

# Evaluating the Comprehensive Model of Ego-integrity for Senior Patients in Convalescent Hospitals: Influence Factors and Outcome Variables

HyeSun Jeong<sup>1</sup> and HyunSoo Oh<sup>2\*</sup>

<sup>1</sup>Kongju National University, 56 Gongju Daehak-Ro Gongju-Si  
Chungcheongnam-Do 314-701, Republic of Korea

<sup>2</sup>Inha University, 100 Inharo Nam-Gu Incheon 402-791, Republic of Korea  
<sup>1</sup>hsjeong@kongju.ac.kr, <sup>2</sup>hsoh@inha.ac.kr

## Abstract

*This study was performed to evaluate the applicability of the ego-integrity model for home residing elderly to elderly patients in long-term care hospitals. In order to identify the –predictors of ego-integrity in elderly patients, a regression analysis was conducted. Results showed that higher age, lower pain levels, higher levels of fantasy and perspective taking, and lower personal distress level in the empathy dimension, as well as higher spiritual well-being, were related to higher ego-integrity. These results show that multidimensional factors covering all the physical, psychosocial, and spiritual aspects have to be considered to formulate a comprehensive understanding of ego-integrity in seniors.*

**Key words:** integrity, elderly, empathy, spiritual well-being

## 1. Introduction

Enhancements of living standards and medical technologies have led to a rise in both average life expectancy and the proportion of seniors in the population. In 2014, seniors above the age of 65 made up 12.7% of the total population, but this percentage is expected to rise to 27.6% within the next 20 years [1]. Along with the rise in the senior population comes a corresponding increase in medical costs, as most seniors will have to live with one or more chronic diseases in their later years.

The treatment of most chronic diseases require caregivers to provide necessary care and aid in the patients' daily lives, rather than advanced medical equipment. Thus, senior patients are usually admitted to convalescent hospitals, where they are hospitalized or receive outpatient care. Accordingly, the number of convalescent hospitals increased from 650 in 2008 to 1,103 in 2012 [2]. Due to changes in family structures as well as increased female presence in the workforce, it is difficult for seniors to receive the care they need at home [3]. Thus the number of senior patients in convalescent hospitals is expected to keep growing.

Erikson proposed ego-integration as a developmental goal in maturity. Ego-integration means integrating one's past with the present and future. A state of integration leads to positive psychological attitudes such as an understanding of the meaning of life, satisfaction with reality, and acceptance of one's impending death [4]. On the other hand, when ego-integration is not achieved, one feels anxious about death, harbors negative attitudes toward death, and suffers from depression and a lowered quality of life [4-8].

Thus, in order to increase well-being in seniors, it is most important to support their ego-integration process. This requires a strategy that identifies positive and negative factors of ego-integrity and strengthens the positive while alleviating the negative.

---

\* Corresponding Author

Existing studies have reported general characteristics such as age, sex, education, economic status, and religion [9], as well as physical and psychosocial factors such as pain [4], perceived health conditions, and social support/interaction with family [10] to be predictors of ego-integrity in seniors. Other studies have proposed spirituality as a further influencing factor, with attitude toward religion and religious activities being reported to impact ego-integrity [11, 12].

In sum, ego-integrity can be seen as affected by comprehensive factors in the physical dimension, psychosocial dimension, and spiritual dimension, with social support and interaction emphasized as major influencing factors [9, 13]. In order to enhance ego-integrity, it is crucial to form good relationships with others; empathy is a precondition for good interpersonal relationships [14]. Thus, it can be predicted that empathy will have a strong impact on ego-integrity in seniors.

On the other hand, one consequence of ego-integrity could be a change in attitude toward death [15]. Seniors with ego-integrity will accept death, having positive attitudes toward death; those without ego-integrity will have negative attitudes toward death, such as fear and anxiety.

