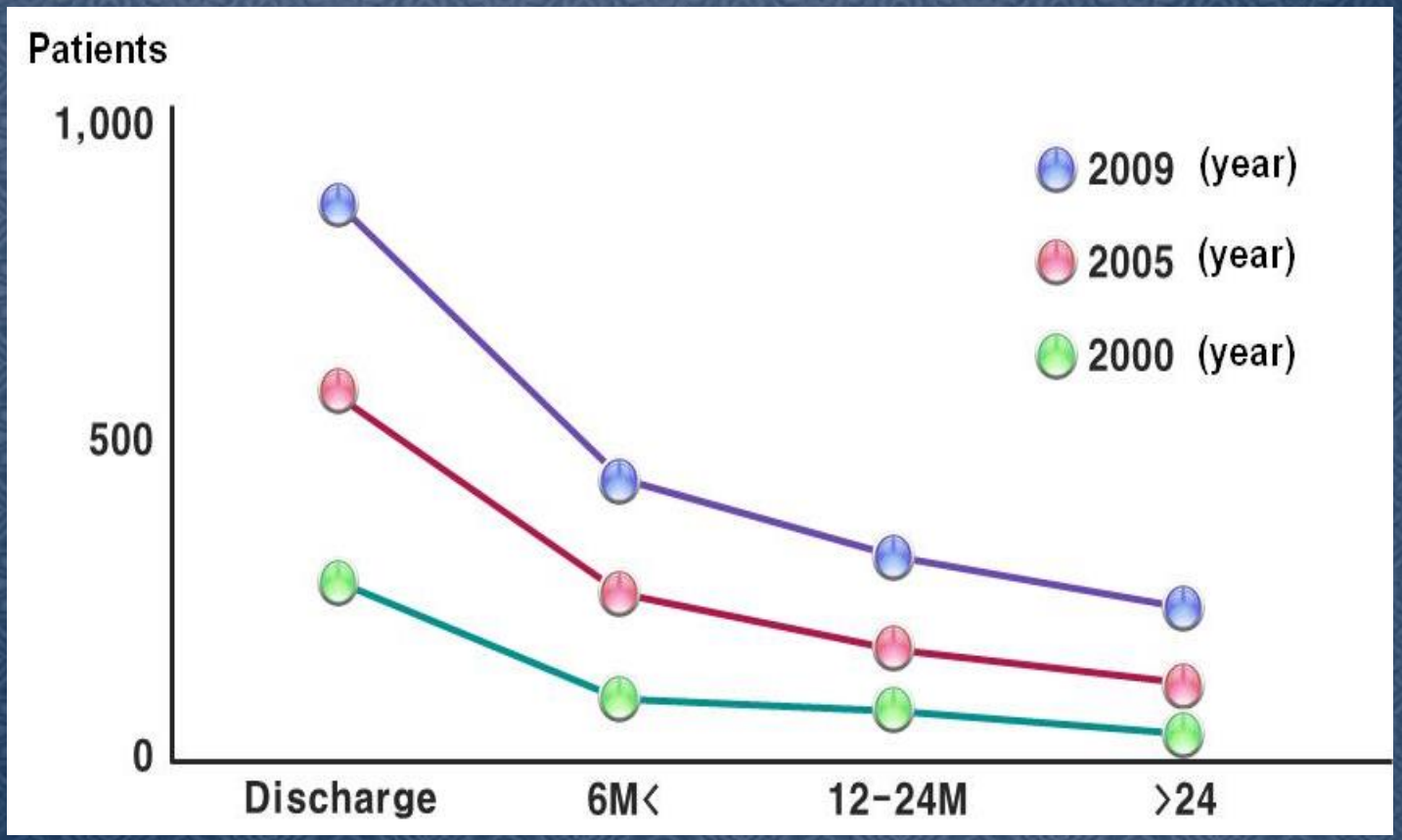
INTRODUCTION

Backgrounds (1)

