

# Effects of Gerontological Nursing Practicum on Attitudes toward Elders with Dementia and General Elders among Korean Nursing Students

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**Purpose.** This study investigated changes in attitudes toward elders in general and elders with dementia after students finished a gerontological nursing practicum.

**Methods.** Questionnaires developed for Asian cultures were administered pre practicum, immediately post practicum, and at 8-months follow up to 31 senior students in a baccalaureate nursing program. The 1-week practicum occurred at two adult day care centers: a center for elders with dementia and a center for elders with stroke. Repeated measures ANOVA and Bonferroni correction procedures were used to analyze data.

**Results.** Students' evaluation of elder vitality and flexibility increased significantly at post practicum, however this increase was not sustained at follow up. Score of generosity of elders, the only positively evaluated dimension for elders in general, improved partly at post practicum. Students evaluated flexibility and generosity of elders with dementia more negatively than general elders. All of the decreased attitudes at follow up were not significantly different from those at pre practicum.

**Conclusions.** Students had more negative attitudes toward elders with dementia. Attitudes of students in direct contact with elders with dementia were improved through the practicum regarding generosity and flexibility. However the sustainability of the immediate effect was not observed at follow up.

**Key Words :** Attitude, Aged, Dementia, Nursing students, Nursing education

## INTRODUCTION

Korea reached an aging society by having 7.2% of its population aged 65 and over in 2000 and proceeds to an aged society (Ministry of Health and Welfare, 2001). This increase in the proportion of elderly persons implies increasing prevalence of chronic diseases and health care needs, including dementia. In 2005 the estimated rate of dementia among the elderly was 8.3%; this figure is expected to reach 9% by 2020 (Byun, 1997), when Korea

turns into an aged society. Accordingly, the need for health care services for elders with dementia will require health care professionals who are willing to work with elders to provide quality nursing services.

Attitudes were reported to affect preference in working gerontology and working with older patients among senior nursing students (Gomez, Young, & Gomez, 1991). In an earlier study in Korea, nursing students least preferred caring for the elderly or working in a nursing home (Kim, 1981). Nurses' decreased acceptance of the stereotype toward old people was related to

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their positive interaction with old people in a long-term care facility (Hatton, 1977). Nursing staff interacted significantly less with confused patients than lucid patients on a geriatric ward (Armstrong-Esther, 1986). Particularly those studies of nursing personnel caring for elderly people with dementia report less job satisfaction, greater burnout, reduced empathy associated with their negative attitudes toward those elderly (Brodaty, Draper, & Low, 2003; Åström, Nilsson, Norberg, Sandman & Winblad, 1991). Hence, negative attitudes can be a significant barrier to bring future nurses into direct nursing care for elders with dementia, to provide quality nursing care to them, to continue professional development in the same area for an extended period of time.

Researchers have given little attention to elders with dementia when examining the attitudes of service providers. In past decades, researchers have studied the effects of nursing education on attitudes of students toward elders in general. Few empirical studies were found on attitudes toward elders with dementia. Furthermore, most studies have focused on the immediate effects of education, and have excluded the long-term effects of education (Kong, 1999; Hartly, Bentz, & Ellis, 1995; Sheffler, 1995; Eddy, 1986; Langland et al., 1986; Hannon, 1980). Therefore, it is unknown whether attitudes toward elders with dementia were changed after education, if at all, and if that change could be sustained after a certain period of time.

The present study investigated immediate and long-term changes in attitudes toward general elders and elders with dementia after students finished a clinical practicum in gerontology. Specifically, it was hypothesized that, before the practicum, the attitudes of nursing students toward elders with dementia would be less favorable than their attitudes toward elders in general and that the attitudes of nursing students in direct contact with elders with dementia would be improved after the clinical practicum.

## METHODS

### *Sample*

The present study was initiated in a Bachelor's of Science in Nursing program in a metropolitan city of Korea. Senior students were required to take a practicum in gerontological nursing which consisted of 1 credit (48 hours), for 1 week (Monday through Friday). Sessions of the practicum were conducted between

March and April, 2000. In the junior year of university, students took a 2 credit lecture course of gerontological nursing in addition to such courses as adult health nursing, psychiatric nursing, community health nursing. The contents of the gerontological nursing course were understanding of Korean aging society, characteristics of elders, aging theories, health promotion of older adults, health education, social welfare system, and caring for elders with dementia, depression, and incontinence.