The model, formulated using influencing factors and outcome variables as proposed in existing studies, is presented in 1. All influencing factors and outcome variables in the model have been identified by studies conducted on seniors living at home. Senior patients hospitalized or receiving outpatient care in convalescent hospitals live in different circumstances; thus, it can be expected that influencing factors will be different in their cases. However, there is as yet no study on the adequacy of these influencing factors, identified for seniors living at home, for senior patients at convalescent hospitals. Thus, this study was conducted to evaluate the adequacy of the influencing factors and outcome of ego-integrity, identified in studies conducted on seniors living at home, for senior patients hospitalized or receiving outpatient treatment at convalescent hospitals.

## **2. Research Methods**

### **2.1. Research Design**

This study is a non-experimental cross sectional correlation based study aimed at identifying the influencing factors and outcome variables of ego-integrity in senior patients at convalescent hospitals.

### **2.2. Research Subjects**

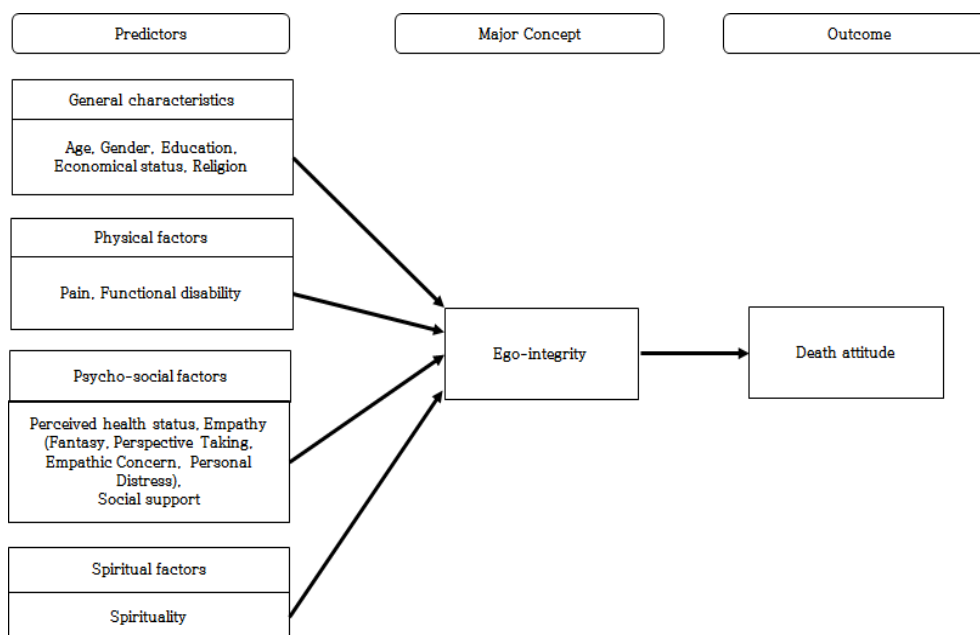
The subjects of this study were selected from among senior patients above age 65 hospitalized or receiving outpatient care at two long term care hospitals, one located in Gyeonggi Province and one in Chungcheongbuk Province. The subjects were selected from among senior patients capable of communication, and without psychological problems such as depression or cognitive problems such as dementia; all subjects agreed to participate in the study.

A G\*power analysis (Faul, Erdfelder, Buchner, & Lang, 2009)[16] was applied to calculate the minimum sample size for the study of 92 subjects. Taking into account the possibility of human error in data collection, data was collected from 99 subjects in total.

### **2.3. Research Procedure**

Prior to collecting the data, the heads of the nursing departments in the hospitals involved were briefed about research objectives and procedures, and their agreement to conduct the study was obtained. Then, the subjects were briefed about research objectives and the contents of the questionnaire. Data was collected from patients who voluntarily agreed to participate in the study. Data collection was conducted by 1 researcher and 4 assistants in an interview format in which the questionnaire was read aloud to the subjects

and their responses were recorded. The research assistants had also been trained in the research objectives, questionnaire content, and precautions before conducting data collection.