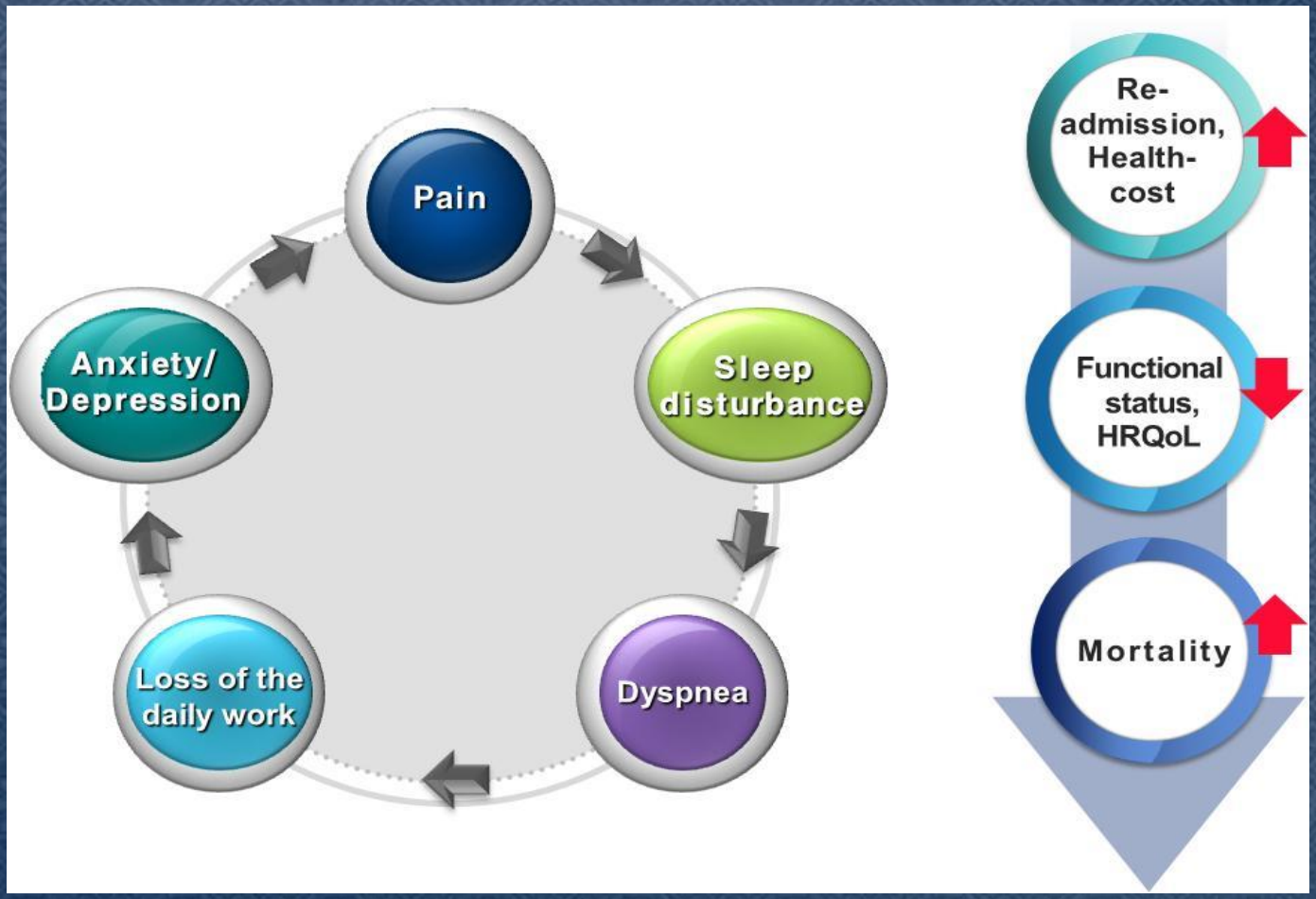
- Survival rates after discharge from the ICU.



(Cabral et al., 2009; Jackson, Mitchell, & Hopkins, 2009)

Backgrounds (2)

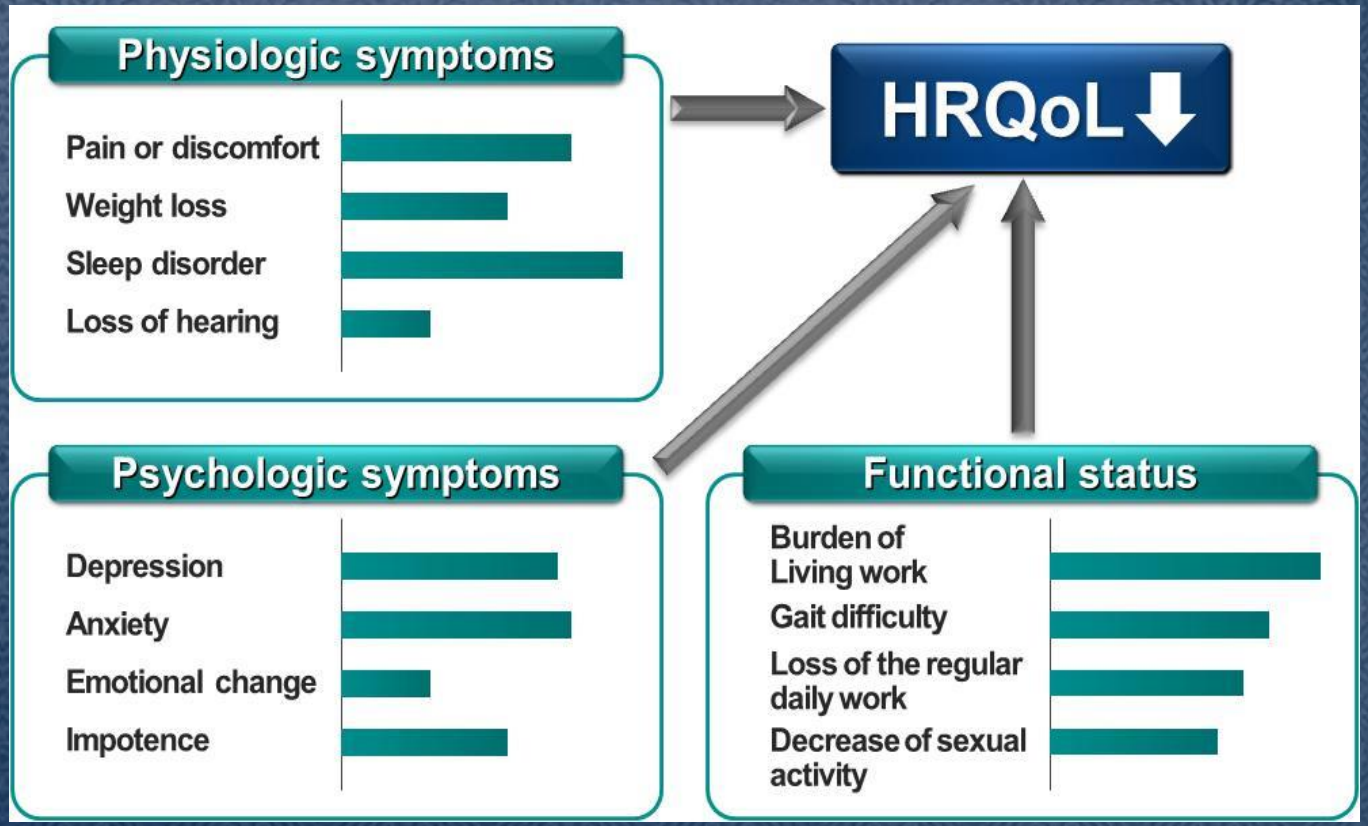
- ICU survivors experience various symptoms after discharge from the ICU.



