Effects of Interaction and of Instruction in Changing the Perceptions of Children and Elderly People About Each Other

John H. Andrus

Follow this and additional works at: https://commons.und.edu/theses

Recommended Citation
https://commons.und.edu/theses/1125

This Dissertation is brought to you for free and open access by the Theses, Dissertations, and Senior Projects at UND Scholarly Commons. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of UND Scholarly Commons. For more information, please contact zeinebyousif@library.und.edu.
EFFECTS OF INTERACTION AND OF INSTRUCTION IN CHANGING THE PERCEPTIONS
OF CHILDREN AND ELDERLY PEOPLE ABOUT EACH OTHER

by
John H. Andrus

Bachelor of Science, Valley City State College, 1973
Master of Education, University of North Dakota, 1978

A Dissertation
Submitted to the Graduate Faculty
of the
University of North Dakota
in partial fulfillment of the requirements
for the degree of
Doctor of Education

Grand Forks, North Dakota
August
1985
This Dissertation submitted by John H. Andrus in partial fulfillment of the requirements for the Degree of Doctor of Education from the University of North Dakota has been read by the Faculty Advisory Committee under whom the work has been done, and is hereby approved.

Donald A. Egger (7-2-85)
(Chairperson)

Donald K. Lemon
Myrma L. Olson
K. Kurtz

This Dissertation meets the standards for appearance and conforms to the style and format requirements of the Graduate School of the University of North Dakota, and is hereby approved.

William Johnson 7/5/85
Dean of the Graduate School
Permission

Effects of Interaction and of Instruction in Changing the Title Perceptions of Children and Elderly People about Each Other

Department Center for Teaching and Learning/Educational Administration

Degree Doctor of Education

In presenting this dissertation in partial fulfillment of the requirements for a graduate degree from the University of North Dakota, I agree that the Library of this University shall make it freely available for inspection. I further agree that permission for extensive copying for scholarly purposes may be granted by the professor who supervised my dissertation work or, in his absence, by the Chairman of the Department or the Dean of the Graduate School. It is understood that any copying or publication or other use of this dissertation or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the University of North Dakota in any scholarly use which may be made of any material in my dissertation.

Signature ________________

Date ________________
# TABLE OF CONTENTS

LIST OF ILLUSTRATIONS ............................................. v
LIST OF TABLES ....................................................... vii
ACKNOWLEDGMENTS ................................................... x
VITA ............................................................. xi
ABSTRACT ......................................................... xii

CHAPTER I. BACKGROUND OF THE STUDY .............................. 1
CHAPTER II. REVIEW OF RELATED LITERATURE ........................ 9
CHAPTER III. THE PROCEDURES ...................................... 29
CHAPTER IV. ANALYSIS OF THE DATA ................................ 46
CHAPTER V. OBSERVATIONS/CONCLUSIONS AND RECOMMENDATIONS .......... 131

APPENDICES ....................................................... 151

APPENDIX A. CHILDREN'S VIEWS ON AGING INVENTORY: ADAPTED ... 152
APPENDIX B. CHILDREN'S FOLLOW-UP QUESTIONNAIRE ............... 154
APPENDIX C. PERCEPTIONS ABOUT YOUNG PEOPLE SURVEY .......... 156
APPENDIX D. COMPOSITE PICTURE OF ELDERLY PEOPLE .............. 158
APPENDIX E. CHILDREN/RESIDENTS INTERACTION ACTIVITIES ....... 160
APPENDIX F. AGING AND ELDERLY PEOPLE LESSON PLANS .......... 169

APPENDIX G. FREQUENCIES OF CHILDREN'S RESPONSES TO PRETEST ITEM ONE, "At what age does a person become old?" .......................................... 177

REFERENCES ....................................................... 179
LIST OF ILLUSTRATIONS

1. Percentages of the Children's Responses by Sex Group to Pretest Item Six, "Would You Like to Have an Old Person Come and Help You during School?" .......................... 54

2. Percentages of the Children's Responses by Sex Group to Pretest Item Five, "If You Had a Broken Toy, Would You Ask an Old Person to Help Fix It?" .......................... 57

3. Percentages of the Children's Responses by Grade Group to Pretest Item Six, "Would You Like to Have an Old Person Come and Help You during School?" .......................... 58

