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The effects of knowledge and experience on college students' attitudes toward the elderly.

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THE EFFECTS OF KNOWLEDGE AND EXPERIENCE ON COLLEGE
STUDENTS' ATTITUDES TOWARD THE ELDERLY.

A Thesis Presented

by

LOREN M. ANGIULLO

Submitted to the Graduate School of the University of
Massachusetts Amherst in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE

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Psychology

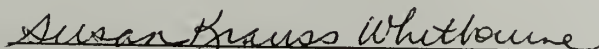
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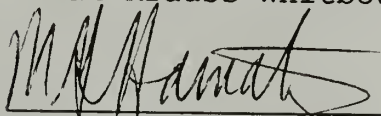
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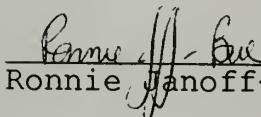
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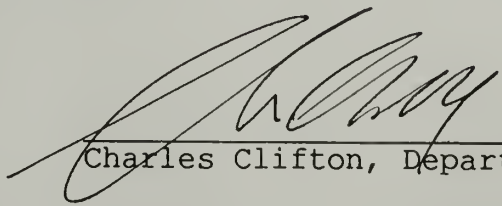
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ABSTRACT

THE EFFECTS OF KNOWLEDGE AND EXPERIENCE ON COLLEGE
STUDENTS' ATTITUDES TOWARD THE ELDERLY.

SEPTEMBER 1994

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Historically, the elderly have been the victims of discrimination and ageism as evident in their under-represented or negative portrayal in the media. The research examining attitudes about older adults has been equivocal. Some researchers have discovered overt negative attitudes (Tuckman & Lorge, 1953, Wingard et al., 1984), while others have found more positive attitudes (Jackson & Sullivan, 1988). Furthermore, the literature examining attitude change is split. Some researchers assert that attitudes are best changed through direct contact with an elderly population (Murphy-Russell et al., 1986, Caspi, 1984, Gordon & Hallauer, 1977), while others state that formal lectures aimed at increasing knowledge are a more effective method (Carmel, Cwikel & Galinsky, 1992, Palmore, 1977). The goal of this study was to determine whether or not negative attitudes toward the elderly exist and if so, how these attitudes are most effectively changed.

The subjects in this study were college students enrolled in a psychology of aging class. They completed measures of knowledge (FAQ) and attitudes (ASD) during the first week of class and then again, during the last week of class. In addition, a subgroup of the class who volunteered weekly with the elderly were compared to other subgroups who had limited or no contact with older adults. Finally a control group comparable in academic level, professor and time of day, was included in an effort to detect bias.

A 2 (time) X 3 (group) multiple analysis of variance with repeated measures on the first factor was conducted on these data. There was a significant effect of time. Students' knowledge about and attitudes toward the elderly significantly improved over the course of the semester. However, there was no significant difference between the volunteer group and the other groups. Explanations for these results as well as limitations of the study are discussed.

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CHAPTER I

INTRODUCTION

Historically, the elderly have been the victims of discrimination and ageism. Derogatory names such as "biddy", "crone", or "hag" have been commonly heard in reference to older women while names including "codger", "coot", and "geezer" are often heard in reference to older men. Terms such as these are demeaning because they represent the elderly as having undesirable traits and characteristics (Nuessel, 1982). These names have resulted from negative attitudes and misconceptions about the elderly and growing old. According to Palmore (1988) in a review of past studies, the most frequent misconceptions about the elderly included beliefs that at least 1/10 were institutionalized, that they were unable to adapt to change, that the majority were often bored, poverty stricken, angry and irritable.

It is possible that in the past, ageism and discrimination toward older adults have been promoted through the media. Verbs and adverbs utilized in visual and auditory media to describe or direct the elderly often have reinforced ageist stereotypes (Nuessel, 1982). Television has been a prime example of a media source that has depicted the elderly negatively. In a national survey of 4,460 adults Gerbner et al. (1980a) found that heavy viewers of television came to believe that older

adults were not bright, open-minded or good at getting things done, and that the number, health and longevity of older adults were declining. The researchers accounted for these beliefs by proposing cultivation and mainstreaming hypotheses. These hypotheses asserted that for heavy television viewers television cultivated the world by providing a world view that shaped the beliefs of non-subscribing social groups. In other words, indecisive or non-committal individuals were influenced by what was portrayed on television. While this hypothesis has not been found to generalize to the population it has been found to hold true for younger television viewers, who have grown up with television (Passuth & Cook, 1985). These results suggest that young people who have limited experience with the elderly will be influenced by what they see on television.