Thirty-eight students participated in the practicum. Students' age ranged between 21 and 24 years; they were all females except for one male.

### *Procedure*

Students were divided into groups based upon university identification numbers, which are determined by Korean alphabetical order from students' names. Each group consisted of 3–4 participants and assigned blindly to a practicum conducted at one of two adult day care centers: a center for elders with dementia (Center A) and a center for elders with stroke (Center B). In Center A there were 13 elders, (women  $n = 12$ , men  $n = 1$ ), while Center B had 18 elders (women  $n = 12$ , men  $n = 6$ ). No medical treatment was provided in the Centers; services consisted of administering medication, health examinations, exercise, physical therapy, and various activity programs including art therapy, horticultural therapy, reminiscence therapy.

The contents of the practicum included a case study, environmental evaluation, examination of the roles of a nurse, application of relevant law. In particular, each team planned and operated its own program for promoting the health status of elderly clients in each Center.

One nurse at each Center worked with students during the practicum. The two nurses maintained a strong trusting relationship with their elderly clients and committed as field nurses for the practicum. In addition, a professor, the present author, visited each Center mid-week and held discussion sessions with student groups from both Centers on the last day of each practicum.

### *Instruments*

The short questionnaire used in this study included items measuring attitudes toward elders in general, followed by the same set of items measuring attitudes toward elders with dementia. In addition, the first survey included questions regarding students' experiences living with older adults and interest in older adults.

Attitudes toward elders were measured using an instrument developed specifically for Asian cultures by Takeda and colleagues (1991). The instrument, which employs 50 pairs of adjectives, was used in a study by Kim and colleagues (2004) to examine the attitudes of 366 Korean nursing students. Kim et al. (2004) reported 3 underlying factors consisting of 37 items; 18 items for vitality, 14 items for generosity, and 5 items for flexibility. The present study adopted those 37 items representing three dimensions. The items for the vitality dimension were active/passive, dark/light, dynamic/static, negative/positive, slow/quick, introverted/extroverted, productive/unproductive, weak/strong, conspicuous/inconspicuous, isolated/connected, dependent/independent, busy/idle, big/small, sturdy/fragile, happy/unhappy, gray/rosy, capable/incapable, and attractive/unattractive. The 14 items representing the generosity dimension were cold/warm, narrow/wide, greedy/unselfish, clever/stupid, gentle/severe, cooperative/rebellious, vulgar/elegant, splendid/shabby, distant/close, unstable/stable, satisfied/dissatisfied, neat/sloppy, hard/soft, and optimistic/pessimistic. The flexibility dimension was measured with 5 items such as stubborn/docile, progressive/conservative, objective/subjective, open/closed, and emotional/rational.

Cronbach's alpha coefficients were .88, .86, and .67 for the vitality, generosity, and flexibility dimensions respectively (Kim et al., 2004). In the present study, alpha coefficients were .77, .81, .70 respectively for elders in general while alpha coefficients toward elders with dementia were .73, .77, and .81 respectively.

In obtaining the data, the pairs of adjectives were rated using a seven-point semantic differential scale ranging from 1 to 7, with 4 being neutral. A favorable or an unfavorable attitude is revealed when the score falls more toward an either end, while intensity is shown by how far out from the neutral point the score lies, which makes it possible to examine both the direction and the intensity of attitudes (Osgood, Suci, & Tannenbaum, 1957). The possible range of the mean scores for each dimension is 1 to 7, where scores higher than 4.0 indicate positive evaluation.

### **Data collection**

Students completed self-administered questionnaires at pre practicum, post practicum and at an 8-month follow up. Participants were assured that their responses would be anonymous and used for research purposes

only. Students agreed to answer the questions by responding to the questionnaires. Pre practicum questionnaires were administered right before beginning the practicum on the first day at Centers. Post practicum questionnaires were administered before the discussion sessions after the 5-day field practicum while follow-up questionnaires were administered approximately 8 months later when students had finished the entire curriculum required for graduation.

Thirty-eight students responded to the pre and post practicum questionnaires. However, at follow up seven students were missing due to their responses with no identification numbers. Therefore, this study includes data from the 31 students who completed all three questionnaires.

Table 1 shows comparisons between students who completed all three questionnaires and those who did not. Those who did not complete the questionnaires did not differ from the other students in terms of practicum sites, experience living with elders, communication with elders, and interest in elders or issues related to elders. Except for practicum site, these characteristics were reported to have a significant relationship with attitudes toward older adults among Korean nursing students in a former study (Kim, Son, & Algase, 2004). The attitudes toward elders did not differ significantly between the two groups except for vitality of elders with dementia: the dropouts had somewhat less negative attitude than the completers.