4. Percentages of the Children's Responses by Grade Group to Pretest Item Eight-A, "Do You Think Old People Are Usually Healthy?" .......................... 59

5. Percentages of the Children's Responses by Assignment Group to Pretest Item Eight-A, "Do You Think Old People Are Usually Healthy?" .......................... 62

6. The Children's Mean Follow-up Survey Responses for the Assignment Groups .......................... 64

7. The Children's Mean Follow-up Survey Responses for the Question, "Were Your Sessions Fun?" x Pretest Item Six x Assignment Group .......................... 67

8. The Children's Mean Follow-up Survey Responses for the Question, "Was the Time Spent Worthwhile?" x Pretest Item Eight-B x Assignment Group .......................... 69

9. Mean Number of the Children's Response Changes from the Pretest to the Posttest .......................... 72

10. Percentages of the Children's Responses Which Changed from the Pretest to the Posttest for the Sex Groups .......................... 76

11. Percentages of the Children's Responses Which Changed from the Pretest to the Posttest for the Assignment Groups .......................... 86

12. Male and Female Elderly People's Mean Pretest Ratings of Children .......................... 104

13. Family Contact Groups' Mean Pretest Ratings of Children .......................... 108
14. Frequency Distribution of the Total Elderly Group's Pretest-to-Posttest Rating Changes ................................................. 111

15. Elderly People's Mean Pretest and Posttest Ratings of Children ............................................................ 114

16. Mean Rating Changes from the Pretest to the Posttest for the Elderly People's Sex Groups on Items One to Ten .................. 116

17. Mean Rating Changes from the Pretest to the Posttest for the Elderly People's Family Contact Groups on Items One to Ten .......................................................... 121
LIST OF TABLES

1. The Child Population by Grade and Assignment ................ 30
2. The Children's Questionnaire Categories Used in the Data Analysis ................................................. 34
3. Statistical Treatment of the Data from the Children ................ 36
4. Statistical Treatment of the Data from the Elderly People .......... 40
5. The Children/Elderly People Interaction Program Activities .......... 43
6. The Aging Instruction Program Activities .............................. 45
7. Percentages of the Children's Responses to the Pretest ........... 48
8. Chi Square Tests for Differences in the Children's Pretest Responses between Sex Groups .......................... 53
9. Percentages of the Children's Responses by Sex Group to Pretest Item Six, "Would You Like to Have an Old Person Come and Help You during School?" .......................... 54
10. Chi Square Tests for Differences in the Children's Pretest Responses among the Grade Groups .......................... 56
11. Percentages of the Children's Responses by Grade Group to Pretest Item Five, "If You Had a Broken Toy, Would You Ask an Old Person to Help Fix It?" ...................... 57
12. Percentages of the Children's Responses by Grade Group to Pretest Item Six, "Would You Like to Have an Old Person Come and Help You during School?" ...................... 58
13. Percentages of the Children's Responses by Grade Group to Pretest Item Eight-A, "Do You Think Old People Are Usually Healthy?" .............................................. 59
14. Chi Square Test for Difference in the Children's Pretest Responses among the Assignment Groups .......................... 61
15. Percentages of the Children's Responses by Assignment Group to Pretest Item Eight-A, "Do You Think Old People Are Usually Healthy?" .......................... 62
16. The Children's Mean Follow-up Survey Responses for the Assignment Groups .......................... 64
17. Analysis of Variance for the Children's Follow-up Survey Responses x the Pretest Responses x the Assignment Groups .............................................. 66
18. The Children's Mean Follow-up Survey Responses for the Question, "Were Your Sessions Fun?" x Pretest Item Six x Assignment Groups .............................................. 67
19. The Children's Mean Follow-up Survey Responses for the Question, "Was the Time Spent Worthwhile?" x Pretest Item Eight-B x Assignment Groups .............................................. 69
20. Mean Number of the Children's Response Changes from the Pretest to the Posttest for the Grade x Assignment x Sex Groups .............................................. 71
21. Analysis of Variance for the Number of Pretest-to-Posttest Changes by Sex, Grade, and Assignment Groups .............................................. 74
22. Total Change and Response Percentages from the Pretest and the Posttest for the Sex Groups on the Items in the Category "Aging" .............................................. 78
23. Total Change and Response Percentages from the Pretest and the Posttest for the Sex Groups on the Items in the Category "Personality of Elderly People" .............................................. 80
24. Total Change and Response Percentages from the Pretest and the Posttest for the Sex Groups on the Items in the Category "Attraction to Elderly People" .............................................. 81
25. Total Change and Response Percentages from the Pretest and the Posttest for the Sex Groups on the Items in the Category "Stereotypes of Elderly People" .............................................. 83
26. Total Change and Response Percentages from the Pretest and the Posttest for the Assignment Groups on the Items in the Category "Aging" .............................................. 87
27. Total Change and Response Percentages from the Pretest and the Posttest for the Assignment Groups on the Items in the Category "Personality of Elderly People" .............................................. 89
28. Total Change and Response Percentages from the Pretest and the Posttest for the Assignment Groups on the Items in the Category "Attraction to Elderly People" .............................................. 92
29. Total Change and Response Percentages from the Pretest and the Posttest for the Assignment Groups on the Items in the Category "Stereotypes of Elderly People" .............................................. 94
30. Correlation between the Children's EAS Scores and Their Pretest-to-Posttest Changes