(Campbell et al., 2008; Kelly et al., 2010)

Backgrounds (3)

- **ICU survivor's physiological, psychological, and functional status factors affect the HRQoL and survival rate of ICU survivors.**



(Stein-Parbury et al., 2000; Baldwin et al., 2009; van der Schaaf et al., 2009)

Backgrounds (4)

- It is necessary to understand how ICU survivors experience symptoms and functional status and HRQoL after discharge.

- Health care providers caring critical patients should be aware of recovery pattern for ICU survivors after treatment.

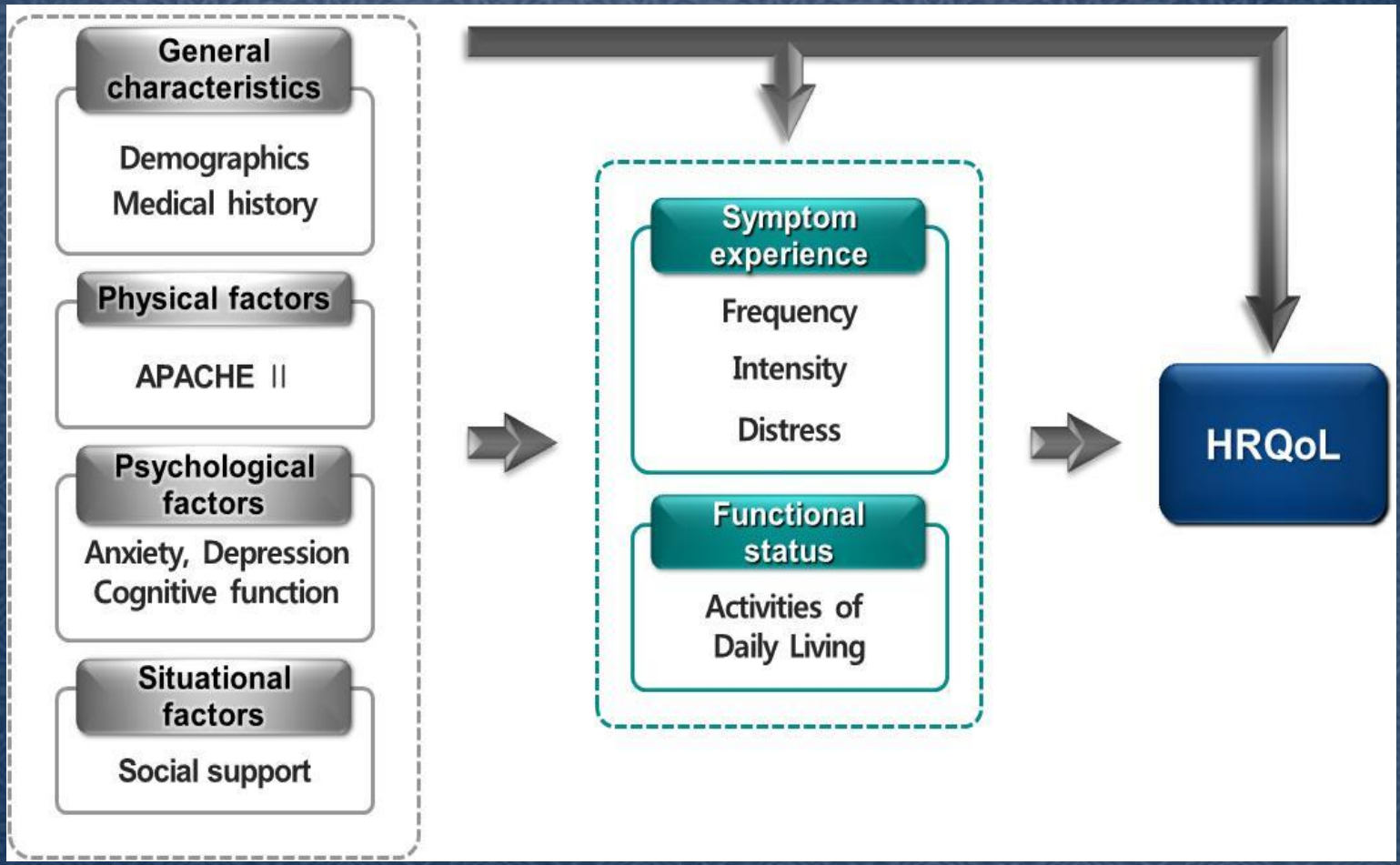
Purpose

- **This longitudinal follow-up study** was aimed to

1. **Describe change in symptom experiences, functional status and health-related quality of life (HRQoL) after discharge from adult ICU**

2. **Identify the role of symptom experiences and functional status on HRQoL of intensive care units (ICU) survivors after discharge from adult ICU**

Conceptual Framework



METHODS

Study Design and Participants

Study design

Longitudinal prospective study design with repeated measurements of the symptom experiences, functional status, and HRQoL of ICU survivors **at the time of discharge and at 1, 3, and 6 months after discharge from the ICU**.