### **Data analysis**

Data were analyzed using SAS 8.2. The thirty seven items presented above were used to calculate three factor mean scores. Some items were reversed to represent consistently more positive attitudes with higher mean scores. There was one missing item from the generosity dimension in both the pre practicum and the follow up data sets. Accordingly, mean scores were calculated using the complete items only, which resulted in imputing the missing values with complete responses.

A test of repeated measures ANOVA was used to examine the effects of the practicum on each dimension of attitude. Bonferroni correction procedures were adopted for multiple comparisons. In terms of testing the interaction effect of site, elder type and measurement time, the adjusted significance level was calculated by dividing the alpha level of .05 by 18, since the present study focused on 18 comparisons. The significance level of the effect of

time was calculated by dividing .05 by 3.

## RESULTS

Table 2 shows the mean scores of each attitudinal dimension at the three data collection points. The mean scores of the vitality dimension at pre practicum ranged from 2.9 toward elders with dementia among students at Center B to 3.21 toward general elders among students

at Center A, indicating a negative evaluation. All mean scores increased at post practicum, however, the scores decreased at follow up in both Centers. The mean scores in both sites were lower toward elders with dementia than toward general elders at all 3 time points, indicating a more negative evaluation given to elders with dementia than to general elders.

Analyses of the effects using repeated measures ANOVA appear in Table 3. According to statistical tests, only

**Table 1.** Comparison of Completers and Dropouts

Variable	Completers (n = 31)		Dropouts (n = 7)		Statistical Test	
	N	%	N	%	Fisher's exact test	p value
Practicum center						
for demented elders	15	(48.39)	4	(57.14)		.999
for elders with stroke	16	(51.61)	3	(42.86)		
Living experience with elders <sup>†</sup>						
1) yes (present)	5	(16.13)	1	(14.29)		.999
1) yes (past only)	11	(35.48)	2	(28.57)		
2) no	15	(48.39)	4	(57.14)		
Communication with elders <sup>†</sup>						
1) Frequent	2	(6.45)	1	(14.29)		.999
1) Occasional	11	(35.48)	2	(28.57)		
2) Rare	14	(45.16)	4	(57.14)		
2) Never	4	(12.90)	-	-		
Interest in elders/issues <sup>†</sup>						
1) Very much	1	(3.23)	-	-		.687
1) Moderate	13	(41.94)	4	(57.14)		
2) Little	9	(29.03)	2	(28.57)		
2) Very little	8	(25.81)	1	(14.29)		
Attitude scores at Pre practicum	Mean	SD	Mean	SD	t	p value
Demented elders						
Vitality	3.03	(.52)	3.62	(.60)	-2.63	.013
Generosity	2.88	(.53)	3.23	(.32)	-1.67	.104
Flexibility	2.19	(.76)	2.37	(.85)	-.55	.588
General elders						
Vitality	3.07	(.54)	3.21	(.58)	-.60	.556
Generosity	4.27	(.67)	4.72	(.38)	-1.71	.095
Flexibility	2.54	(.70)	3.06	(.85)	-1.71	.095

<sup>†</sup> divided into 2 groups for Fisher's exact test.

**Table 2.** Means and Standard Deviations of Attitude Dimensions over Time

Dimensions of	Center for Demented Elders (n = 15)			Center for Elders with Stroke (n = 16)		
	Pre practicum M (SD)	Post practicum M (SD)	Follow up M (SD)	Pre practicum M (SD)	Post practicum M (SD)	Follow up M (SD)
Attitudes toward Elders						
Vitality						
Demented Elders	3.16 (.45)	3.55 (.77)	3.12 (.95)	2.90 (.57)	3.29 (.85)	3.25 (.56)
General Elders	3.21 (.56)	3.67 (.69)	3.16 (.95)	2.94 (.50)	3.64 (.67)	3.42 (.78)
Generosity						
Demented Elders	2.84 (.58)	3.91 (.63)	3.30 (.80)	2.92 (.50)	3.21 (.68)	3.12 (.64)
General Elders	4.35 (.69)	4.35 (.57)	4.50 (.62)	4.21 (.66)	4.78 (.34)	4.51 (.76)
Flexibility						
Demented Elders	2.35 (.80)	2.95 (.89)	2.49 (.74)	2.05 (.72)	2.61 (.96)	2.43 (.64)
General Elders	2.68 (.87)	2.97 (.69)	2.61 (.75)	2.40 (.48)	3.14 (.66)	2.86 (.66)