31. Percentages and Mean Response Ratings from the Elderly People's Responses to the Pretest

32. Analysis of Variance for the Elderly People's Pretest Answers between Sex Groups

33. Pearson Product-Moment Correlation Coefficients of the Elderly People's Pretest Answers in Relation to Nursing Home Longevity

34. Analysis of Variance for the Elderly People's Pretest Answers between Those with and Those without Family Contact

35. Pearson Product-Moment Correlation Coefficients of the Elderly People's Pretest Answers in Relation to Outgoing/Withdrawn Personality Rating

36. t-Tests for Paired Samples for the Elderly People's Pretest Responses Paired with Their Posttest Responses

37. Analysis of Variance for the Elderly People's Pretest-to-Posttest Rating Changes between Sex Groups

38. Pearson Product-Moment Correlation Coefficients of the Elderly People's Pretest-to-Posttest Rating Changes in Relation to Nursing Home Longevity

39. Analysis of Variance for the Elderly People's Pretest-to-Posttest Rating Changes for the Family Contact Groups

40. Pearson Product-Moment Correlation Coefficients of the Elderly People's Pretest-to-Posttest Rating Changes in Relation to Outgoing/Withdrawn Personality Rating

41. Frequencies of Children's Responses to Pretest Item One, "At What Age Does a Person Become Old?"
ACKNOWLEDGMENTS

I express my sincere appreciation to my advisor, Dr. Donald Piper, for his valued guidance and patience during the planning and writing of this dissertation. I am also very appreciative of the assistance which I received from Dr. Donald Lemon in running the statistical tests for this study and for his constant support throughout my graduate studies. Dr. Richard Kauffman, Dr. Ronald Kutz, and Dr. Myrna Olson also served as committee members and added to the quality of this study.

Dr. Richard Landry and Dr. Selmer Moen provided valuable insights during the interpretation of the statistical data. Mr. Curtis Tenneson provided assistance and materials for the word processing of the draft copies.

I am thankful for the cooperation of many individuals in the Bottineau, North Dakota community including Superintendent James Holwell, the Bottineau school board, teachers, and students. Mr. Duane Delaney, Mr. Richard Hunt, the staff, and the residents of the Good Samaritan Nursing Home were also consistently cooperative and encouraging.

A special thank you is expressed to my wife Arlene and to her parents for their support throughout my graduate studies. I thank my parents for their encouragement and guidance throughout my academic career.
VITA

John Herbert Andrus was born in Valley City, North Dakota. He attended elementary schools in Valley City, Minot, and Jamestown, North Dakota and graduated from Jamestown High School in 1969. He earned a Bachelor of Science Degree from Valley City State College, Valley City, North Dakota, in 1973 with a major in elementary education.

Between 1973 and 1979 he was employed as an elementary teacher in the Langdon, North Dakota and the Cando, North Dakota public schools.

Mr. Andrus completed his Master of Education Degree in educational administration in 1978 at the University of North Dakota. During this time he worked as a graduate research assistant with the Northern Plains Teacher Corps.

