

# Attitudes toward the Elderly among Nursing Students in Korea

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**Purpose.** The primary purpose of this study was to reexamine underlying dimensions of attitudes toward the elderly held by undergraduate nursing students. A secondary purpose was to investigate characteristics of nursing students associated with attitudes toward elders.

**Methods.** A survey was performed using self-report questionnaire completed by nursing students from a total of 10 nursing schools or departments each selected randomly from one province of Korea. Students' responses (N=366) were analyzed using factor analysis, correlation coefficients, t-test, and ANOVA.

**Results.** Three attitudinal dimensions explaining 35.29% of the variance were extracted: vitality, generosity and flexibility. From a neutral point of 4.0 in the range of 1 to 7, only generosity (4.47) was evaluated positively, whereas vitality (3.31) and flexibility (2.91) were evaluated negatively. The mean scores of the vitality and generosity dimensions were significantly different by students' level of communication with the elderly, experience living with the elderly, and interest in elders or in issues related to elders. Interest in elders/elder issues was the only characteristic affecting significant mean score difference in flexibility.

**Conclusion.** Educational process should increase students' exposure to healthy elderly to modify negative attitudes toward the elderly among nursing students.

**Key Words :** Attitude, Aged, Nursing students, Factor analysis

## INTRODUCTION

Korea's elderly population, age 65 and over, reached 7.2% in 2000 and is projected to reach 15.1% in 2020 leading to an aged society (Ministry of Health and Welfare, 2001). This rapid increase in the older segment of the population raises a need for health care services and an increase for nursing services for the elderly. In facing these societal needs, health care professionals who are well equipped and willing to work with the elderly are needed to provide quality nursing services.

Earlier studies found that caring for the elderly or working in a nursing home was least preferred among Korean nursing students (Kim, 1981) and nurses (Cho,

1992; Choi, 1976). An unwillingness to work with the elderly is regarded as an expression of students' negative attitudes toward older people (Small, 1991). Attitudes affect not only willingness to work with the elderly, but also the nursing care that clients receive (Arnold, 2001; Small, 1991). Modifying students' negative attitudes toward the elderly could enhance nursing resources with proper preparation for a gerontological nursing career. Hence nursing educators that are sensitive to students' attitudes toward the elderly may devise educational experiences to promote a positive attitude toward the elderly and to increase the pool of professional nurses that can take public responsibility for the current and future nursing needs of an aging society.

Attitudes toward the elderly have received attention

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from researchers in various fields including nursing (Arnold, 2001; Seefeldt, Jantz, Galper, & Serock, 1977; Singleton, 1998; Thorson & Perkins, 1981). Although various attitudes toward the elderly have been studied in relation to student characteristics, such as sex, age, years of education, contact with old people, interest in issues related to the elderly, communication with the elderly, and knowledge of aging in several cultural groups (Naus, 1973; Rosencranz & McNevin, 1969; Seo & Kim, 1999; Takeda, Hosoe, Sodei, Cheng, & Sue, 1991; Thorson & Perkins, 1981), no standardized instrument applicable across various different cultures exists for measuring attitudes. However, an effort to develop such an attitude scale for Asian cultures was made, but the underlying factors and factor loadings of items varied among college students in Korea, Japan and Taiwan (Takeda, Hosoe, Sodei, Cheng & Sue, 1991). Although these countries are all Asian, different attitudinal dimensions toward the elderly emerged by country and culture. In a later study applying the same instrument to Korean college students, yet another constellation of factors resulted. In addition to the common dimensions such as activity, mildness, happiness, cooperativeness, and greatness found in at least two countries, extraversion was reported in Japanese students, while cheerfulness in Taiwanese students, and preciseness in Korean students. Considering that an attitude scale may be culture-specific and multidimensional, further study is needed to establish a stable structure and psychometric properties representing attitudes of Korean nursing students.

Further, information about student characteristics associated with various dimensions of attitude is needed for practical application in designing learning activities to modify negative attitudes. Dimensions of attitudes toward the elderly may differ academic major of undergraduate and graduate students (Thorson & Perkins, 1981). Thus, it is important to examine the attitudes of nursing students, as distinct from other fields, because they will be a key health professional for the elderly in the future. Therefore, the primary purpose of this study was to re-examine underlying dimensions of attitudes toward the elderly among undergraduate nursing students in Korea. A secondary purpose was to investigate related characteristics of attitudes toward the elderly in the same population.