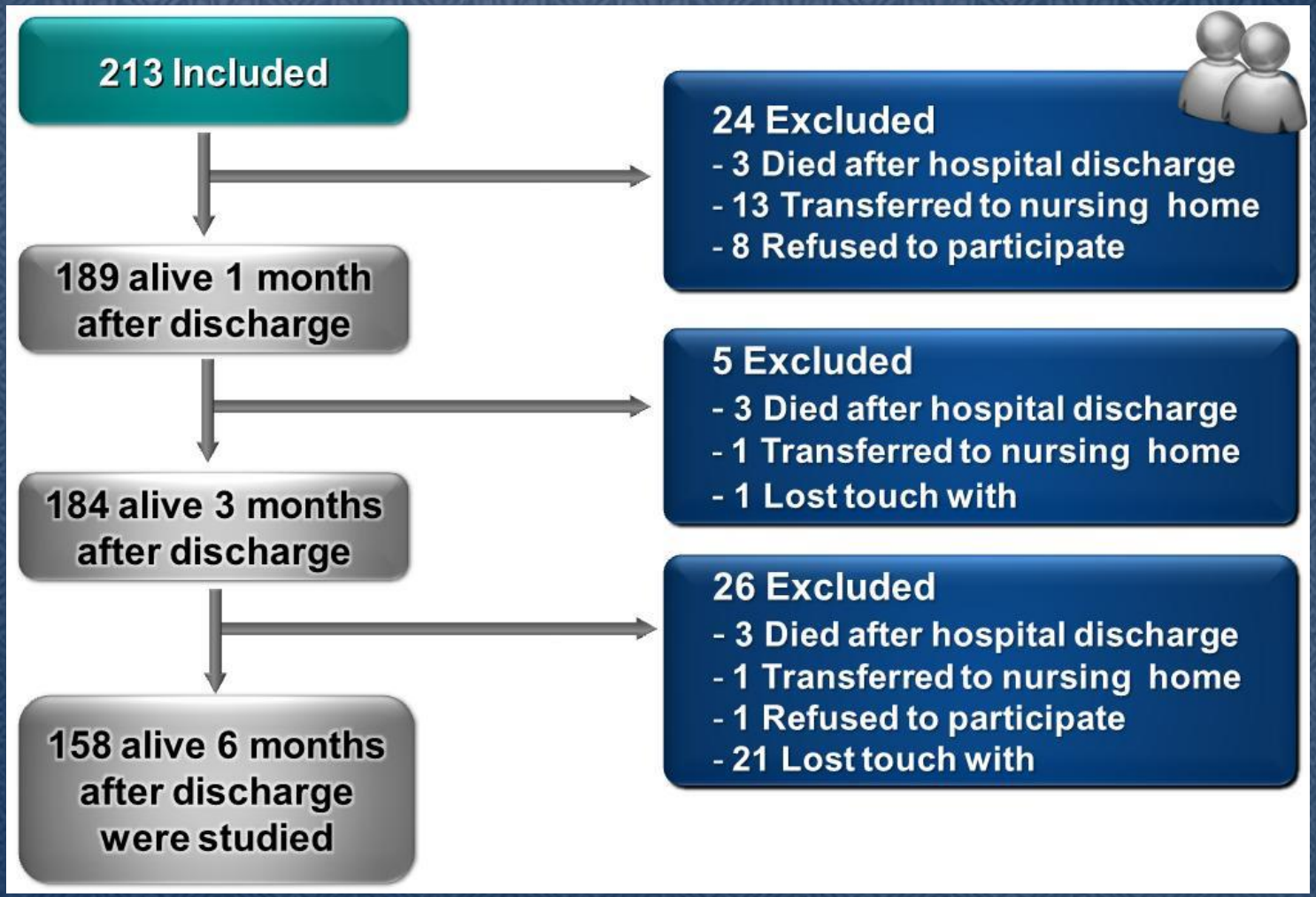
Inclusion Criteria

- Adult men or women 18 years
- More than 24 hours stay in ICU

Exclusion Criteria

- Patients with a history of dementia as well as other mental diseases
- Malignant tumors on other major organs

Flow Chart of Participants



Instruments

Factors	Instruments	Developer	Cronbach's α (original / this study)
Physical factors	APACHE II score	Knaus et al., (1991)	
Cognitive function	Mini-Mental State Examination (MMSE-K)	Modified by Park et al.,(1989)	0.79 / 0.87
Social support	Multidimensional Scale of Perceived Social Support(MSPSS)	Zimet et al. (1988)	0.89 / 0.93
Anxiety/ Depression	The Hospital Anxiety-Depression Scale(HAD)	Zigmond et al., (1983) Translated by Oh et al., (1999)	0.89-0.86 / 0.76-0.81
Symptom experience	Developed by this researchers through a literature review (15 symptoms)	This researcher	0.95
Functional status	Korean Version of Modified Barthel Index (K-MBI)	Mahoney and Barthel (1965), translated by Jung et al., (2007)	0.94 / 0.93
HRQoL	Korean Euroqol-5 Dimensions (KEQ-5D)	EuroQol group (1987), Adapted by Jo et al., (2010)	0.86 / 0.80