Mr. Andrus served as elementary principal of the Bottineau Elementary Schools in Bottineau, North Dakota from 1978 to 1982. He is presently serving as an elementary principal in the Minot, North Dakota public schools.
ABSTRACT

This study examined children's perceptions of elderly people, elderly people's perceptions of children, and changes in perceptions following either a six-week program of interaction between a children's group and a nursing home population or a six-week unit of instruction about elderly people presented to a second children's group.

Fourth-, fifth-, and sixth-grade children completed a 15-item pretest/posttest dealing with perceptions of "aging," "personality of elderly people," "attraction to elderly people," and "stereotypes of elderly people." Selected nursing home residents completed a ten-item pretest/posttest asking them to compare personality characteristics of today's young people with characteristics the residents themselves had possessed as young people. Other variables included the children's sex, grade, project assignment, educational ability, and ratings of their sessions and the elderly people's sex, longevity in the nursing home, personality rating, and contact with family.

The statistical tests included chi-square comparisons, analysis of variance, t-tests, and Pearson product-moment correlations. Findings were considered to be significant at the .05 level of difference or relationship. Some of the observations/conclusions were:

1. The children had mixed feelings about the aging process but positive feelings about the personalities of elderly people.

2. The female children and the fourth-grade children were more attracted to elderly people.
3. The children who received instruction about elderly people became more positive about elderly people's personality characteristics.

4. The children who visited the nursing home became more stereotyped in their views of the health of elderly people.

5. The elderly people described today's young people as less willing to work, as respecting parents less, and as caring less about old people but also as being more mature, as knowing more about the world, and as enjoying life more.

6. The elderly people's high rating of children's maturity dropped after the interactions but the elderly males described children as knowing more about the world and as caring more about old people.

The study has implications for educators planning intergenerational programs dealing with aging issues. A major finding was the need to supplement nursing home visits with instruction about elderly people to avoid generalizing what is observed to all elderly people.
CHAPTER I

BACKGROUND OF THE STUDY

Children who are approaching their teenage years are moving into a developmental period when they will gain independence from the significant adults in their lives. Lefrancois (1976) described that move toward independence as a very demanding period for children:

Throughout their growing years, children are usually emotionally, financially, and physically dependent upon their immediate families; as adults they will ordinarily become relatively independent from them in all these areas. The transition from dependence to independence is frequently difficult not only for the adolescents, but for the parents as well. It imposes new demands on the adolescents--demands that require a dramatic change in their image of their capabilities and needs; demands that, as well, require that they be able to form emotional relationships outside the sphere of the immediate family. (p. 129)

The oldest members of our society also find themselves in a demanding period of their lives. The independence which they have held for half a century or so is lost to an increasing dependence on others. Atchley (1972) wrote:

As a result of the high value placed on independence, most older people hold extremely negative attitudes toward dependency. The reaction to dependency is thus highly predictable. It makes older people despise themselves and their situation. Compounding the problem is the fact that older people often must depend on their children--a situation that degrades the older person and puts a strain on his relationships with his children. (p. 197)

These two age groups, preadolescents and elderly people, can be viewed as opposite ends of a continuum with the much valued independent
years between them. Both groups have a need to form new emotional relationships. The children must form new relationships as a means of gaining independence. The elderly people are required to form new relationships as they lose their independence and must rely more and more on people outside the family. The essence of this study is to examine how these groups view each other. The effects of providing social interaction between the groups and the effects of providing classroom instruction about elderly people to the children will also be examined.

Need for the Study

Our nation's concern for elderly people has recently been intensified by the recognition that the number of older persons is increasing dramatically. Our people are living longer and the proportion of the old to the young is rising rapidly. Hendricks and Storey (1982) stated:

The percentage of the total population age 65 and over, now 10.7 percent, is projected to rise only to 12.2 percent by the year 2000 but will zoom up to 15.5 percent in 2020 . . . but if the 1976 death rate were reduced by half over a 75-year period, the higher estimate would rise to 19.6 percent. (p. 170)

The attention given to elderly people in the media is increasing along with the increase in older Americans. As the topic of aging and elderly people receives more attention, it causes young individuals to contemplate the potential conditions of their future lives as elderly people in the American society.