**Table 3.** Effects of Practicum on Attitude Dimensions

Effects	Vitality		Generosity		Flexibility	
	F	p value	F	p value	F	p value
Elder	2.09	.159	163.66	.000*	9.15	.005*
Time	12.04	.000*	10.89	.000*	10.85	.000*
Site	.14	.711	.35	.560	.24	.624
Elder * Time	.96	.413	3.41	.040*	.13	.882
Site * Elder	.45	.507	3.54	.070	1.97	.171
Site * Time	2.86	.065	.14	.867	1.29	.284
Site * Elder * Time	.34	.712	10.11	.000*	1.34	.269

\*  $p < .05$ 

the time effect on vitality was significant ( $F = 12.04$ ,  $p < .000$ ). While the students' evaluation of vitality at post practicum increased significantly ( $p < .000$ ), this increase was not sustained at follow up ( $p < .004$ ). The decreased mean scores for all four measures at follow up were not significantly different from those scores measured at pre practicum.

Mean scores for the dimension of generosity toward general elders were greater than 4.0 at all three time points in both Centers, indicating a positive evaluation. In contrast, a negative evaluation was made toward elders with dementia in both Centers at all three time points. With the exception of mean scores toward general elders in Center A, all mean scores for the generosity dimension increased at post practicum and decreased at follow up.

Regarding statistical tests, the interaction effect of practicum site, elder type and measurement time was significant ( $F = 10.11$ ,  $p < .000$ ). Results show that students at both Centers evaluated the generosity of elders with dementia significantly differently from general elders at both pre practicum ( $p < .000$ ) and follow up ( $p < .000$ ), in that elders with dementia were evaluated negatively, whereas general elders received a positive evaluation. At post practicum, only students at Center B made significantly different evaluations between the two types of elders ( $p < .000$ ). The increased mean scores of generosity at post practicum were significant toward elders with dementia at Center A ( $p < .000$ ) and toward general elders at Center B ( $p = .002$ ). As a result, the significant difference of the mean scores of generosity toward elders with dementia and toward general elders observed at pre practicum disappeared at post practicum in Center A. In addition, the increased mean score toward elders with dementia at Center A significantly decreased at follow up ( $p = .002$ ), resulting in no significant difference in mean scores between pre practicum and follow

up.

In terms of flexibility, mean scores toward both general elders and elders with dementia were all below the neutral point of 4.0 at all time points, indicating a negative evaluation. With the exception of mean scores at post practicum for Center A, students evaluated the flexibility dimension of elders with dementia more negatively than general elders. Mean scores of flexibility toward elders with dementia and toward general elders at post practicum for Center A were almost the same. All the mean scores for flexibility increased at post practicum and decreased at follow up.

Statistical tests for flexibility revealed significant effects for elder type ( $F = 9.15$ ,  $p = .005$ ) and measurement time ( $F = 10.85$ ,  $p < .000$ ). Students evaluated elders with dementia more negatively than general elders regarding flexibility ( $p = .005$ ). The mean scores of flexibility were significantly increased at post practicum ( $p < .000$ ), whereas mean scores showed a significant decrease at follow up ( $p = .009$ ) with no significant difference between scores obtained at pre practicum and follow up.

## DISCUSSION

In this study, different effects of the practicum across the three dimensions of attitudes indicate that student attitudes toward older adults are a multi-dimensional concept. This is consistent with the work of Hicks, Rogers, and Shemberg (1976) and has been reported in previous studies (Takeda et al., 1991; Kim et al., 2004). The multi-dimensional construct of attitudes toward elders supports separate analysis of each dimension adopted in the present study.

Prior to the practicum, attitudinal dimension scores toward general elders were negative for vitality and flexibility and positive for generosity. The flexibility dimen-

sion was evaluated more negatively than the vitality dimension. These findings were similar to a study using a national sample of Korean nursing students (Kim, et al., 2004). Although the clinical practicum improved students' attitudes toward older adults' vitality and flexibility, it did not change the negative attitudes into positive ones.