Furthermore older adults have been under-represented in the media. People age 65 and older were found to make up only 2.3% of fictional characters in prime time television and 1.4% of fictional characters in weekend daytime hours (Passuth & Cook, 1985). Older adults also have been under-represented in commercials. In the few commercials that they did appear in they were atypical (rarely bald or wrinkled) and were portraying non descriptive roles. A positive view of being old was displayed in only 1% of television (Hiemstra, et al., 1983). These findings seem more drastic when one

considers the fact that adults over age 65 made up 11% of the population and that this number has been increasing steadily (Passuth & Cook, 1985). The underrepresentation of the elderly in television combined with the finding that television particularly shapes younger people's views makes it important to examine negative attitudes and misconceptions that exist about the elderly, especially in younger populations.

Recently, however, there seems to have been a shift in awareness of ageism in the media. Programs such as *The Golden Girls* and *Empty Nest* portray older adults as active, healthy individuals who are completely independent and sufficient. In addition there seems to have been a decrease in commercials depicting the elderly in negative terms. One rarely sees commercials for Depends undergarments or similar negative advertisements. In today's society there seems to be more emphasis on doing what is considered to be "socially acceptable". Political correctness is an example of this in terms of the language that is used to describe minority groups. It is unclear whether or not this shift in the media and language is an effect of more positive attitudes toward the elderly or an effect of increased awareness. It is possible that individuals may openly act more positively but may still inwardly hold negative opinions. One of the goals of this study is to try to move beyond outward attitudes and examine underlying views.

Although negative attitudes and misconceptions about the elderly historically have existed, the results of research in this area have been equivocal. Most of the initial studies evaluating attitudes about the elderly consistently found an abundance of outright negative attitudes and stereotypes. For example, Tuckman and Lorge (1953), in one of the first studies on attitudes and aging, found that even educated graduate students held many misconceptions and stereotypes about aging. They found that most of the graduate students believed that growing old would be characterized by "economic insecurity, poor health, loneliness, resistance to change, and failing physical and mental powers".

However in several more recent studies positive views about the elderly have been observed. Jackson & Sullivan (1988) actually found an "age favorability bias" in the evaluation of older adults by younger adults. While such contrasting results are confusing there may be an explanation. Procedural differences that exist in different studies have yielded deviant results (Wingard, et al., 1982). Jackson and Sullivan provided a non-stereotypical description of an older adult and asked the subjects to rate the person in comparison to a similar younger counterpart. The fact that the subjects were rating the elderly more favorably does not necessarily mean they have more positive attitudes about the elderly. On the contrary, what the subjects may actually have been

saying is that it is more admirable and rare to see an elderly person with positive attributes; therefore, that particular person must be exceptional. It was possible that these subjects harbored stereotypes that were more subtle and may not have been revealed in such a procedure.

Although more positive attitudes have emerged when non-stereotypical older adults have been used as the target, negative attitudes have emerged when an older adult was directly compared to a younger adult. For example, Wingard et al (1982) conducted a study where they asked subjects to rate a series of adjectives on how descriptive they were of older adults and then how descriptive they were of younger adults. In a direct comparison such as this one, the subjects reported more negative adjectives in reference to older adults and more positive attitudes in reference to younger adults. In studies such as this, when direct comparisons have been made, more extreme negative attitudes toward the elderly were expressed.

Similar results have been found when this comparison was done in a more indirect manner. For example, when ratings of an age-specific target were compared to ratings of a non age-specific target, more negative attitudes emerge. In the age-specific situation, age was salient and therefore shaped the judgment of the subject (Schwalb & Sedlacek, 1990). This seems to have been

particularly true of the "old-old" elderly as concluded in a study conducted by Hummert (1990). In this study subjects were asked to place subgroups of traits in particular age groups where they would most likely be found. They were then asked to complete a semantic differential attitude scale to evaluate an individual displaying these traits. While subjects did not openly report negative stereotypes to be more representative of the elderly, they did assign negative stereotypes to the older ranges more often than they did the positive stereotypes.