The growing elderly population has begun to show increasing political activity. Flieger (1976) reported that elderly people have been faithful voters. In the 1972 presidential election 64 percent of
the population over 65 years old voted. That was nine percent better than the national average. Barrow and Smith (1979) stated that while elderly voters have not yet organized at the state or national level, "the aged's voting as a block is increasing at the local level" (p. 359). At that local level, our public schools are becoming more dependent upon the support of the elderly voter to maintain the financial base necessary to maintain quality educational systems. Finding ways for elderly people to interact in a positive way with the public schools is one way of soliciting their political support.

Our young people need to examine the "world of the elderly person" that may one day be their own. They need to learn what it really is like to be old rather than accepting the stereotypes that abound. Comfort (1976) listed some common inaccurate stereotypes about the elderly:

Most old people live in institutions--hospitals, homes, etc.
After sixty-five everyone goes steadily downhill.
Old people are typically alone, abandoned by family and lonely.
People should retire; older people can't do a decent job.
Everyone knows old folks are past having sex.
After sixty-five your mind deteriorates and you can expect to get senile.
Old folks spend all their time sitting around watching television.
Disengagement is a natural acceptance of old-age limitations--older people really welcome it.
Since physical aging is a natural process, it can't be altered.
Most of the handicaps of older people are physical; after all, they are old. (pp. 86-89)

Studies of children's attitudes toward elderly people have often shown that children share the negative stereotypes of the elderly held by the rest of our society. Children view elderly people as slower, forgetful, less able to learn, grouchy, and feeling sorry for themselves
Purpose of the Study

The purpose of this study was to examine preadolescent children's perceptions of elderly people before and after the children's participation in either an instructional unit on "Aging and the Elderly Person" or planned group interactions with an elderly population. The study also examined the elderly population's perceptions of children before and after the interactions with the children. Differences were also examined among variable groups of the children and the elderly people in their initial perceptions and in their changed perceptions after the experiment. These findings provide data for decision makers to use in planning for instructional programs about elderly people and children/elderly people interactions.

Definition of the Terms

For the purpose of this study, several frequently used terms were given specific definitions.

1. Aging: refers to the physical aspects of growing older.

2. Aging instruction: refers to the six one-hour lessons on "Aging and Elderly People" given to some of the children.

3. Aging instruction group: refers to the group of children who completed the pretest and the posttest and received six one-hour instructional sessions on "Aging and Elderly People."

4. Assignment group: refers to the three categories of participation in the study for the children--the "aging instruction group," the "home visits group," and the "control group."
5. Change score: refers to the number of changes in responses that a child had from the pretest to the posttest.

6. Children: refers to young people in general; the children refers to the public school children in grades four, five, and six who participated in the study.

7. Control group: refers to the group of children who completed the pretest and the posttest but did not visit the nursing home nor receive aging instruction as a part of the study.

8. Elderly people: refers to people over age 65 in general; the elderly people refers to the nursing home residents who completed the pretest and the posttest and participated in the interactions with the children.

9. Grade group: refers to the grade level of the children who participated in the study—grade four, grade five, and grade six.

10. Home visits group: refers to the group of children who completed the pretest and the posttest and visited the nursing home for formal interactions with the elderly people.

11. Interactions: refers to the six visits of the children to the nursing home.

12. Perceptions: refers to the information collected by the survey instruments describing how children viewed the elderly people and how the elderly people viewed the children.

13. Rating change: refers to the difference in the elderly people's rating of children from the pretest to the posttest.

14. Stereotypes: refers to commonly held perceptions which have been disputed by research.
Assumptions

The design of this study required the acceptance of some basic assumptions.

1. The responses of the children and the elderly people to the questionnaire items were accurate indications of their perceptions.
2. The perceptions of the children about elderly people were not significantly changed by outside influences during the experiment.
3. The perceptions of the elderly people about children were not significantly changed by outside influences during the experiment.

Delimitations of the Study

This study was limited to the perceptions of Bottineau, North Dakota fourth-, fifth-, and sixth-grade children regarding elderly people and the perceptions of selected Bottineau Good Samaritan Center residents regarding children. The instruments used to measure perceptions were an adapted version of the Children's Views on Aging Inventory (Marks and Newman 1978) and the Perceptions About Young People Survey, which was developed by the writer.

The major sources of related literature for this study were the Chester Fritz Library of the University of North Dakota and the Education Resources Information Center. Additional sources were the Aging Services Library at the State Capitol in Bismarck, North Dakota, and the Minot Public Library in Minot, North Dakota.