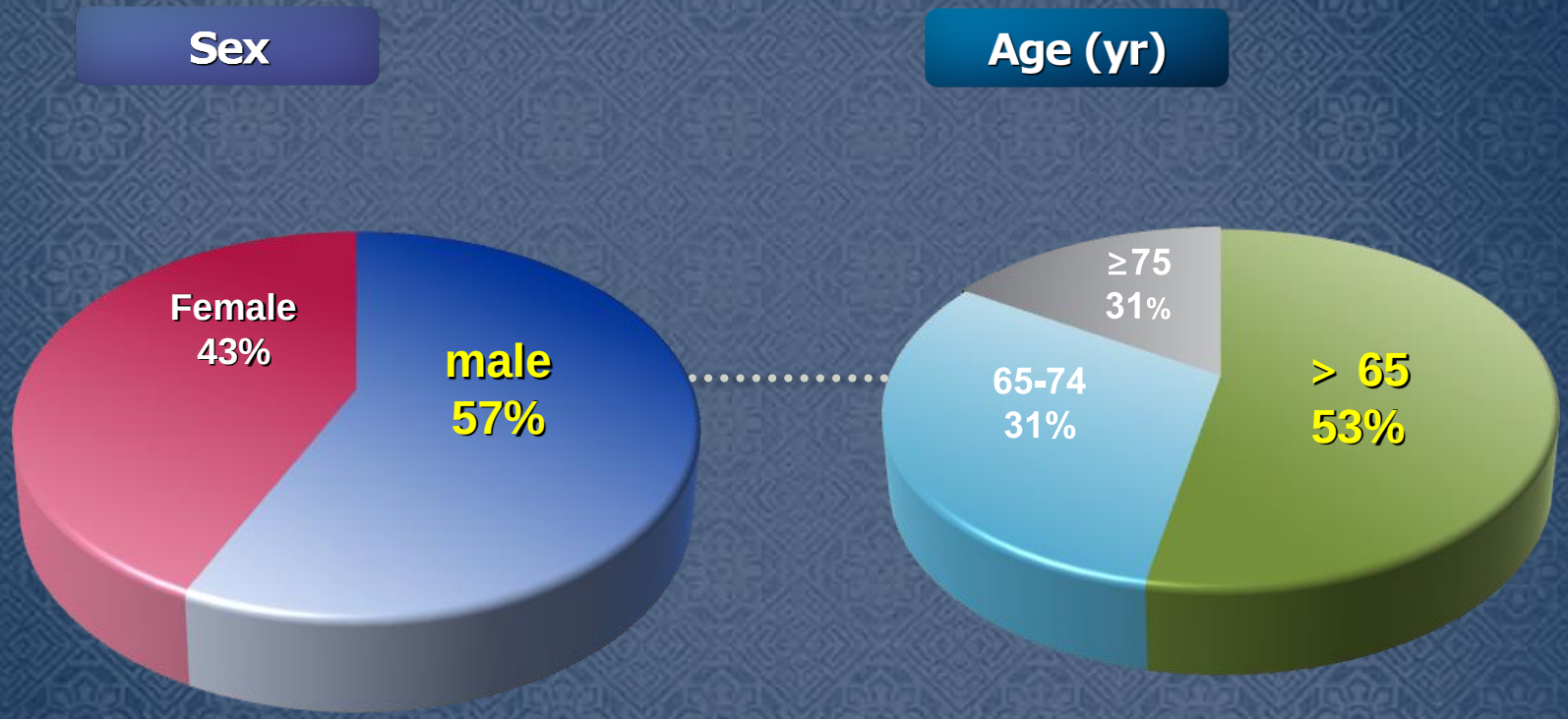
Data Collection & Data Analysis

- Ethical approval was done by the Soonchunhyang University Hospital of Choeonan Institutional Review Boards on the June 2011 (IRB No. 2011061601).
- Data were collected from July 18, 2011, to May 30, 2012 by four trained research assistants.
- PASW(Predictive Analytics Soft Ware) 18.0.

Statistics	Factors
T-test or One-way ANOVA	To analyze the diffference of demographics, Disease related factors, physical and psychological factors
Repeated measure ANOVA	To measure subjects' longitudinal changes in symptom experience, functional status, and HRQoL after discharge.
Hierarchical multiple regression analysis	To analyze factors influencing subjects HRQoL after ICU discharge