Research examining attitudes and misconceptions about the elderly has been relevant in clinical work because in this area as well, age seems to be a salient characteristic affecting treatment. Therapists and psychological professionals often have held biases toward the elderly. One strong misconception involved the prevalence of Alzheimer's disease. It seems that many different populations over-estimated the occurrence of Alzheimer's. Gatz & Dieckman (1987) observed this effect when administering the "Alzheimer's Disease Knowledge" test to 43 undergraduates. In their sample 49% overestimated the prevalence of Alzheimer's disease. This disease was also over-represented in the media (Gatz & Pearson, 1988). This exaggeration of dementia may have reinforced the stereotype that many older adults are "senile". It may also have promoted over-diagnosis of

Alzheimer's disease which can lead to poor or mistreatment (Gatz & Pearson, 1988).

It seems that when examined under specific circumstances positive attitudes about older adults may have emerged; however, it is unclear whether these attitudes have resulted from actual beliefs or from subtle differences in procedural method. One purpose of this study is to evaluate in a methodical manner the attitudes and misconceptions of younger adults toward the elderly and growing old.

A second relevant area of interest is attitude change and more specifically how to foster more positive attitudes toward the elderly. Instruction or education of misconceptions is one method that has been found to be effective in changing attitudes toward older adults. For example when students in a life span development class consisting of a 5 week lecture series on adult development and aging were compared to a similar class focusing on childhood, the life span class showed significant pre/post differences in their knowledge about aging. In this study knowledge was measured by the Facts on Aging Quiz (Palmore, 1977) before and after the five week instructional period. Also required in the life span course was participation in a one hour discussion group per week or 2 hours of volunteer work per week. The students in these two groups showed no difference in knowledge. Similarly, Carmel, Cwikel & Galinsky (1992)

found that formal lectures were a more effective way of transmitting knowledge about aging than group discussions or contact.

Although the previously mentioned researchers did not find differences in knowledge between the groups that did volunteer work, direct contact with the elderly has been found to be an effective means of attitude change (Murphy-Russell et al., 1986, Caspi, 1984, Gordon & Hallauer, 1977). Attitude change through direct contact may be explained by the same principles as prejudice reduction through inter- group contact. Caspi (1984) explained these principles in terms of inter-age conflict and attitude improvement. First, acquaintance potential (Cook, 1962, cited in Caspi, 1984) took effect when the older adult and the volunteer spent time together getting to know one another. The principle of cooperative efforts (Sheriff & Sheriff, 1966, cited in Caspi, 1984) may have been established when the volunteer and the older adult shared certain activities, such as puzzles, reading etc. Next ego-involving and intimate relationships (Chadwick-Jones, 1962, cited in Caspi, 1984) may have been formed when the interaction between older adult and volunteer was equally satisfying. That is, each counterpart had a need that was met by the other. The final principle, established social expectations and institutional support (Deutsch & Collins, 1955, cited in Caspi, 1984) provided a model for

future interaction. When the contact between older adult and volunteer changed expectations and was met with support a norm for cross-age contact may be established. Attitude change in this manner also seemed to depend in part on the contact of younger people with non-stereotypical elderly (active, coherent, intelligent people). If contact was made with frail or demented older adults, stereotypes may have been reinforced instead of changed (Caspi, 1984).

In this study I will first examine attitudes and misconceptions about older adults. It is hypothesized that the subjects will not report any overt negativity but will express their negative attitudes through ageist misconceptions. I will also examine attitude change before and after a psychology of aging class and look specifically at subgroups within the class that differed in the amount of direct contact experienced with the elderly. It is hypothesized that the subgroup that spent the most time in direct contact with older adults would experience the largest attitude change over time.

CHAPTER II

METHOD

Subjects

The sample in this study was divided into two groups. The first group consisted of undergraduate students at the University of Massachusetts at Amherst who were enrolled in the class Psychology of Aging taught by Dr. Susan Whitbourne in the fall of 1992. The sample was evenly split by gender (50% males and 50% females) and the average age was approximately 21 years. The majority of the students were Caucasian and of moderate socio-economic status. Before entering the class, it was assumed that the students had relatively limited knowledge of the aging process.

As a requirement for the course, the students had to choose and complete a special project. The project options consisted of: 30 volunteer hours in a nursing home, weekly, one-hour discussions in small groups, or a life history paper based on an interview with an older adult. The sample was grouped according to the project they chose. There were 29 students in the discussion group, 135 students in the life history paper group and 27 students in the volunteer group; however, because of absenteeism and missing data, not all of these subjects were included in the final analyses. The majority of the sample chose the life history project which required the subject to spend 1-2 hours interviewing an elderly

person. After the interview each student then wrote a 10-15 page paper on the older adult's life. The paper encompassed health, work history, family history and age-related issues. In addition the students were required to integrate a significant number of class concepts into the report.