Research Questions

A number of research questions were originally posed for this study. Five questions related to the children's perceptions of the elderly people and five questions related to the elderly people's
perceptions of children. Additional research questions which were added as the data were being examined are discussed in chapter 3.

Research Questions for the Child Population

1. Are there differences between the male and the female children's perceptions of elderly people as measured by the pretest?
2. Are there differences among the fourth-, the fifth-, and the sixth-grade children's perceptions of elderly people as measured by the pretest?
3. Are there differences among the home visits, the aging instruction, and the control groups' perceptions of elderly people prior to the experiment?
4. Is there a relationship between the children's perceptions of elderly people as measured by the pretest and their perceptions of the project as measured by the follow-up survey?
5. Are there differences among the variable groups (sex, grade, and assignment) related to the number of changes from the pretest to the posttest?

Research Questions for the Elderly Population

1. Are there differences between the male and the female elderly people's perceptions of children as measured by the pretest?
2. Is there a relationship between longevity in the nursing home and the elderly people's perceptions of children as measured by the pretest?
3. Are there differences in the elderly people's perceptions of children prior to and following the experiment?
4. Are there differences between the male and the female elderly people related to their rating changes from the pretest to the posttest?

5. Is there a relationship between longevity in the nursing home and the elderly people's rating changes from the pretest to the posttest?

As this study was being developed, the current literature was examined. The following chapter presents a review of the literature regarding stereotypes of elderly people, children's perceptions of aging, children's perceptions of elderly people, and elderly people's perceptions of children.
CHAPTER II

REVIEW OF RELATED LITERATURE

In the review of the literature related to this study the writer addressed the following topics: research on stereotypes of elderly people, children's perceptions of aging and elderly people (including attempts to modify children's perceptions of elderly people), and elderly people's perceptions of children. Summaries were completed for each topic.

Research on Stereotypes of Elderly People

Recent research has rejected many of the commonly held beliefs about aging and elderly people. The writer reviewed this research, much of which presents a more positive view of advanced age.

Accepting the common stereotypes of elderly people encourages the members of our society to discriminate against them as a group rather than dealing with them individually. This combination of stereotyping and discrimination was termed "ageism" by Butler (1975) in his Pulitzer Prize-winning work: "Ageism can be seen as a process of systematic stereotyping of and discrimination against people because they are old just as racism and sexism accomplish this with skin color and gender" (p. 12).

One area in which stereotyped beliefs about elderly people have been commonly found is the area of health, both physical and mental.
While normal physical decline is associated with advanced age, Comfort (1976) reported that sickness is not the rule for people over 65:

They get fewer acute illnesses than younger people; 1.3 illnesses per person per year as against 2.1 for all ages. True, 81 percent of people over sixty-five have some chronic problem, as against 54 percent of all people below that age, but this need be nothing worse than short sight or hay fever. (p. 86)

Mental health of elderly people has also often been stereotyped. The concept of "senility," a lay expression for losing mental functions because of advanced age, has been disputed by research. Comfort (1976) discussed the effects of aging on the mind:

In fact the only thing that declines a little is speed of response; there is no change, normally, in intelligence and little in memory. Any blunting we do see in the absence of actual disease commonly results not from age but from put-downs, boredom and exasperation. About 1 percent of all people become "demented" or "senile"—less than the percentage who go insane at earlier ages. (p. 88)

Baltes and Schaie (1974) studied the intellectual functioning of more than 300 adults ages 21 to 70 over a seven-year period. Their findings supported Comfort's views disputing the notion of intellectual decline resulting from old age:

In our opinion, general intellectual decline in old age is largely a myth. During the past ten years, we and our colleagues ... have worked to gain a better understanding of intelligence in the aged. Our findings challenge the stereotyped view, and promote a more optimistic one. We have discovered that the old man's boast, "I'm just as good as I ever was," may be true after all. (p. 35)

Frankfather (1977) rejected the medical value of the term "senility." He described the use of the senility label as a tool our society uses to exclude elderly people from the mainstream:

Senility is like no other deviant label, and its unique quality serves an explicit social function: the diagnosis legitimizes, with the authority invested in the scientist, the exclusion and removal of old people who constitute a social problem. The empirical pattern is clear: those
labeled senile presumably cannot be rehabilitated and therefore
need only to be maintained, generally in nursing homes. (p. 190)