**Figure 1. Study Model of Influencing Factors and Outcome of Ego Integrity**

## 2.4. Measurement Indices

**2.4.1. General Characteristics of Subjects:** General characteristics of subjects collected were age, gender, education level, economic status, religion, status of cohabitation with family, and hospitalization status (hospitalization/ outpatient).

**2.4.2 Ego-integrity:** Ego-integrity was measured using Hong's (2000) [17] index of ego-integrity. This instrument consists of 16 items on a 4 point scale; its validity and reliability have been verified by its developer. Cronbach's alpha calculated in this study was .77.

**2.4.3. Perceived Pain Level:** The level of pain experienced by the subject was measured on a 10 point numeric rating scale (NRS). NRS as a pain scale is known to be valid and reliable.

**2.4.4. Activity in Daily Living:** To identify subjects' activity of daily living(ADL), the level of assistance required for 7 activities related to daily life such as having a bath/shower, getting dressed, going to the bathroom, lying down on and getting up from bed/chair, feeding, urination and/or evacuation, were measured on a 3 point scale. Cronbach's alpha calculated in this study was .94.

**2.4.5. Perceived Health Status:** Perceived health status was measured using a modified version of the Lee's (2006) [18] revised version of the health self-evaluation index developed by Lawston *et al.*, (1982)[19], consisting of 3 items. The reliability and validity of this index has been verified by the original developer and Cronbach's alpha as calculated in this study was .88.

**2.4.6. Empathy:** Empathy was measured using the Korean version of the interpersonal

reactivity index (IRI), which was developed and verified for validity and reliability by Davis (1980) [20]. The Korean IRI has also been evaluated for validity and reliability (Kang *et al.*, 2009) [21]. The IRI consists of 28 items on a 5 point scale divided into the 4 sub-categories of perspective taking, fantasy, empathic concern, and personal distress. Cronbach's alpha as calculated in this study was .73 for perspective taking, .77 for fantasy, .80 for empathic concern, .69 for personal distress.

**2.4.7. Social Support:** Social support was measured using a modified version of the multidimensional scale of perceived social support (MMPSS) developed by Zimet *et al.*, (1988) [22] and translated by Shin and Lee (1999) [23]. The version used in this study was modified by Lee (2010)[24] from the original 12 items on a 7 point scale to 12 items on a 5 point scale. Cronbach's alpha as calculated in this study was .87.

**2.4.8. Spiritual Well-Being:** Spiritual well-being was measured using the Korean version of the spiritual well-being scale (SWB) developed by Paloutzian and Ellison (1982) [25]. This instrument consists of 10 items on existential spiritual well-being and 10 items on religious spiritual well-being, making 20 items on a 6 point scale. The validity and reliability of the Korean version have also been verified [26, 27]. Cronbach's alpha as calculated in this study was .91.

**2.4.9. Attitude toward Death:** Attitude toward death was measured using a version of Kim's (2010)[28] index reconfigured into 12 items. This index is comprised of 3 sub-indices: positive death attitudes (3 items), negative death attitudes (6 items), and attitudes toward the death of others (3 items). The validity of the modified index was verified by a panel of experts, while the reliability was measured in a different study (Oh, 2012)[29] which calculated Cronbach's alpha values of .71 for positive death attitudes, .88 for negative death attitudes, and .71 for attitudes toward the death of others. Cronbach's alpha as calculated in this study was .60.

## 2.5. Data Analysis

The subjects' general characteristics, social support, empathy, spiritual well-being, ego-integrity, and attitude toward death were measured using descriptive statistics. Determinative factors and consequence variables for ego-integrity were analyzed using multiple regression analysis.