The second part of the sample consisted of students enrolled in a Personality class taught by Dr. Susan Whitbourne the following semester, spring, 1993. Because this class was comparable in level, professor and time of the day, these students were used as a control group.

In addition, there was a portion of the students in the Personality class who had also taken the Psychology of Aging class the previous semester. These students were omitted from the control group and examined separately as a post-post group. Their knowledge about and attitudes toward the elderly were measured at three time points: the beginning of the aging class, the end of the aging class, and the following semester during the personality class.

Measures

The two measures used in the study; the Facts on Aging Quiz (FAQ, Palmore, 1977) and the Aging Semantic Differential (ASD, Rosencranz & McNevins, 1969) are presented in Appendices A and B. Both measures were

chosen to measure knowledge about aging and attitude change related to the elderly, over the allotted time period.

FAQ

The FAQ is a 25 item, true/false questionnaire. Half of the questions are true items about the aging process and the elderly, and the other half are false items constructed from frequent stereotypes (See Appendix A). For each subject a total number of incorrect responses is calculated and a "Bias Score" is formed. The forming of these bias scores are based on the assumption that certain misconceptions about the aged indicate positive or negative perceptions. There are 5 items of the FAQ that if answered incorrectly indicate a positive bias (for example, item 2. "All five senses tend to decline in old age"). This is a very interesting aspect of the measure because it provides a check for "faking good" so to speak. It is possible that students in a psychology of aging class filling out a questionnaire on the elderly might respond more favorably than normal.

Similarly, there are 16 items that, if answered incorrectly, indicate a negative bias toward the elderly (for example, item 1. "The majority of old people (past age 65) are senile"). Furthermore, a net bias score may be calculated consisting of the pro-aged score minus the

anti-aged score. The purpose of this questionnaire and scoring is to measure the levels of information known about the elderly, to identify the most frequent misconceptions and to measure changes in information over time (Palmore, 1988).

ASD

The Aging Semantic Differential (ASD) was the second measure used in the study. The ASD is a questionnaire used to measure the subjects' perceptions and attitudes about older adults. It consists of a 32 bi-polar adjective checklist, each with a seven point scale. Subjects were asked to mark the scale at the point which they think best describes the average older person. The 32 adjectives can be broken down into three dimensions which were shown to be differentially attributed to young, middle-aged and older adults. The three dimensions are: Instrumental/ Ineffective, Autonomous/Dependent, and Personal Acceptability/Unacceptability. The Instrumental/Ineffective dimension was the most dominant. An individual capable of actively pursuing goals and adapting to change would be rated highly on this dimension. The second dimension Autonomous/Dependent would be rated highly for an individual that contributes to his/her social system an equal amount to that which he/she derives from others for personal maintenance. An

individual that would be rated highly on the third dimension, Personal Acceptability/Unacceptability, would be one that was competent socially and maintained high levels of interaction.

Procedure

On the first day of the class (Psychology of Aging), the subjects completed two questionnaires measuring their attitudes about aging. The class also completed these same questionnaires the last week of class, approximately 4 months later. Throughout the course of the semester, the class as a whole was exposed to concepts of aging, recent research and relevant literature. They were provided with a comprehensive overview of the physical, social, and psychological aspects of aging. In addition the required special project resulted in many of the students interacting, at least briefly, with an older adult and getting a first hand account of growing old.

CHAPTER III

RESULTS

The means and standard deviations for each group at each time of measurement are presented in Appendix C, Table 1. A 2 (time) x 3 (group) multiple analysis of variance, with repeated measures on the first factor, was performed on these data. There was a significant main effect of time, $F(1, 94) = 20.47, p < .001$. Collapsing over group, the class as a whole, displayed more positive attitudes and increased knowledge at the second time of measurement. Moreover, individual contrasts were conducted to examine change on each scale from the pre-test time of measurement to the post-test time of measurement. The F -ratios and p -values are displayed in Appendix C, Table 2. There was a significant difference from the pre-test time of measurement to the post-test time of measurement on each scale. Attitudes and knowledge as measured by the individual scales increased positively over time.

However, the group effect was not significant, $F(2, 94) = 2.007, p > .05$. The subjects in the volunteer group had attitudes that were equivalent to the attitudes of subjects in the other groups. Although there were no significant differences between the groups overall, there was a marginally significant interaction effect between group and time, $F(2, 94) = 2.673, p < .10$.