## METHODS

**Design:** A survey study design with the cross-sectional method was used to examine the attitudes to elders among nursing students in Korea.

**Sample:** After all nursing colleges in Korea were divided into ten provinces; one college from each province was randomly selected for a total of ten recruiting sites. There were 50 four-year nursing schools or departments (total nursing students = 9,561) in Korea at the time of data collection in 2000 (Korean Nurses Association, 2002). From the 10 selected schools, only one grade from each school was randomly selected. Through this stratified sampling at an organizational level, 3.9% ( $n = 369$ ) of nursing students in Korea were recruited.

One professor at each school received an explanation of the study purpose. Then, a package including the survey questionnaire and a return envelope was sent to the contacted professors. The inclusion criteria of participants in the study were college students who 1) were in the Bachelor's Science of Nursing (BSN) program at the time of data collection, and 2) agreed to answer the questions by responding to the questionnaire. After all participants filled out the questionnaire, the contacted professor collected the forms and returned them in the return envelope. Data collection was conducted in November 2000. Three subjects who did not complete the questionnaire in full were deleted from the analysis. Hence, the current analyses were based upon the responses of 366 subjects.

The mean age of nursing students was 21.29 ( $SD = 6.01$ ) and ranged from 18 to 39. Most of the respondents were females (99.2%) and juniors (44.5%). Seventy-seven students (21%) took lectures about gerontological nursing, and the rest of the students who did not take them were freshmen or sophomores. One hundred sixty eight students (46.2%) occasionally communicated with elders, and interestingly, 17 students (4.6%) had never communicated with the elderly. One hundred ninety one students (52.2%) had experiences in living with the elderly including grandparents or older relatives, and 200 (54.9%) had at least a moderate interest in the elderly or issues related to the elderly. One hundred sixty four nursing students (45.1%) had little, very little or no interest in the elderly or issues related to the elderly. One hundred fifty eight students (43.2%) grew up in large cities. Table 1 describes participants'

characteristics.

**Instrument:** Attitude was measured by using an instrument developed by Takeda and her colleagues (1991). The 108 adjectives in the attitude scale were originally developed by collaborative work among several researchers from Japan, Taiwan and Korea based upon free association, literature review, and dictionary (Takeda et al, 1991). The original 108 items were antonyms of each other describing an attitude toward the elderly. Among them, 58 items were deleted because: 1) they were very similar in meaning to another pair of antonyms, 2) they were too ambiguous, and/or 3) they were not able to be translated into each language, Japanese, Taiwanese, or Korean. The finalized 50 pairs of adjectives describing an attitude toward the elderly were rated using a seven-point semantic differential rating ranging from 1 to 7, with 4 being neutral (neither one nor the other). A favorable or an unfavorable attitude is revealed when the score falls more toward a either end, while intensity is shown by how far out from the neutral point the score lies along the 7-point scale that makes it possible to examine both the direction and the intensity of attitudes (Osgood, Suci, & Tannenbaum, 1957). Each pair of antonyms was asked using the same question: "Please circle the number that describes your perception of the image of the elderly."

**Data Analysis:** SPSS 12.0 was used to analyze the data. Descriptive statistics were calculated to examine the mean, standard deviation, and frequency of the variables of interest in this study. Both exploratory and confirmatory factor analysis was done to reexamine the underlying dimensions of attitude. Factors were expected to be correlated with each other, which is a general phenomenon in social behavioral science (Lee, 1995). Correlated factors of the attitudes toward the elderly were also empirically found by Seo and Kim (1999). ANOVA and t-tests were used to examine group differences in the identified factors and a Scheffe post-hoc test was utilized to examine the detailed group difference.

## RESULTS

### *Reexamination of the underlying dimensions*

The exploratory factor analysis using Principal Axis Factoring (PAF) with Promax rotation method was conducted initially. The Kaiser-Meyer-Olkin test for examining the adequacy of sampling was significance ( $KMO = .90, p < .00$ ), for confirming that the sample size was ad-

equate. Based upon the assumption of correlated latent factors one of oblique methods, Promax, was applied to improve interpretation of results. Based on scree plot and eigen value, three factors were extracted (Total cumulative percentage = 32.4).