## 3. Results

### 3.1. General Particulars of Subjects

Among the subjects participating in this study, 68.7% were female (68 subjects), and 45.5% were between the ages of 65 to 69 (45 subjects). 84.8% had a religion (84 subjects), 58.6% were married (58 subjects), and 35.4% were elementary school graduates (35 subjects). 45.5% lived just with their spouses (46 subjects), 20.2% lived alone. For perceived economic status, 65.7% (65 subjects) were in the middle class. 53.5% were hospitalized (53 subjects), while 46.5% were in outpatient care. For perceived health status, 43.4% (43 subjects) replied 'so-so', and 26.3% (26 subjects) replied 'good'. 27.3% (27 subjects) thought that their health had become worse in the past 6 months, while 56.6% (56 subjects) thought that their health had remained the same 66.7% (66 subjects) were experiencing pain Table 1.

### 3.2. Ego-integrity, Empathy, Social Support, Spiritual Well-Being, and Attitude Toward Death

Ego-integrity of senior patients in convalescent hospitals averaged  $45.52 \pm (6.24)$  points

out of a total of 64 points. For the sub-indices of empathy, average scores were 20.88±(5.77) for fantasy, 23.13±(5.89) for perspective taking, 26.84±(5.28) for emphatic concern, and 19.55±(5.34) for personal distress. Average score for social support was 46.04±(8.97) out of a total of 60, 81.38±(19.40) out of 120 points for spiritual well-being, and 30.31±(7.12) out of 60 for attitude toward death Table 2

### 3.3. Influencing Factors of Ego-Integrity

Regression analysis was carried out to identify the influencing factors of ego-integrity in senior patients at convalescent hospitals. The final analysis showed the tolerance of the model to be higher than 0.1 at .475-.842; the variance inflation factor was lower than 10, in the range of 1.187 to 2.106. Thus, the regression analysis was free from multicollinearity.

The results of the analysis showed age ( $\beta=.23$ ,  $t=2.15$ ,  $p=.017$ ), existence of pain ( $\beta=-.31$ ,  $t=-2.15$ ,  $p=.017$ ), level of pain ( $\beta=-.31$ ,  $t=-1.87$ ,  $p=.032$ ), fantasy sub-index in empathy ( $\beta=.20$ ,  $t=1.94$ ,  $p=.028$ ), perspective taking sub-index in empathy ( $\beta=.20$ ,  $t=1.94$ ,  $p=.028$ ), personal distress sub-index in empathy ( $\beta=-.34$ ,  $t=-3.23$ ,  $p=.001$ ), and spirituality ( $\beta=.23$ ,  $t=2.11$ ,  $p=.019$ ) to have significant influences on ego-integrity. The coefficient of determination for these factors was adjusted  $R^2=.35$ , meaning that the model explained 35% of the variability; this was statistically significant ( $F=5.24$ ,  $p<.001$ ).

Higher age, lower pain levels, higher levels of fantasy and perspective taking, and lower personal distress level in the empathy dimension, as well as higher spiritual well-being, were related to higher ego-integrity. Among these factors, the most influential were personal distress in empathy, the existence of pain, and level of pain Table 3.

**Table 1. Characteristics among Subjects**

(N=99)		
Variable	Category	N (%)
Gender	Male	31(31.3)
	Female	68(68.7)
Age	65- 69	45(45.5)
	70-79	33(33.3)
	≥ 80	21(21.2)
Religion	Not have	15(15.2)
	Have	84(84.8)
Marital status	Married	58(58.6)
	Separated/Bereaved	41(41.4)
Education	Elementary school	35(35.4)
	Middle school	17(17.1)
	High school	26(26.3)
	College	21(21.2)
Cohabitation status	Sons and/or daughters	33(33.3)
	Husband or wife	46(46.5)
Perceived economic status	Lives alone	20(20.2)
	Poor	25(25.3)
	Middle	65(65.7)
Pattern of care	Wealthy	9(9.0)
	Hospitalized	53(53.5)
	Out patient	44(46.5)