Appendix C, Table 3 displays the means and standard deviations of the aging class as a whole at time 1 as compared to those of the control group. There was no significant difference between the aging class as a whole (combining all 3 groups) and the control group, $F(3,265) = .298$, $p > .05$. This result suggests that the students in aging class did not begin the course with more knowledge or more positive attitudes about aging than those in another psychology class comparable in level, professor and time of day.

Appendix C, Table 4 displays the correlation coefficients between each of the scales. While the FAQ is significantly correlated in a negative direction with each of the subscales of the ASD it seems to be particularly related to the Instrumental subscale. Because a higher score on the FAQ implies more knowledge about aging and a lower score on the ASD subscales implies more positive attitudes, this result suggests that as attitudes toward aging improve, knowledge about aging also improves. Similarly, each of the subscales of the ASD, Instrumental, Autonomous and Personal Acceptability were positively correlated with each other. This result suggests that these subscales may have some overlap in terms of the attitudes they measure.

The means and standard deviations for the post-post group at each time of measurement are displayed in Appendix C, Table 5. This group consisted of subjects

who had completed the psychology of aging class and who had then enrolled in the personality class. The attitudes and knowledge of these students were measured at three time points, the start of the aging class, the end of the aging class, and then 4 months later in the personality class. A multivariate repeated measures analysis was conducted on this group in order to test for a significant effect of time, and to detect whether or not attitudes changed after the aging class had ended. The analysis yielded a significant time effect, $\underline{F}(2,22)=4.587$, $\underline{p}<.05$ over the three time points. However, there was not a significant difference between the post time measurement taken at the end of the aging course and the post-post time measurement taken during the personality class, $\underline{F}(1,11)=2.871$, $\underline{p}>.05$.

CHAPTER IV

DISCUSSION

There was a significant effect of time on the attitudes and knowledge of the subjects. This result supports the study's hypothesis that through education and learning about the aging process attitudes of undergraduate students can be improved. The students displayed more positive attitudes and increased knowledge at the end of the aging course. Furthermore, these positive attitudes did not decrease back to normal (baseline) after the aging class was over, as displayed by the post-post group. The students maintained a positive view of the elderly even 4 months after the aging class had ended. These results are consistent with past studies that found that education can increase knowledge and attitudes about aging (Palmore, 1977).

Although there was a significant time effect, the subjects in this study began the class with a fair amount of knowledge about aging. They scored approximately 91.54% on the pretest measure of the FAQ. This score is much higher than the mean reported by Palmore (1988) in a review of 15 different applications. He found the mean score for undergraduates to be approximately 56%. Since the subjects began the class with so much knowledge, it is possible that there was a ceiling effect in terms of

change. Since knowledge was high to begin with, it could only improve so much.

However, attitudes as measured on the ASD subscales were much lower than those measured in previous studies. Rosencranz & McNevin (1969) used the ASD to measure attitudes of 257 undergraduates. They divided the subjects into groups based on grandparent contact and meaningful association with an aged person. On both the Instrumental and the Autonomous scales, the subjects in this study had more negative attitudes than those in the group reported by Rosencranz and McNevin (1969) as having "no meaningful association" with an aged person (48.24 and 35.73 compared to 37.6 and 31.91). This comparison suggests that negative attitudes toward the elderly do indeed exist, and that they have possibly gotten worse since 1969.

Contrary to the hypothesis, there was no significant group effect. The volunteer group was expected to display more positive attitudes at each time of measurement than the life history group, followed by the discussion group. It was thought that interacting with the elderly on a weekly basis would foster more positive attitudes and increased knowledge. However, the volunteer group displayed attitudes and knowledge that were equivalent to those of the other groups. This result is consistent with a past study conducted by Carmel, Cwikel & Galinsky (1992) who found that formal

lectures were a more effective way of transmitting knowledge about aging than group discussion or contact. However, it contradicts other studies which found that volunteer work did indeed foster positive attitudes (Murphy Russell et al., 1986, Caspi, 1984, & Gordon & Hallauer, 1977).

Several explanations may be proposed for this result. First, most of the volunteers worked in nursing homes or rest homes. These types of institutions receive elderly clients who are at the lower end of functioning. Many of the clients suffer from dementia and are very confused or have been victims of stroke and are severely disabled. It is possible that this experience reinforced many of the negative stereotypes that we were trying to combat against (Caspi, 1984). If the volunteers had worked in an atmosphere that contained more functional elderly, such as a senior center, the results may have been different.