After the initial extraction with Promax rotation, eleven items (e.g., superior/inferior, happy/sad, poor/rich) that did not load to any of the three extracted factors ( $<.40$ ) were deleted. Then, another factor analysis forcing three factors was conducted (Table 2). In the final model, a total of three factors explained 35.29% of variance. Factor 1, vitality, was composed of 18 items. For subsequent analyses, the item, quiet/noisy, was excluded from factor 1 because it did not fit well with the rest of items (e. g., active/passive, slow/quick) in the vitality dimension. The item of happy/unhappy double

**Table 1.** Characteristics of Participants (N = 366)

Variable		n (%)
Age		
Mean (SD)	Range	
21.29 (6.01)	18-39	
Sex		
Female		362 (99.2)
Male		3 (.8)
Year in College		
Freshmen		46 (12.7)
Sophomore		86 (23.6)
Junior		162 (44.5)
Senior		70 (19.2)
Lecture of Gerontological Nursing		
Yes		77 (21.0)
No		289 (79.0)
Communication with Elders		
Frequent		44 (12.1)
Occasional		168 (46.2)
Rare		135 (37.1)
Never		17 (4.6)
Experience Living with Elders		
Yes		191 (52.2)
No		175 (47.8)
Interest in Elders/Issues		
Very much		17 (4.6)
Moderate		183 (50.3)
Little		116 (31.9)
Very little		40 (11.0)
Not at all		8 (2.2)
Residence Area when growing up		
Large city		158 (43.2)
Mid/small city		140 (38.4)
Rural area		67 (18.4)
Excluded missing value		

loaded (.50 and .40) on both the vitality and generosity dimensions. However, the happy/unhappy item was assigned to the vitality dimension because it loaded more strongly with vitality and went better with other vitality

items than with generosity ones. Another item, open/closed, was deleted from the vitality dimension and moved to the flexibility dimension because it conceptually better matched with the rest of items (e. g., ob-

**Table 2.** Exploratory Factor Analysis: Factor Loadings and Reliabilities

ITEMS	Vitality	Generosity	Flexibility
Active/Passive	.67		
Dark/Light	-.62		
Dynamic/Static	.60		
Negative/Positive	-.58		
Slow/Quick	-.57		
Introverted/Extroverted	-.57		
Productive/Unproductive	.57		
Weak/Strong	-.56		
Conspicuous/Inconspicuous	.54		
Isolated/Connected	-.53		
Dependent/Independent	-.52		
Busy/Idle	.51		
Big/Small	.51		
Sturdy/Fragile	.50		
Happy/Unhappy	.50		
Gray/Rosy	-.47		
Capable/Incapable	.46		
Attractive/Unattractive	.42		
Cold/Warm		-.72	
Narrow/Wide		-.71	
Greedy/Unselfish		-.66	
Clever/Stupid		.62	
Gentle/Severe		.60	
Cooperative/Rebellious		.57	
Vulgar/Elegant		-.53	
Splendid/Shabby		.50	
Distant/Close		-.50	
Unstable/Stable		-.50	
Satisfied/Dissatisfied		.45	
Neat/Sloppy		.45	
Hard/Soft		-.45	
Optimistic/Pessimistic		.43	
Stubborn/Docile			-.66
Progressive/Conservative			.59
Objective/Subjective			.47
Open/Closed			.34
Emotional/Rational			-.41
*Quiet/Noisy	-.43		
*Flamboyant/Plain	.42	-.51	
Rotation Eigen Value	7.35	5.99	3.67
Percent Explained Variance (R <sup>2</sup> = 35.29%)	22.42	9.61	3.26
# of item	18	14	5
Item Means (Possible Range: 1-7)	3.31	4.47	2.91
N for subscale Analyses	362	357	360
Subscale Alpha (Overall Alpha = .90, 37 items; N = 351)	.88	.86	.67

\* Deleted items in the final model. Items with negative direction are the reversed items.

jective/subjective, stubborn/docile) in the flexibility dimension, although its loading was .34 on the flexibility dimension.

Factor 2, named generosity, kept 14 items. The item, flamboyant/shabby, was deleted because it loaded in a different direction (negative and positive) on factors 1 and 2, causing less communality with the rest of items. Finally, factor 3 was named flexibility, keeping 5 items including the item open/closed.