Perceived health status	Poor	30(30.3)
	So-so	43(43.4)
	Good	26(26.3)
Perceived health status compare with people in the same age	Bad	33(33.4)
	so-so	23(23.2)
	Good	43(43.4)
Perceived health status change during past 6months	Become worse	27(27.3)
	Remained same	56(56.5)
	Become better	16(16.2)
Pain	Yes	66(66.7)
	No	33(33.3)

**Table 2. Ego-integrity, Spiritual Well-Being, Empathy, Social Support and Attitude toward Death among Subjects**

(N=99)

Variable	Sub-categories	Score range (total)	Score range (item)	Mean	Grade Point Mean
Ego-integrity		16-64	1-4	42.52(6.24)	2.66(.39)
Spiritual Well-Being	Spiritual Well-Being	20-120	1-6	58.62(19.20)	2.93(.96)
	Existential spiritual well-being	10-60	1-6	30.23(7.43)	3.02(.74)
	Religious spiritual well-being	10-60	1-6	28.36(12.55)	2.84(1.26)
	Fantasy	7-28	1-5	20.88(5.77)	2.98(.82)
Empathy	Empathic concern	7-28	1-5	26.84(5.28)	3.83(.75)
	Perspective taking	7-28	1-5	23.13(5.89)	3.30(.84)
	Personal distress	7-28	1-5	19.55(5.34)	2.79(.76)
	Social support	12-60	1-5	46.04(8.97)	3.84(.75)
Social support	Family	4-20	1-5	17.37(3.42)	4.34(.85)
	Friends	4-20	1-5	12.65(4.63)	3.16(1.16)
	Others	4-20	1-5	16.02(3.74)	4.01(.94)
Attitude toward death		12-60	1-5	30.31(7.12)	2.53(.59)

### 3.4. Additional Analysis: Indirect Effect of Empathy on Ego-Integrity through Social Support

It has been known that empathy determines social interaction including perceived social support by making individuals be sensitive with others' feeling, psychological state, and inner experiences, and several related studies reported that social support had important influence on ego-integrity. Based on these evidences, we planned to descriptively investigate whether empathy could improve ego-integrity through enhancing

social-support. That is, in this study the significance of indirect influence of empathy on ego-integrity through social support was additionally examined using path analysis. And the results of the analysis showed that all of the indirect influences of sub-scales of empathy (Fantasy, Empathic concern, Perspective taking, Personal distress) on ego-integrity through social support were not statistically significant (-.01, t=-0.29; -.01, t=-0.29; -.01, t=-0.30; .00, t=0.28, respectively) Table 4.

**Table 3. Influencing Factors of Ego Integrity and Death Attitude**

(N=99)						
Outcomes	Predictors		$\beta$	t(p)*	R <sup>2</sup> †	F(p)
Ego-integrity	Age		.23	2.15 (.017)	.35	5.24 (<.001)
	Pain		-.31	-2.15 (.017)		
	Perspective taking		.25	2.02 (.023)		
	Empathy	Fantasy	.20	1.94 (.028)		
		Personal distress	-.34	-3.23 (.001)		
	Spirituality		.23	2.11 (.019)		
Death attitude	Ego-integrity		.19	1.90 (.030)	.03	3.60 (.030)

\*One-tailed test

**Table 4. Indirect Influences of Empathy on Ego-Integrity through Social Support**

(N=99)				
Extrinsic/Intrinsic factors	Coefficient estimates			SMC
	Direct (T-value)	Indirect (T-value)†	Total (T-value)	
<b>Social support</b>				
Empathic concern	.14 (1.23)	-	.14 (1.23)	.23
Fantasy	.16 (1.72)*	-	.16 (1.72)*	
Perspective taking	.33 (2.95)**	-	.33 (2.95)**	
Personal distress	-.08 (-0.85)	-	-.08 (-0.85)	
<b>Ego-integrity</b>				
Social support	.03(0.30)	-	.03 (0.30)	.33
Perspective taking	.25 (2.34)**	<b>-.01 (-0.30)</b>	.24 (2.34)**	
Fantasy	.07 (0.77)	<b>-.01 (-0.29)</b>	.06 (0.75)	
Empathic concern	.21 (1.95)*	<b>-.01 (-0.29)</b>	.20 (1.95)*	
Personal distress	-.41 (-4.44)**	<b>.00 (0.28)</b>	-.41 (-4.44)**	