Secondly, the class as a whole was exposed to a variety of teaching methods in addition to lecture material. An elderly woman who had recently won a fitness award, came in and talked to the class. They were shown numerous videos, explaining the aging process and exemplifying active older adults. It is possible that the rich class experience negated some of the effects of the volunteer group. Had the class been

organized by a lecture format only, there may have been a greater difference between the three groups.

There was no significant difference between the aging class and the personality class, which acted as the control. It was previously thought that the results might be biased by the fact that the aging class began with more positive attitudes. Due to social desirability, the students realized that in an aging class, they should express positive attitudes toward the elderly. However, the aging class did not display any positive bias toward the elderly and began the class with equivalent attitudes and knowledge as any other three hundred level psychology class.

There were several limitation to this study. First, the three groups (volunteer, life history and discussion) varied considerably in size. After dropping subjects with incomplete data, the discussion group had a total of 29 students, the life history group had a total of 135 students, and the volunteer group had a total of 27 students. Since the life history group was significantly larger than the other two groups, it is possible that some of the group effect was lost. If the groups were more equally distributed, there might have been greater effect.

A second limitation of this study is that there was no control for experience involving the elderly that took place outside of the class assigned activities. For

example, since it was an aging class, there may have been some students who worked with an elderly population or who had a prior positive experience. However, since there was no significant difference between the control group and the aging class, it seems unlikely that this was a factor.

A third limitation of this study is related to its pretest-posttest design. First, since the same measures were used at the pre and post time of measurement, the subjects may have experienced a practice effect. In other words, knowledge and attitudes may have improved simply because the subjects were more practiced at the measures and knew what to expect. While this may have affected the FAQ measure, which assesses knowledge about aging, it seems unlikely that practice would have affected the attitude scores. The measure used to assess attitudes was a bi-polar adjective checklist which is a very straightforward questionnaire. Even if subjects remembered their pretest responses, it is unlikely that this would affect their posttest answers.

It is also possible that there was a Testing X Treatment interaction or a pretest sensitization effect. Pretest sensitization is a limitation of pretest-posttest designs and refers to the phenomenon where the pretest sensitizes subjects to the intervention (Kazdin, 1992). After taking the pretest subjects may have become more sensitive to issues involving aging and may have

approached the class material in a more conscientious manner. As a result of this possibility, generalizations to other teaching settings should be made conservatively, and should consider the advantage of a pretest.

In conclusion, it seems that education of aging issues can be an important part of attitude change. While we did not find an affect of volunteer work future research should examine this more closely. The results of this study point to the need for more classes on the topic of aging. Because the population of older adults is growing rapidly, universities and colleges should incorporate such classes into their curriculum. If this is not possible then aging issues and concerns should be integrated into existing classes. Teaching can be an effective method of changing many attitudes at once and should be maximally utilized.

APPENDIX A

FAQ

Answer "T" (true) or "F" (false) to each item:

- ___ 1. The majority of old people (past age 65) are senile (i.e. defective memory, disoriented or demented).
- ___ 2. All five senses tend to decline in old age.
- ___ 3. Most older people have no interest in, or capacity for, sexual relations.
- ___ 4. Lung capacity tends to decline in old age.
- ___ 5. The majority of old people feel miserable most of the time.
- ___ 6. Physical strength tends to decline in old age.
- ___ 7. At least one-tenth of the aged are living in long stay institutions (i.e. nursing homes, mental hospitals, homes for the aged, etc.).
- ___ 8. Aged drivers have fewer accidents per person than drivers under 65.
- ___ 9. Most older workers cannot work as effectively as younger workers.
- ___ 10. About 80% of the aged are healthy enough to carry on their normal activities.
- ___ 11. Most older people are set in their ways and unable to change.
- ___ 12. Old people usually take longer to learn something new.
- ___ 13. It is almost impossible for most old people to learn new things.
- ___ 14. The reaction time of most old people tends to be slower than the reaction time of younger people.
- ___ 15. In general, most old people are pretty much alike.
- ___ 16. The majority of old people are seldom bored.
- ___ 17. The majority of old people are socially isolated.
- ___ 18. Older workers have fewer accidents than younger workers.
- ___ 19. Over 15% of U.S. population are now age 65 or over.
- ___ 20. Most medical practitioners tend to give low priority to the aged.
- ___ 21. The majority of older people have incomes below poverty level (as defined by the Federal Government).
- ___ 22. The majority of older people are working or would like some kind of work to do (including housework and volunteer work).
- ___ 23. Older people tend to become more religious as they age.
- ___ 24. The majority of old people are seldom irritated or angry.
- ___ 25. The health and socioeconomic status of older people (compared to younger people) in the year 200 will probably be about the same now.