The internal consistencies of vitality, generosity, and flexibility dimensions were further assessed with Cronbach's alpha coefficient showing .88, .86, and .67, respectively. The mean score of each factor was 3.31, 4.47, and 2.91. As a group, students rated vitality (mean score = 3.31) and flexibility (mean score = 2.91) of the elderly negatively, whereas their rating of generosity (mean score = 4.47) was positive. Yet, the intensity of both positive and negative ratings were not strong. Table 2 describes factor loadings and reliabilities. The factor correlation matrix showed low to moderate relationships among factors ranging from .21 (between generosity and flexibility) to .50 (between vitality and flexibility). Please see Table 3.

**Examination of the relationship between the identified dimensions of attitude and nursing student's characteristics**

No significant mean difference in the attitude of the elderly was found among nursing students by year in college. The attitudes to elders between nursing students who had taken (or not) a gerontological nursing lecture were also not significantly different on t-test. However, the mean score between groups was lower in those who had taken the lecture on each of the three dimensions.

Frequency of communication with the elderly had a significant effect on attitudes toward the elderly in ANOVA analyses. A Scheffe test revealed significant group differences on the vitality dimension ( $F=9.87, p < .001$ ), demonstrating that nursing students who frequently communicated with elders had a higher score (3.72) than those with occasional (3.37), rare (3.17), and no (2.89) communication. Furthermore, nursing students who frequently communicated with elders had the highest score on generosity dimension and a significantly higher score (4.83) than nursing students who rarely (4.35) communicated with elders ( $F=4.64, p < .01$ ). Mean scores in the flexibility dimension were ranked by the frequency of communication with the elderly; how-

ever, differences did not reach significance ( $F=1.94, p > .05$ ).

Experience living with the elderly, such as grandparents, was another contributing characteristic in evaluating the elderly. Both the vitality ( $t=3.0, p < .01$ ) and generosity ( $t=2.88, p < .01$ ) dimensions had a statistically significant mean difference between nursing students who had (3.42 for vitality, 4.58 for generosity) and had not had (3.20 for vitality, 4.35 for generosity) experience living with the elderly. Again, mean scores in flexibility were ranked with a higher score in the group who had experience living with the elderly; however, it did not reach significance ( $t=1.57, p > .05$ ).

The level of interest in the elderly or issues related to the elderly was the only characteristic that made a significant difference in all three dimensions. For vitality, students who had a moderate interest in the elderly or issues related to the elderly showed a significantly higher score (3.47) than that of those who had either very little (2.90) or no (2.66) interest in the elderly or elder issues ( $F=8.47, p < .001$ ). For generosity, students who had very much (4.94), moderate (4.55) and little (4.40) interest showed a significantly higher score than that of those who had no (3.54) interest in the elderly or elder issues ( $F=5.74, p < .001$ ). For flexibility, nursing students who had moderate (3.01) and little (2.98) interest in the elderly or elder issues demonstrated a higher score than that of those who had very little (2.51) interest in the elderly or elder issues ( $F=4.26, p < .01$ ).

The area where students were raised did not reach statistical significance on any dimension of attitude; however, the highest mean score in each attitude dimension was reported from the students who grew up in the rural area. Please refer to Table 4 for ANOVA analyses in detail.

**DISCUSSION**

**Underlying Dimensions of Attitudes toward the Elderly**

Attitudes are defined as "predispositions to respond toward a person or thing in either a positive or a negative

**Table 3.** Factor Correlation Matrix

	Vitality	Generosity	Flexibility
Vitality	1.00		
Generosity	.37	1.00	
Flexibility	.50	.21	1.00

way” (Seltzer & Atchley, 1971, p226). In examining underlying dimensions of attitudes toward the elderly, the present study extracted 3 factors, while the previous studies using the same instrument reported 6 (Takeda et al, 1991) and 4 factors (Seo & Kim, 1999). These two previous studies shared 4 identically named factors such as activity/independence, happiness, mildness and cooperativeness, although the items for each factor were not identical. The two factors reported by Takeda and her colleagues (1991) were preciseness and greatness, and preciseness was not well defined by having 2 items only. Of the three factors in the current study, the vitality and flexibility were similar to activity/independence and cooperativeness reported in the previous studies respectively, by sharing more than 70% of the same items in each factor. Generosity in the current study is defined in

a more complicated way by sharing 10 items out of total 14 items with those items from happiness and mildness found in the previous studies.