\*T<sub>1</sub>≥1.64, p≤.05; \*\*T<sub>1</sub>≥1.96, p≤.01) SMC: Squared Multiple correlation

## 4. Discussion

This study was conducted in order to analyze the influencing factors and outcome variables for ego-integrity in senior patients hospitalized or receiving outpatient care in convalescent hospitals. The results showed that the influencing factors of age, pain, the fantasy sub-dimension of empathy, the perspective taking sub-dimension of empathy, the personal distress sub-dimension of empathy, and spirituality had meaningful effects on ego-integrity. It was possible to explain 35% of the variability in ego-integrity using these factors. Among the significant factors, personal distress in empathy was the most influential, followed by pain.

The results showed that age was the only general characteristic to have a significant impact on ego-integrity, with ego-integrity increasing along with age. In general, higher age brings poorer health and lowered mobility. As these variables were shown to adversely impact ego-integrity in earlier studies [13], it was expected that higher age would bring about lower ego-integrity. However, the results contradicted this expectation. It was found that subjects tended to accept their pasts and integrate them better with the present and future as they aged.

The results showed lower ego-integrity when pain levels rose. This was in line with earlier studies showing chronic pain to have a negative impact on ego-integrity [4]. The problem is that most seniors tend to perceive pain as a part of the aging process, and neglect to take appropriate measures to manage chronic pain. If chronic pain continues to be taken as a part of the normal aging process and is neglected, it will continue to worsen and may eventually inflict severe damage on ego-integrity. Therefore, more proactive nursing and intervention should be implemented to alleviate chronic pain in seniors.

In terms of empathy, the sub-dimensions of fantasy, perspective taking, and personal distress were shown to have meaningful effects on ego-integrity. Higher cognitive empathy, given its concomitant higher level of understanding toward others, is expected to lead to good interpersonal relations and thus bring about higher ego-integrity in seniors. On the other hand, personal distress in the empathy dimension refers to an experience of distress in response to the suffering of others [20, 21]. While personal distress leads to a heightened understanding of others, it can cause psychological distress or burden. For this reason, personal distress has also been reported to be a determinative factor of feelings of depression [30, 31]. Correspondingly, personal distress in the empathy dimension was shown to have a negative impact on ego-integrity.

According to the results of this study, spiritual well-being is positively related to ego-integrity. This corresponds to earlier studies showing the positive impact of spiritual well-being on ego-integrity [12]. Ego-integrity was also shown to have a positive impact on attitudes toward death. A meaningful correlation between ego-integrity and positive attitudes toward death has been reported in earlier studies as well [15], matching the results of this study.

In conclusion, achieving ego-integrity is a multidimensional concept that includes independence, acceptance of life, psychological stability, harmony with others through empathy, overcoming difficulties, and spiritual well-being [32, 33, 34]. Therefore, when attempting to understand ego-integrity in seniors, it is important to achieve a comprehensive understanding of the physical, psychosocial, and spiritual factors that interact with the environment that the individual is placed in.

## Acknowledgments

This study was supported by Inha University research fund in 2015.

## References

- [1] [www.kostat.go.kr](http://www.kostat.go.kr), Statistics for Elderly, [http://www.kostat.go.kr/portal/korea/kor\\_nw/2/1/index.board?bmode=read&aSeq=330349](http://www.kostat.go.kr/portal/korea/kor_nw/2/1/index.board?bmode=read&aSeq=330349), (2014).