Nursing students in the present study held more negative attitudes toward elders with dementia than toward general elders. This finding is consistent with an empirical study reported by Kahana et al. (1996). In addition, a methodological explanation might be made for this finding. Student evaluations of elders with dementia were made after evaluations of general elders at all three measurement points. This may have indirectly led to comparative judgments between general elders and those with dementia by making "dementia" as a salient attribute. Likewise, Wingard, Heath and Himelstein (1982) reported more extreme negative attitudes among adults who made comparative judgments of older people relative to young people.

Consistent with prior studies examining effects of clinical experiences with ill older adults (Greenhill & Baker, 1986; Hartly, Bentz, & Ellis, 1995; Sheffler, 1995), the effect of the practicum in this study on student attitudes toward elders was positive immediately following the practicum. However, the improved attitudes were not sustained through the follow up, which may be attributed to the short period of the practicum. The clinical practicum in the present study provided only a short, one week period of full-time practice. Within this period of time, the observation of positive effects on attitudes was encouraging. However, the positive effect of an intensified experience of direct contact with elders could not change students' negative attitudes toward elders in general and elders with dementia into positive ones in terms of vitality and flexibility, and toward elders with dementia in the generosity dimension.

The generosity dimension was the only one revealing the interaction effect of practicum site, elder type and measurement time. While the generosity dimension was shown to be positive toward general elders, attitudes toward elders with dementia were still negative. This finding highlights the negative attitudes of nursing students attached to dementia. This negativity can be explained by Jolley and Benbow (2000). These authors reported fear attached to Alzheimer's disease by displaying the most debilitating, demeaning and despairing features of

dementia. The situation of cognitively impaired older adults with Alzheimer's disease has been viewed as having "triple jeopardy" when compared to the double stigma attached to being old and having mental illness (Benbow & Reynolds, 2000). An empirical study reported the influence of negative portrayal of older adults in newspaper advertisements on people's perceptions of older adults (Kim & Won, 1999). Prior to their direct contact with elders with dementia, students in the present study may have been exposed to fictionalized dramatizations of typical symptoms of dementia in the mass media. This may have contributed to more negative attitudes toward elders with dementia than toward general elders. It is a greater challenge for nursing educators to change the attitudes of students toward elders with dementia than to change those toward elders in general.

Since students were identified with university identification numbers and the practicum was a part of their formal curriculum, there might be the possibility of response bias. However this possibility seems to be unlikely. Students were assured of using their responses for research purpose only. Attitudes measured at pre practicum were very similar to those of a national sample of nursing students (Kim et al., 2004). Follow-up measures, which were obtained a semester after finalizing grades of the practicum, were not significantly different from measures at pre practicum. In addition, positive changes observed at post practicum can be supported by positive comments, feelings, self-reported changes of perceptions of elders, which were presented in open discussions with students at a final session of the practicum.

Because the positive effects of the practicum in this study were shown to be short-term, it would seem logical to suggest that strategies to boost students' changed attitudes should be set in place after the practicum. However, formation of long-lasting attitudes involves a great deal of effort. Seefeldt, Jantz, Galper, and Serock (1977) mentioned that educating children to develop positive attitudes toward older adults is a life long process. Therefore, our own efforts in nursing curricula might not be enough to create positive attitudes toward elders among nurse graduates. Instead, societal efforts may be needed to influence attitudes from childhood. In the meantime, nursing educators should give continuous attention to this aspect of nursing care and attitudes throughout the entire curriculum from entrance until graduation.

The present study revealed a possibility of changing

students' attitudes toward elders with dementia. In terms of educational strategies, facilitating positive interactions between nursing students and elders with dementia under well supervised circumstances is suggested. Further research is needed to focus on longitudinal studies of students' attitudes toward different types of elders. In addition, elements to improve attitudes toward elders that can be incorporated into the entire nursing curriculum need to be devised. Educational strategies need to be developed to reveal stronger effects to form positive attitudes in dealing with older adults.