Lack of information in previously published studies prevented the authors from comparing the psychometric properties of the attitude scale. Based upon the current analysis, low Cronbach’s alpha (.67) indicated a room for improving the measures of flexibility. The reliability coefficients for vitality and generosity dimensions were strong (both greater than .85). Given the current measurement properties, the differences in attitude dimensions discussed above might be attributed to different study population. Nursing students seemed to conceptualize attitudes toward the elderly somewhat differently than those students majoring in other areas. Further investigations are required to reveal this.

**Table 4.** Attitudes on Elders: t-test and ANOVA by Characteristics

	Vitality		Generosity		Flexibility		F (t)	Post-hoc (Scheffé)	
	Mean (SD)	F (t)	Mean (SD)	F (t)	Mean (SD)	F (t)			
Year in College									
Freshmen	3.33 (.73)		4.52 (.78)		2.92 (.83)				
Sophomore	3.29 (.63)	.26	4.41 (.66)	.60	2.79 (.66)		2.15		
Junior	3.35 (.77)		4.45 (.79)		3.03 (.82)				
Senior	3.27 (.64)		4.56 (.81)		2.83 (.75)				
Lecture of Gerontological Nursing									
Yes	3.27 (.69)		4.41 (.89)		2.89 (.71)				
No	3.33 (.71)	(-.63)	4.49 (.74)	(-.89)	2.93 (.79)		(-.40)		
Communication with Elders									
Frequent (1)	3.72 (.60)		4.83 (.79)		3.13 (.83)				
Occasional (2)	3.37 (.76)	9.87***	4.49 (.75)	4.64**	2.95 (.69)	1>3	1.94		
Rare (3)	3.17 (.59)		4.35 (.78)		2.84 (.69)				
Never (4)	2.89 (.73)		4.30 (.55)		2.74 (.78)				
Experience Living with Elders									
Yes	3.42 (.68)		4.58 (.80)		2.98 (.80)				
No	3.20 (.72)	(3.00)**	4.35 (.71)	(2.88)**	2.85 (.74)		(1.57)		
Interest in Elders/Issues									
Very much (1)	3.49 (.76)		4.94 (.96)		2.74 (.75)				
Moderate (2)	3.47 (.72)		4.55 (.72)		3.01 (.80)				
Little (3)	3.24 (.63)	8.47***	4.40 (.67)	5.74***	2.98 (.72)	1,2,3>5	4.26**	2,3>4	
Very little (4)	2.90 (.60)		4.36 (.87)		2.51 (.70)				
Not at all (5)	2.66 (.47)		3.54 (1.11)		2.58 (.73)				
Residence area when growing up									
Large city	3.29 (.65)		4.49 (.77)		2.85 (.75)				
Mid/small city	3.29 (.71)	.71	4.38 (.76)	1.82	2.97 (.77)		1.22		
Rural area	3.41 (.81)		4.59 (.75)		2.99 (.84)				

\*\*\**p*<.001 \*\**p*<.01 \**p*<.05 Excluded missing values

Overall, students evaluated the elderly negatively on vitality and flexibility, but positively on generosity. These findings are very similar to those college students' attitudes reported by Takeda et al (1991) and Seo and Kim (1999) considering similarity between flexibility and cooperative and between vitality and activity/independence as noted above. Although our students had negative attitudes in the two dimensions, the intensity was not strong and the same was true for generosity. In nursing curricula, increased exposure to elders who display vitality and flexibility may help in modifying the attitudes of nursing students. Generosity should also be a part of target attitudes to promote the intensity of positive attitude.

#### *Characteristics Associated with the Attitudes toward the Elderly*

**Year in College:** Interestingly, mean differences of each attitudinal dimension were not significant by year in college, which was inconsistent to the finding with nursing students in Sweden (Sodeorhamn, Lindencrona, & Gustavsson, 2001). They reported more unfavorable feelings toward the elderly in the first year students than in the third year students, who were at the end of their education. Considering year in college as educational level of individual person, the current subjects were confined to undergraduate students only, leaving small variation in level of education from one to four. This finding has importance for nursing education. Upperclassmen (juniors and seniors) who had been exposed to a variety of age groups including the elderly through clinical practicum, did not demonstrate higher (or lower) views of older people than sophomores and freshmen, whose experiences were more limited. Either education alone may not be sufficient to change attitudes or the specific learning experiences generally in nursing curricula were of insufficient weight to affect such change. However, cross-sectional data obtained in this study constrains us in revealing the actual effect of college education on attitudes toward the elderly among nursing students. However, nurse educators need to pay attention to the influence of nursing education in producing nurses with positive attitudes toward older clients.