APPENDIX B

ASD

Below are listed series of polar adjectives accompanied by a scale. You are asked to place a check mark along the scale at a point which in your judgment best describes the average older person (over age 65). Make each item a separate and independent judgment. Do not worry or puzzle over individual items. Do not try to remember how you have marked the earlier items even though they may seem to have been similar. It is your first impression or immediate feeling that is wanted.

Progressive	—	—	—	—	—	—	—	Old-fashioned
Consistent	—	—	—	—	—	—	—	Inconsistent
Independent	—	—	—	—	—	—	—	Dependent
Rich	—	—	—	—	—	—	—	Poor
Generous	—	—	—	—	—	—	—	Selfish
Productive	—	—	—	—	—	—	—	Unproductive
Busy	—	—	—	—	—	—	—	Idle
Secure	—	—	—	—	—	—	—	Insecure
Strong	—	—	—	—	—	—	—	Weak
Healthy	—	—	—	—	—	—	—	Unhealthy
Active	—	—	—	—	—	—	—	Passive
Handsome	—	—	—	—	—	—	—	Ugly
Cooperative	—	—	—	—	—	—	—	Uncooperative
Optimistic	—	—	—	—	—	—	—	Pessimistic
Satisfied	—	—	—	—	—	—	—	Dissatisfied
Expectant	—	—	—	—	—	—	—	Resigned
Flexible	—	—	—	—	—	—	—	Inflexible
Hopeful	—	—	—	—	—	—	—	Dejected
Organized	—	—	—	—	—	—	—	Disorganized
Happy	—	—	—	—	—	—	—	Sad
Friendly	—	—	—	—	—	—	—	Unfriendly
Neat	—	—	—	—	—	—	—	Untidy
Trustful	—	—	—	—	—	—	—	Suspicious
Self-reliant	—	—	—	—	—	—	—	Dependent
Liberal	—	—	—	—	—	—	—	Conservative
Certain	—	—	—	—	—	—	—	Uncertain
Tolerant	—	—	—	—	—	—	—	Intolerant
Pleasant	—	—	—	—	—	—	—	Unpleasant
Ordinary	—	—	—	—	—	—	—	Eccentric
Aggressive	—	—	—	—	—	—	—	Defensive
Exciting	—	—	—	—	—	—	—	Dull
Decisive	—	—	—	—	—	—	—	Indecisive

APPENDIX C
DATA TABLES

Table 1 Means and Standard Deviations of Each Group at Each Time of Measurement.

Measures	Time 1		Time 2	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
FAQ				
Discussion	45.83	1.53	47.15	1.23
Life History	45.75	1.63	46.99	1.23
Volunteer	45.83	1.64	46.17	1.79
Control	45.21	1.64	.	.
INST				
Discussion	38.04	6.77	29.96	5.41
Life History	37.94	5.92	32.07	5.92
Volunteer	35.96	6.41	33.62	6.16
Control	39.73	6.69	.	.
AUTON				
Discussion	31.91	5.69	27.14	5.18
Life History	32.22	5.85	28.30	5.49
Volunteer	30.44	5.79	29.33	5.94
Control	32.28	6.04	.	.

Continued, next page.

Table 1 Continued

Measures	Time 1		Time 2	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
PERACC				
Discussion	44.65	9.67	39.77	7.85
Life History	47.82	9.26	42.43	9.59
Volunteer	43.48	7.71	43.10	8.38
Control	46.94	10.59	.	.

NOTE. A higher score on the FAQ indicates more knowledge about aging, while a lower score on the scales INST, AUTON, and PERACC indicates more positive attitudes toward the elderly.

Table 2 F-ratios and P-values for the Contrasts Measuring Attitude Change on Each Scale From the Pre-test Point of Measurement to the Post-test Point of Measurement.

Scale	F-ratio	P-value
FAQ	18.40	0.00
INST	36.55	0.00
AUTON	8.29	0.00
PERACC	14.60	0.00

Table 3 Means and Standard Deviations of the Aging Class as a Whole at Time 1 (Pre-test) as Compared to the Control Group.