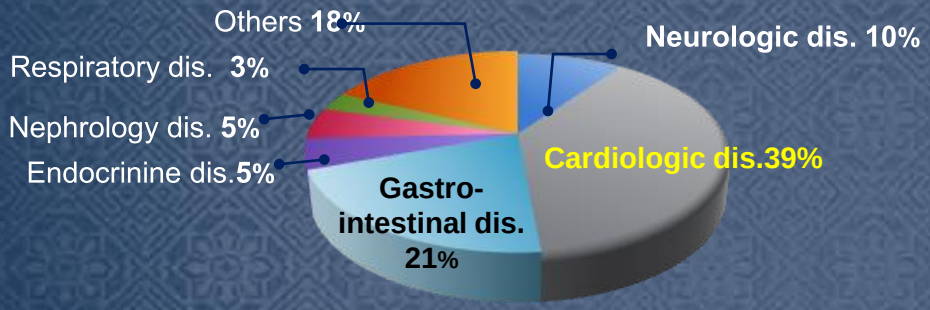
RESULTS

Socio-demographic Characteristics

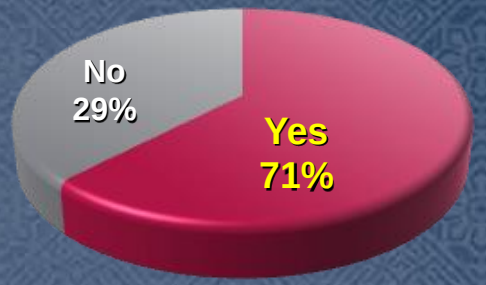


Disease-related Characteristics

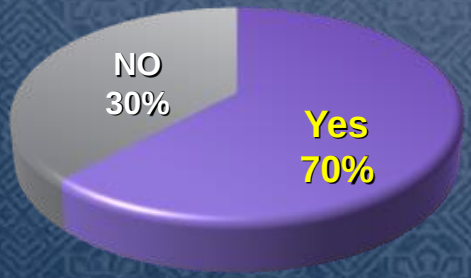
Diseases



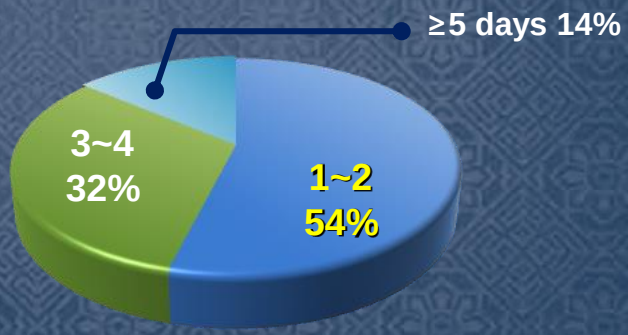
Comorbidities



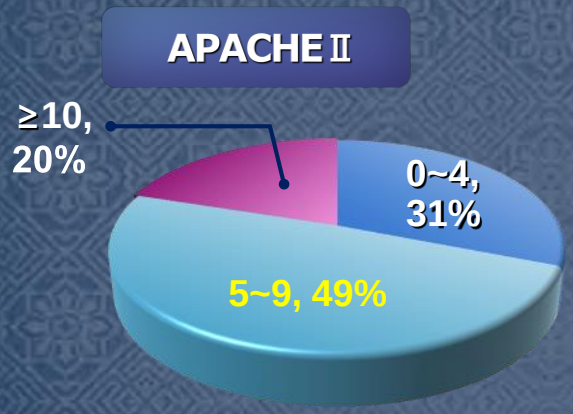
Having caregiver

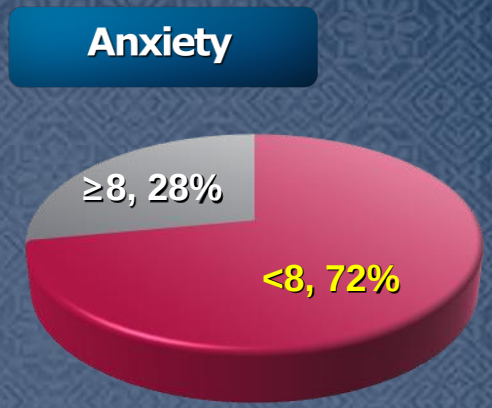


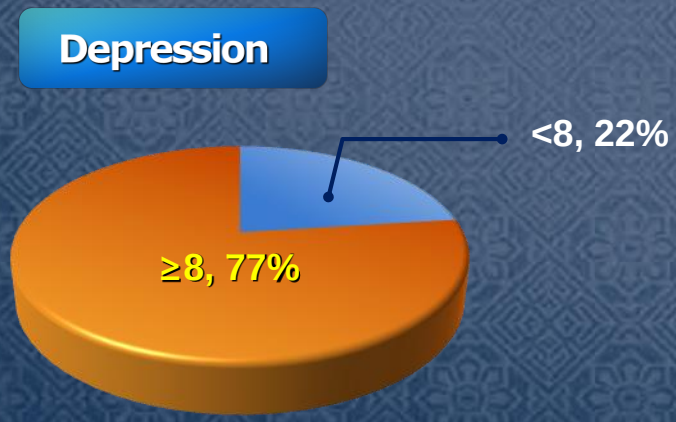
The length of stay in ICU (days)

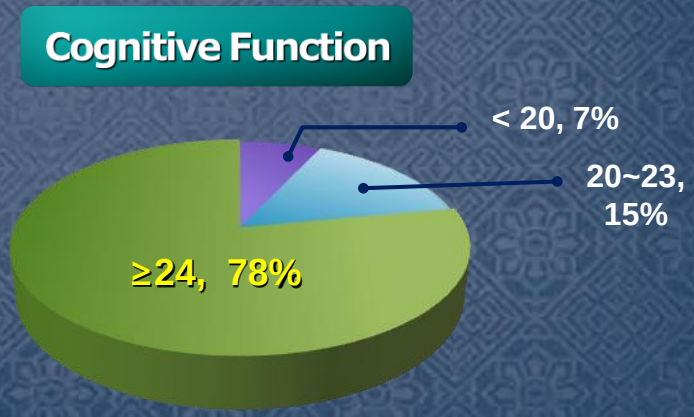


Health-related Characteristics
(physical & psychological factors)