**Lecture Course of Gerontological Nursing:** No significant difference was observed in the students' attitudes toward the elderly between those who took and those who did not take a lecture course of gerontological nursing. In this study sample, only 21% of the students took

such a course, which seems small considering that the portion of junior and senior students together was 63.7% of the sample. When the survey was performed in 2000, 80% of baccalaureate nursing programs in the nation included a lecture course of gerontological nursing in their curriculums (Chon et al, 2001). The lack of significance indicates that changes in the students' attitudes toward the elderly are not simply acquired by increasing knowledge in related area. This notion is supported by the former studies reporting no effect of gerontological nursing education on the attitudes in Korean students (Kim, 1981; Kong, 1999; Yoo et al, 1991). Particularly, Kong (1999) reported no effect of the gerontological nursing lecture course on the attitudes to elders among third year students, despite the increase in knowledge about aging after the course. Furthermore, Yoo and her colleagues (1991) reported no significant difference in the attitudes toward the elderly and the aging process between senior students majoring in human ecology and senior nursing students who had taken both lectures and clinical practicum in gerontological nursing.

In contrast, Gunter's study (1971) revealed more negative attitudes toward older people at the end of course for senior nursing students that focused on normal development in later life, although the number of stereotypes held by students was reduced significantly. She identified several possibilities in explaining her findings including, students' feeling freer to express feelings at the end of the course and obtaining more insight about older people. As for the effect of those courses incorporating both lecture and practicum, Greenhill and Baker (1986) reported increased knowledge and improved attitudes toward older adults regardless of the type of clinical experience, after providing two sets of clinical and theory courses. They argued that knowledge and attitude change does not depend on the particular type of clinical learning activity. Regarding attitude toward working with the elderly as an indirect measure of attitude toward the elderly, significant improvements in attitudes toward working with the elderly were noticed after delivering a course of gerontological nursing having both theory and practicum in a variety of community and institutional settings (Fox & Wold, 1996). In the study of Fox and Wold, the theoretical content emphasized maximizing individual capabilities and quality of life.

Although not all empirical studies reported consistent findings, it seems clear that simple provision of a gerontological nursing course cannot modify students' atti-

tudes toward the elderly. Attitudes are thought to be learned by trial and error or by teaching process of socialization (Seefeldt, et al, 1977). We need to focus on making this socialization useful in changing students' attitudes toward the elderly. Nurse educators should devise teaching strategies to facilitate this type of socialization in nursing education both in lecture and clinical practicum courses. Another important component in the socialization is the attitudes of faculty members toward the elderly, which are conveyed to the students (Small, 1991).

**Communication and Experience Living with Elders:** Communication with elders appeared an important characteristic in relation to students' attitudes toward the elderly in that frequent communication with elders was related to less negative attitudes toward the elderly regarding vitality and more positive attitudes in generosity. The same tendency in the dimensions of vitality and generosity was also observed among those having living experience with elders compared to those with no experience living with elders, where most elders whom students had lived or were living at the time of the survey were grandparents.

Seo and Kim (1999) reported positive correlations between the degree of communication with older adults and each dimension of the attitudes toward the elderly among college students. Among male students, communication with the elderly was significantly associated with activity/independence and happiness. In their study, those having an experience of living with an older person had less negative attitudes in cooperativeness only. This finding was significant among female students only, with reverse direction; those female students with no experience of living with an elder had less negative attitude in cooperativeness. Considering 99.2% of our subjects were females, the present finding of vitality dimension does not seem to be consistent with the report of activity/independence dimension of Seo and Kim (1999). This poses a need for a further analysis of the attitudes toward the elderly by sex, which could not be done in the current study due to very small number of male subjects. It is not clear whether this can be attributed to nursing major without further study. In Kim's study (1981) with nursing students, no significant difference in attitudes toward the elderly was reported by experience of living with older people.