## References

- Armstrong-Esther, C.A. (1986). The influence of elderly patients' mental impairment on nurse-patient interaction. *J Adv Nurs*, 11, 379-387.
- Åström, S., Nilsson, M., Norberg, A., Sandman, P., & Winblad, B. (1991). Staff burnout in dementia care-relations to empathy and attitudes. *Int J Nurs Stud*, 28(1), 65-75.
- Benbow, S.M., & Reynolds, D. (2000). Challenging the stigma of Alzheimer's disease. *Hosp Med*, 61(3), 174-177.
- Brodady, H., & Draper, B., & Low, L. (2003). Nursing home staff attitudes towards residents with dementia: Strain and satisfaction with work. *J Adv Nurs*, 44(6), 583-590.
- Byun, Y.C., Han, Y.J., Lee, S.H., Park, C.H., Woo, J.I., & Lee, J.H. (1997). *Study of developing mapping for dementia care*. KI-HASA.
- Eddy, D.M. (1986). Before and after attitudes toward aging in a BSN program. *J Gerontol Nurs*, 12(5), 31-34.
- Gomez, G.E., Young, E.A., & Gomez, E.A. (1991). Attitude toward the elderly, fear of death, and work preference of baccalaureate nursing students. *Gerontol Geriatr Educ*, 11(4), 45-56.
- Greenhill, E.D., & Baker, M.F. (1986). The effects of a well older adult clinical experience on students' knowledge and attitudes. *J Nur Educ*, 25(4), 145-147.
- Hannon, J. (1980). Effect of a course on aging in a graduate nursing curriculum: A small descriptive study. *J Gerontol Nurs*, 6(10), 604-615.
- Hartley, C.L., Bentz, P.M., & Ellis, J.R. (1995). The effect of early nursing home placement on student attitudes toward the elderly. *J Nur Educ*, 34(3), 128-130.
- Hatton, J. (1977). Nurse's attitude toward the aged: Relationship to nursing care. *J Gerontol Nurs*, 3(3), 21-26.
- Hicks, D.A., Rogers, J., & Shemberg, K. (1976). "Attitudes" toward the elderly: A comparison of measures. *Exp Aging Res*, 2(2), 119-124.
- Jolley, D.J., & Benbow, S.M. (2000). VI. Stigma and Alzheimer's disease: causes, consequences and a constructive approach. *Int J Clin Pract*, 54(2), 117-119.
- Kahana, E., Kinney, J.M., Kercher, K., Kahana, B., Tinsley, V.V., King, C., Stuckey, J.C., & Ishler, K.J. (1996). Predictors of attitudes toward three target groups of elderly persons: The well, the physically ill, and patients with Alzheimer's disease. *J Aging Health*, 8(1), 27-53.
- Kim, E.I. (1981). Study of attitudes toward the elderly among nursing students. Master's thesis, Ewha Womans University, Seoul.
- Kim, J.H., Son, G., & Algase, D. (2004). Attitudes toward the elderly among nursing students in Korea. *J Korean Acad Nur*, 34(8), 1499-1508.
- Kim, M.H., & Won, Y.H. (1999). Analysis on image of the elderly in Newspaper advertisements: the establishments for new image of the elderly. *J Korea Gerontological Society*, 19(2), 193-214.
- Kong, E.S. (1999). The effects of gerontological nursing education on the attitudes toward the elderly: Focused on 3-year nursing college students. *J Margaret Pritchard College of Nursing*, 12(2), 7-16.
- Langland, R.M., Raithel, J.A., Benjamin, G., Benson, R., & Crim, B. & Kunz, C. (1986). Change in basic nursing students' attitudes toward the elderly after a nursing home experience. *J Nur Educ*, 25(1), 31-33.
- Ministry of Health and Welfare (2001). *Annual statistical reports of health and welfare*. Korea.
- Osgood, C.E., Suci, G.J., & Tannenbaum, P.H. (1957). *The measurement of meaning*. University of Illinois Press.
- Seefeldt, C., Jantz, R.K., Galper, A., & Serock, K. (1977). Children's attitudes toward the elderly: Educational implications. *Educ Gerontol*, 2, 301-310.
- Sheffler, S.J. (1995). Do clinical experiences affect nursing students' attitudes toward the elderly? *J Nur Educ*, 34(7), 312-316.
- Takeda, K., Hosoe, Y., Sodei, T., Cheng, S., & Sue, P.S. (1991). The attitude and the sense of responsibility of university students toward the aged: cross cultural study in Japan, Taiwan and Korea (Part 3). *Journal of Home Economics of Japan*, 42(5), 405-413.
- Wilson, R.W., & Patterson, M.A. (1988). Perceptions of stress among nursing personnel on dementia units. *The American Journal of Alzheimer's Care and Related Disorders & Research*, 3(4), 34-39.
- Wingard, J.A., Heath, R., & Himelstein, S.A. (1982). The effects of contextual variations on attitudes toward the elderly. *J Gerontol*, 37(4), 475-482.