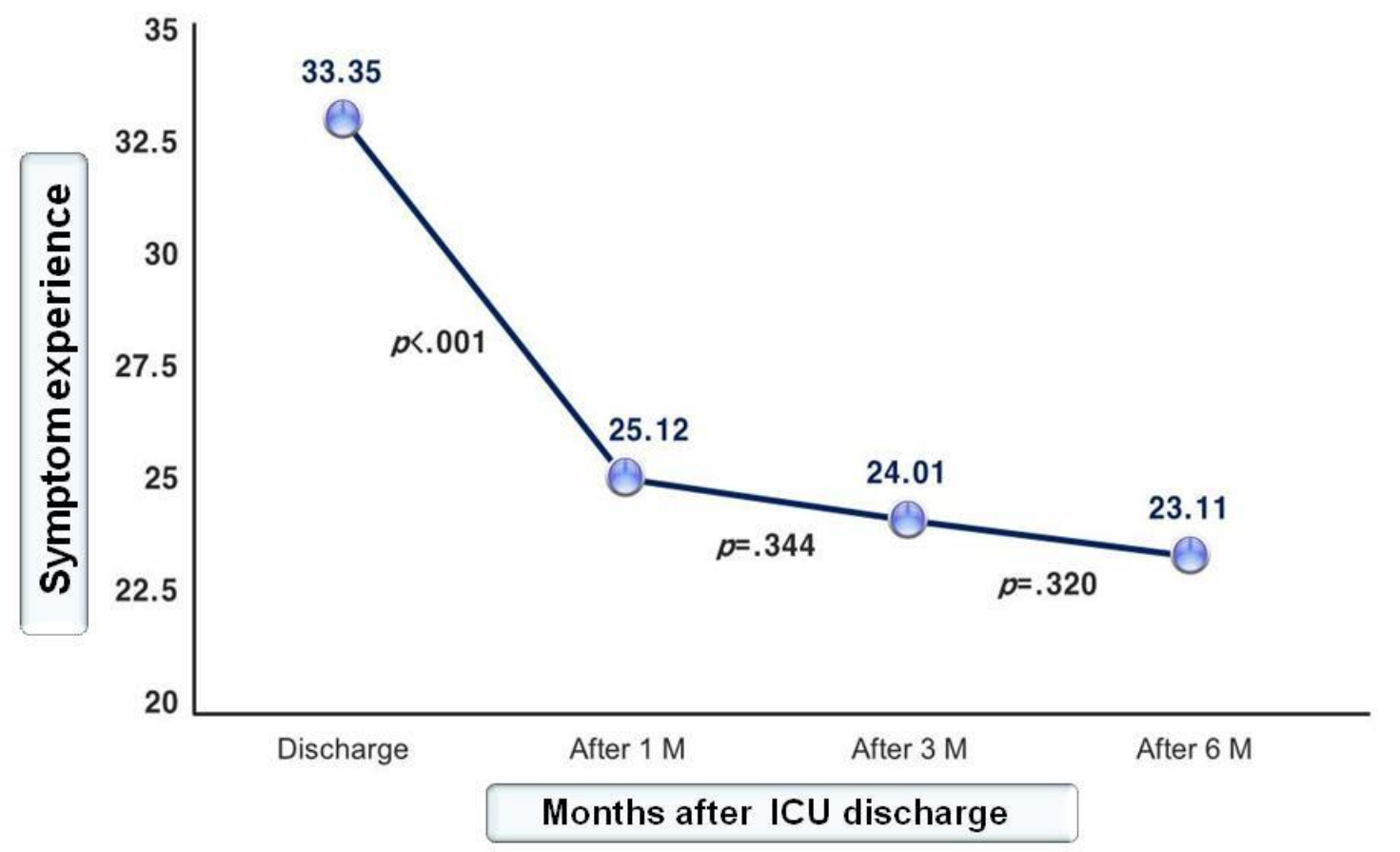




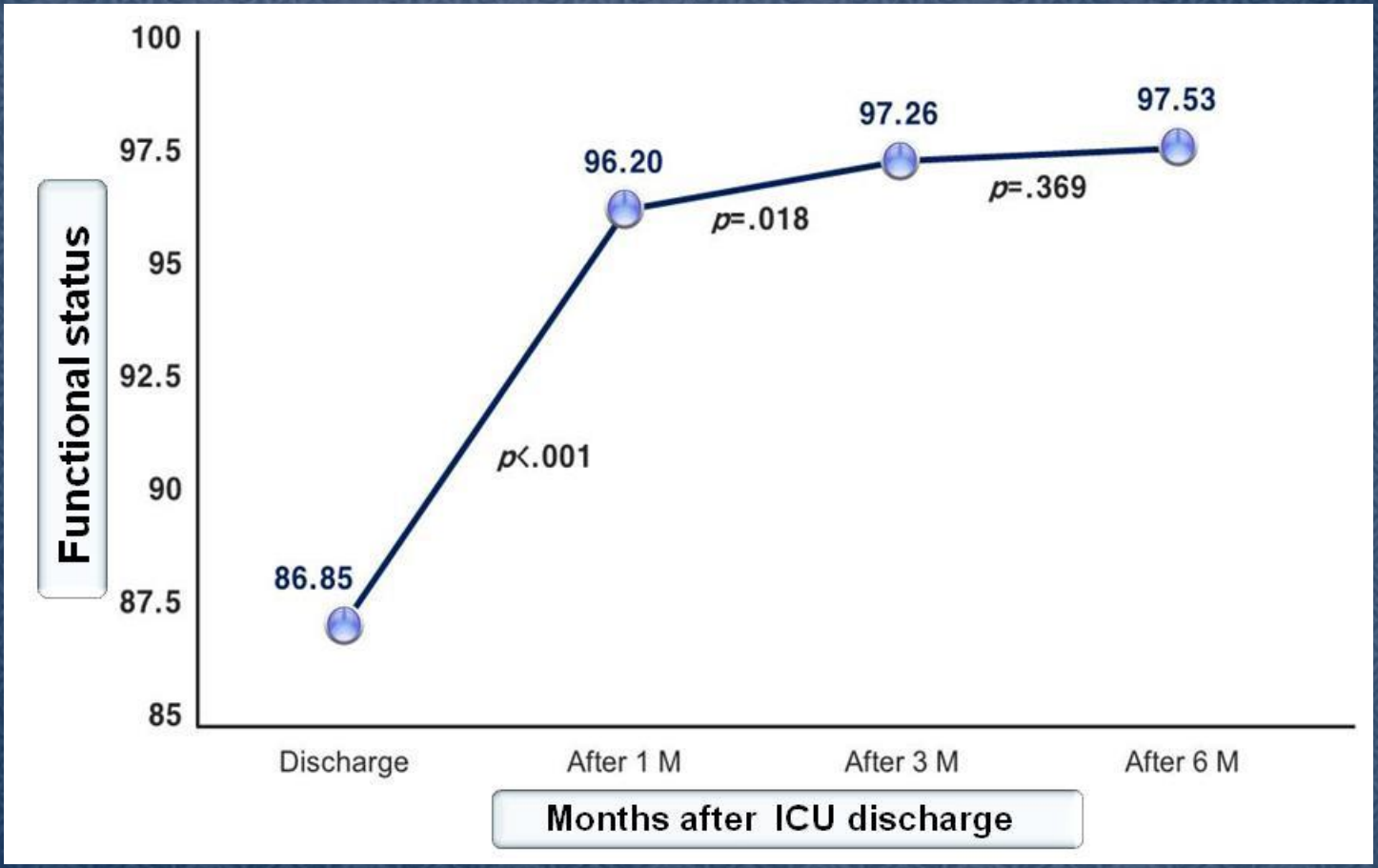




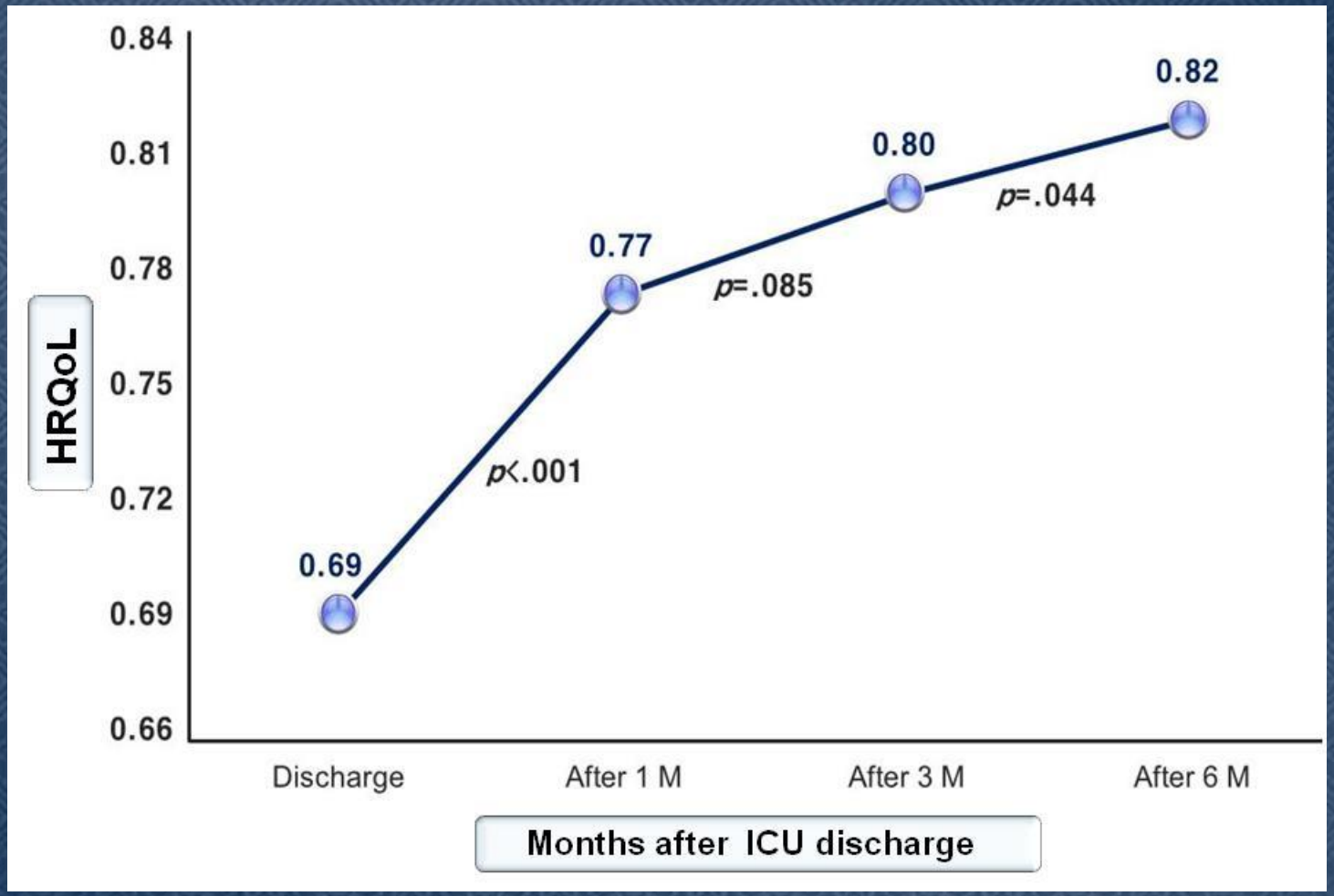
Changes of Symptom Experience after ICU discharge



Changes of Functional Status after ICU discharge



Changes of HRQoL after ICU discharge



Predictors of HRQoL after ICU discharge

Time	Predictors	β	p
Discharge	LOC at admission	-.163	.002
	ADL when transferred from ICU to unit	.133	.033
	The length of stay in ICU	.151	.006
	HAD-D	-.280	<.001
	Functional status	.576	<.001
After 1 Month	Having spouse	.093	.020
	ADL when discharged	.147	.009
	Symptom experience	-.508	<.001
	Functional status	.430	<.001
After 3 Months	The length of stay in ICU	.165	<.001
	Cognitive function	.183	.003
	Symptom experience	-.607	<.001
	Functional status	.448	<.001
After 6 Months	Employed	-.101	.042
	Symptom experience	-.555	<.001
	Functional status	.318	<.001

** Adjusted for General characteristics

** LOC; Loss of Consciousness, ICU; Intensive care unit, ADL; Activities of Daily Living, APACHE II; Acute Physiology and Chronic Health Evaluation II, HAD-A; Hospital Anxiety and Depression-Anxiety, HAD-D; Hospital Anxiety and Depression-Depression

CONCLUSIONS

Summary and Limitations

Summary

Symptom experiences and functional status were significantly associated with HRQoL in ICU survivors after discharge.

Limitation

First, it might also have been due to the limitation brought about by a 6-month follow-up duration instead of **a 1-year or longer on cognitive function would be necessary.**

Second, clear definition of symptom experience and a longitudinal study on HRQoL-related factors are still needed.

Implications

- First, this study was meaningful in showing what intervention would most effectively solve the problems of ICU survivors and promote HRQoL.
- Second, proving symptom experience and functional status of Korean patients as well as influencing factors of HRQoL based on Theory of Unpleasant Symptoms and HRQoL model was also meaningful.
- Finally, we expect this study to be used as preliminary data for medical staff to no longer overlook these problems but to recognize the significance and strategize appropriate ways of interventions of promote HRQoL.

Thank You !!