- [2] Korea Health Industry Development Institute, *Statistical Handbook of Medical Resources*, (2013).
- [3] E. H. Kim and S. Y. Moon, "The effect of health status on sleep quality and quality of life among elderly patient in geriatric hospitals", *Journal of Digital Convergence*, vol. 12, no. 11, (2014), pp. 415-426.
- [4] S. Y. Kim and M. Y. Kim, "The relationship among pain, depression and ego integrity in day care center elderly people with chronic pain", *Journal of the Korean Gerontological Society*, vol. 5, no. 1, (2013), pp. 50-60.
- [5] H. R. Kim, "Quality of life and its' correlated among older adults in one urban community in Korea: mediating effects of ego integrity", *Journal of the Korean Gerontological Society*, vol. 32, no. 1, (2012), pp. 223-236.
- [6] Y.S. Seo, Y. L. Son and K. W. Sung, "Factors related to the death attitudes among the elderly women in rural areas", *Korean Gerontol Nurs.*, vol. 13, no. 1, (2011), pp. 21-28.
- [7] W. S. Choi, "A Study on the elderly's ego integrity and death anxiety", *Journal of the Korean Gerontological Society*, vol. 27, no. 4, (2007), pp. 755-773.
- [8] D. W. Parker, "The relationship between ego integrity and death attitudes in older adults", *American Journal of Applied Psychology*, vol. 2, no. 1, (2013), pp. 7-15.
- [9] H. K. Kim, "Factors influencing ego integrity of elderly", *Korean Gerontol Nurs.*, vol. 8, no. 1, (2006), pp. 21-28.
- [10] H. K. Chang, S. J. Nam and B. K. Cha, "Influencing factors on ego-integrity of the aged", *Journal of Korean Acad Psych Mental Health Nurs.*, vol. 13, no. 1, (2004), pp. 64-71.
- [11] S. B. Kang and S. S. Cho, "Effects of religious activities and faith attitudes on depression and ego-integrity of the elderly", *Journal of the Korean Contents Association*, vol. 13, no. 10, (2013), pp. 325-346.
- [12] G. J. Choi and S. B. Je, "Spirituality effect on ego integrity of aged people", *Journal of Welfare for the Aged*, vol. 38, (2007), pp. 109-126.
- [13] H. K. Chang and W. O. Oh, "Factors influencing ego-integrity in community dwelling elders", *Journal of Korean Acad Fundam Nurs.*, vol. 18, no. 4, (2011), pp. 529-537.
- [14] M. S. Chung, "Relations on self-esteem, empathy and interpersonal relationship for reinforcing competence in communication of nursing students", *Journal of Korean Acad Soc Nurs Educ.*, vol. 20, no. 2, (2014), pp. 332-340.
- [15] Y. S. Seo, Y. L. Son and K. W. Sung, "Factors related to the death attitudes among the elderly women in rural areas", *Journal of Koran Gerontol Nurs.*, vol. 13, no. 1, (2011), pp. 21-28.
- [16] F. Faul, E. Erdfelder, A. Buchner and A.-G. Lang, "Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses", *Behavior Research Methods*, vol. 41, (2009), pp. 1149-1160.
- [17] C. Y. Hong, "Reminiscence functions predictors in the elderly, unpublished doctoral dissertation", Ewha womens university, (2000).
- [18] P. S. Lee, "Correlational study among healthy life style, self-esteem, perceived health status in Korean elderly", *The Korean Journal of Stress Research*, vol. 8, no. 1, (2006), pp. 17-26.
- [19] M. P. Lawston, M. Moss, M. Fulcomer and M. H. Kleben, "A research and service oriented multilevel assessment instrument", *Journal of Gerontology*, vol. 37, no. 1, (1982), pp. 91-99.
- [20] M. H. Davis, "A multidimensional approach to individual differences in empathy", *JSAS Catalog of selected documents in Psychology*, vol. 10, no. 85, (1980).
- [21] I. Kang, S. W. Kee, S. E. Kim, B. S. Jeong, J. H. Hwang, J. E. Song and J. W. Kim, "Reliability and validity of the Korean-version of Interpersonal Reactivity Index", *Journal of Neuropsychiatric Assoc.*, vol. 48, (2009), pp. 352-358.
- [22] G. D. Zimet, S. S. Powell, G. K. Farley, S. Werkman and K. A. Berkoff, "Psychometric characteristics of the multidimensional scale of perceived social support", *Journal of Personality Assessment*, vol. 55, (1990), pp. 610-617.
- [23] J. S. Shin and Y. B. Lee, "The effects of social supports on psychosocial well-being of the unemployed", *Korean Journal of Social Welfare*, vol. 37, (1999), pp. 241-269.
- [24] S. M. Lee, "Factors associated with cognitive function level of the elderly -depression, perceived social support, activities of daily living, unpublished master's thesis", Aju university, (2010).
- [25] R. F. Paultzian and C. W. Ellison, "Loneliness, spiritual well-being and the quality of life", *Loneliness: a Source-book of current theory, Research and therapy*, ed by Peplau LA and Perman D New York, John Wiley and Son, (1982), pp. 224-236.
- [26] S. D. Cheung, J. B. Lee, H. B. Park, J. S. Kim, D. S. Bai, K. H. Lee, J. K. Sagong, C. J. Song and J. W. Bai, "A study on reliability and validity of the Korean version of spiritual well being scale", *Journal of Korean Neuropsychiatr Assoc.*, vol. 40, no. 2, (2001), pp. 230-242.
- [27] G. N. Kang, "Validity analyses on Korean spiritual well-being scale", *Journal of Educational Evaluation*, vol. 16, no. 2, (2001), pp. 111-130.
- [28] S. W. Kim, "A study on attitude to death and need so death education according to general features and personality types of the old", Unpublished master's thesis. Yeungnam Univerisy, (2010).
- [29] S. J. Oh, "The effects of personality traits and social activity on the attitudes of the aged toward death", unpublished masters' thesis, Hoseo University, (2013).