Scale	Aging Class		Control	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
FAQ	45.77	1.61	45.21	1.64
INST	37.66	6.12	39.73	6.69
AUTON	31.91	5.81	32.28	6.04
PERACC	46.72	9.22	46.94	10.59

Table 4 Pearson Correlation Coefficients for the Scales of Measurement.

	FAQ	INST	AUTON	PERACC
FAQ	1.00	.	.	.
INST	-0.40	1.00	.	.
AUTON	-0.27	0.64	1.00	.
PERACC	-0.27	0.57	0.61	.

Table 5 Means and Standard Deviations of the Post-post Group at Each Time of Measurement.

Scale	Time 1		Time 2		Time 3	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
FAQ	47.00	1.21	47.83	1.27	47.33	1.16
INST	36.83	6.42	33.33	4.42	31.83	4.95
AUTON	30.17	6.48	29.00	4.81	25.92	6.29
PERACC	45.42	10.30	42.50	10.19	39.92	8.24

REFERENCES

- Carmel, S., Cwikel, J., & Galinsky, D., (1992). Changes in knowledge, attitudes, and work preferences following courses in gerontology among medical, nursing, and social work students. Educational Gerontology, 18(4), 329-342.
- Caspi, A., (1984). Contact hypothesis and inter-age attitudes: A field study of cross-age contact. Social Psychology Quarterly, 47, 74-80.
- Dail, P., W., & Johnson, J., (1986). Measuring change in undergraduate students' perceptions about aging using the Palmore Facts on Aging Quiz. Gerontology and Geriatrics Education, 5, 61-67.
- Gatz, M., Dieckmann, L., (1987). [Social problems survey]. Unpublished raw data, cited in Gatz, M., & Pearson, C., (1988). Ageism revised and the provision of psychological services. American Psychologist, 43(3), 184-188.
- Gatz, M., & Pearson, C., (1988). Ageism revised and the provision of psychological services. American Psychologist, 43(3), 184-188.
- Gerbner, G., Gross, L., Signorelli, N., & Morgan, M., (1980a). Aging with television: Images in television drama and conceptions of social reality. Journal of Communication, 30, 37-47.
- Gordon, S., Hallauer, D., (1976). Impact of a friendly visiting program on attitudes of college students toward the aged. (A pedagogical note.) The Gerontologist, 16(4), 371-376.
- Hiemstra, R., Goodman, M., Middlemiss, M., Vosco, R., & Ziegler, N., (1983). How older people are portrayed in television advertising: Implications for educators. Educational Gerontology, 9, 111-121.
- Hummert, M., L., (1990). Multiple stereotypes of elderly and young adults: A comparison of structure and evaluations. Psychology and Aging, 5, 182-193.

- Jackson, L., A., & Sullivan, L., A., (1988). Age stereotype disconfirming information and evaluations of old people. Journal of Social Psychology, 128, 721-729.
- Kazdin, A.E., (1992). Research Design in Clinical Psychology (second edition). Needham Heights, Massachusetts: Allyn & Bacon.
- Murphy-Russell, S., Die, A., & Walker, J., (1986). Changing attitudes toward the elderly; The impact of three methods of attitude change. Educational Gerontology, 12, 241-251.
- Nuessel, F.H., (1982). The Language of Ageism. The Gerontologist, 22, 273-276.
- Palmore, E.B., (1977). Facts on aging: A short quiz. The Gerontologist, 17, 315-320.
- Palmore, E. B., (1988). The Facts on Aging Quiz. New York: Springer Publishing Co.
- Passuth, P., & Cook, F., (1985). Effects of television viewing on knowledge and attitudes about older adults: A critical reexamination. The Gerontologist, 25, 69-77.
- Schmidt, D., F., & Boland, S., M., (1986). Structure of perceptions of older adults: Evidence for multiple stereotypes. Psychology and Aging, 1, 255-260.
- Schwalb, S., & Sedlack, W., (1990). Have college students' attitudes toward older people changed? Journal of College Student Development, 31, 127-132.
- Tuckman, J., & Lorge, I., (1953). Attitudes toward old people. Journal of Social Psychology, 37, 249-260.
- Wingard, J., Heath, R., & Himelstein, S., (1982). The effects of contextual variations on attitudes toward the elderly. Journal or Gerontology, 37, 475-482.