In studying undergraduate students' attitudes toward men, Rosencranz and McNevin (1969) reported positive

effects of close grandparent contact in evaluating the older male more favorably. They also found that meaningful associational contact with at least one older person showed more favorable attitudes toward older men. Yet, the researchers found that those students with hospital contact had unfavorable attitudes toward older males in some aspects. This latter finding may raise a question of placing clinical practicum in hospitals only. As for the reason of positive stereotype from direct contact with the elderly, Brubaker and Powers (1976) asserted that the likelihood that a negative stereotype is accepted is lessened due to the decreased distance between the observer and the observed and the declines in the ambiguity of the situation.

**Interest in Elders:** Findings of significant attitudinal difference by interest in elders or in issues related to the elderly were consistent with Seo and Kim's (1999) study; where they reported positive correlation of interests in issues of the elderly with all four dimensions of attitudes. It is noteworthy that flexibility dimension was not significantly different by both communication and living experience with elders; yet, those who had frequent communication and those having living experience with elders tended to have less negative attitudes toward the elders. Flexibility might have been associated with indirect contacts such as mass media rather than direct contacts adopted in the present study; or the nature of the dimension might be less prone to change. The influence of a somewhat low reliability for the flexibility dimension cannot be excluded as a reason for the present findings.

### **Implications**

Measurement of attitudes toward the elderly deserves further work. The instrument adopted in the present study was developed almost 20 years ago. Meanwhile, society has changed in many different aspects, especially the rise of nuclear families. Thus, communication has decreased and isolation has increased between families and the elderly. Therefore, some other adjectives representing attitudes toward the elderly need to be explored.

In the future, we need to examine those influencing variables on attitudes toward elders further to have a better understanding of the characteristics shaping nursing students' attitudes toward the elderly. The effects of clinical practicum on attitudes also needs further exploration. In addition, multivariate analysis should be adopted to control interrelated characteristics. These ad-



vances could lead us to devise better strategies for modifying or promoting nursing students' attitudes toward elders.

As Seefeldt et al (1977) indicated, educating children to develop positive attitudes toward the elders is a life long process. We need to facilitate this process to continue toward the positive direction through nursing education. We may not need to wait until gerontological nursing curriculum begins in junior or senior level, instead we should consider modifying or promoting students' attitudes toward elders throughout the whole educational process. In particular, we can increase the chance or experience of good communication with the elderly through classroom teaching as well as clinical practicum. To increase nursing students' interest in the elderly and related issues, educators can encourage discussions, present problems, and emphasize the positive aspects of aging. In terms of clinical practicum, nurse educators need to make students involved with a wide variety of elders rather than limiting them to hospitalized older patients. In this way, we can reflect the great diversity of the elderly population (e.g., diverse in living arrangement, economic status, health, etc.) and bring our new nursing generation into the reality of our older generation with positive attitudes. Finally and most importantly, nurse educators themselves should have positive attitudes toward the elderly, since their attitudes affect the educational process that can benefit students.

## CONCLUSION

The study investigated dimensions of attitudes toward the elderly and associated characteristics among nursing students. Self-report questionnaires from 366 students were analyzed using factor analysis, correlation coefficients, t-test, and ANOVA.

Three dimensions were identified as a result of factor analysis such as vitality, generosity and flexibility. The reliability coefficients for vitality and generosity were .88 and .86, respectively, while being somewhat lower for flexibility, .67. Students evaluated generosity in a positive direction. Negative evaluation was observed with both vitality and flexibility dimensions. The intensity of the direction tended to be weak for all three dimensions.

Of those characteristics analyzed, the mean scores of the vitality and generosity dimensions were significantly different by communication with the elderly, experience

living with the elderly and having an interest in elders or in issues related to elders. The flexibility dimension was significantly different by interest in elders or in issues related to elders only. In particular, year in college and experience of a lecture course in gerontological nursing revealed no significant difference in terms of the three dimensions of the attitudes toward the elderly.

The above findings suggest the need for further improvements in measures of attitudes toward the elderly in nursing students. In modifying or promoting students' attitudes toward the elderly, the chance of direct interaction including communication with the elderly should be provided through both classroom teaching and clinical practicum. In particular, educators need to arrange diverse settings for clinical practicum to experience a variety of older people rather than limiting to hospitalized or institutionalized frail older people.

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