- [30] S. H. Lee and Y. H. Lee, "Empathic accuracy and self-reported empathic ability in depression among university students", *The Korean Journal of Clinical Psychology*, vol. 33, no. 1, (2014), pp. 17-33.
- [31] S. A. Lee, "Does empathy mediate relationship between neuroticism and depressive symptomatology among college students?", *Personality and Individual Difference*, vol. 47, (2014), pp. 429-43.
- [32] S. O. Chang, E. S. Kong, K. B. Kim, N.C. Kim, J. H. Kim, C. G. Kim, H. K. Kim, M. S. Song, S. Y. Ahn, K. J. Lee, Y. W. Lee, S. J. Chon, N. O. Cho, M. O. Cho and K. S. Choi, "The concept analysis of ego-integrity in the elderly", *Journal Korean Acad Nurs.*, vol. 34, no. 7, (2004), pp. 1172-1183.
- [33] S. O. Chang, J. H. Kim, E. S. Kong, C. G. Kim, S. T. Han and N. O. Cho, "Exploring ego-integrity in old adults: A Q-methodology study", *International Journal of Nursing Studies*, vol. 45, (2008), pp. 246-256.
- [34] H. S. Jeong and H. S. Oh, "A study on a comprehensive model of influence factors and outcomes of ego integrity of elderly patient in long-term care hospitals", *Proceeding of ASTL88; the Current Research on Health and Nursing IV, Jeju island, Korea*, (2015) April 15-18.

### Authors



**Hye-Sun Jeong**, Associate professor, Nursing department, Kongju National University.



**Hyun-Soo Oh**, Professor, Nursing department, Inha University.