A second area of stereotyped beliefs about elderly people has
pictured them as lonely, abandoned by their children, waiting passively
for visitors who never come. While our society has become more mobile
and the classical extended family has become less common, most families
still maintain regular contact between elderly people and their
children. Shanas (1979) wrote:

In the US most old people with children live close to at least
one of their children and see at least one child often. Most
old people see their siblings and relatives often, and old
people, when either bedfast or housebound because of ill
health, are twice as likely to be living at home as to be a
resident in an institution. (p. 6)

A third stereotyped perception of elderly people has been the
belief that they are passive. They only sit and watch television and
wait for something to happen to them. Butler (1978) wrote:

[I]n the absence of diseases and social adversities, old
people tend to remain productive and actively involved in
life. There are dazzling examples like the 82-year-old
Arturo Rubinstein working his hectic concert schedule, or
the 72-year-old Benjamin Dugger discovering the antibiotic
aureomycin. Numbers of people become unusually creative for
the first time in old age when exceptional and inborn talents
may be discovered and expressed. In fact, many old people
continue to contribute usefully to their families and community
in a variety of ways including active employment. (p. 31)

Comfort (1976) responded to the belief that elderly people spend
most of their time watching television:

So would you, if you were put out of work and prevented from
getting any; however, people over sixty actually spend less
time watching and listening to the media than people in their
twenties. The Duke study found no significant fall in people's
activities at ages from sixty to ninety over a ten year period—
those who had them kept them. (p. 88)

In summary, the latest research on the aging process and on the
quality of life for elderly people in America provides a more positive
perspective than the commonly held beliefs. Many of the problems which had been considered part of the aging process are now being tied to negative societal and institutional expectations.

Children's Perceptions of Aging and Elderly People

While perceptions of aging and perceptions of elderly people are often viewed together in the research, it is useful to consider the two areas separately. Old age and the aging process have generally been viewed negatively while the elderly individuals who cope with old age and the aging process have often been admired.

Children's Perceptions of Aging

Research on children's perceptions of the aging process has dealt with two separate but related topics. One topic has been the examination of children's mental concepts of aging and their ability to discriminate among people of various ages. The second topic has been the examination of children's affective responses to the concept of advanced age.

Kogan, Stephens, and Shelton (1961) asked 102 children from four to six years of age to arrange passport pictures of people of various ages into order by age and to choose a preferred picture. They found that children as young as four were capable of fairly accurate age discriminations. Those children who were unable to discriminate ages used the concept "bigger" to describe older people. A preference for the pictures of the younger adults was also noted. Galper, Jantz, Seefeldt, and Serock (1981) asked children questions about aging such as, "If someone is five years older than you, they will always be
five years older than you. Why?" They found that the development of young children's understandings of age concepts follows a Piagetian sequence in the same manner that children develop understandings of time and space relationships. The children's understandings of age concepts were also found to be correlated to their ability to do three Piagetian conservation tasks.

Page, Olivas, Driver, and Driver (1981) surveyed children from preschool to grade six and found that they had negative perceptions of the aging process. The children's perceptions were measured using the Children's Attitude Toward the Elderly (CATE) scale, a four-part measure including open-ended questions, a semantic differential, a picture series, and individual interviews. The children's conceptions of age were not related to the amount of interaction they had with elderly people but appeared to be related to the age of the child. While the children's understandings of age concepts varied in relation to their own ages, negative feelings about growing old were found in all age groups. Less than one-fourth of the children expressed positive attitudes about getting old. The authors concluded, "The study confirms the findings that children at a very early stage accept the negative stereotypes of age" (p. 46).

Newman (1982) examined the perceptions of fourth-, fifth-, and sixth-grade children regarding aging and old people. The Children's Views on Aging inventory, an open-ended questionnaire, was used to examine the children's perceptions of the aging process. The children's concepts of aging appeared to have been based primarily upon observations of physical changes.
Olson (1980) interviewed children from preschool age to fifth grade regarding their concepts of the aging process, their ability to discriminate among different ages, and their attitudes toward elderly people. The children who had reached the Piagetian concrete and formal operational stages were better at differentiating ages and describing the aging process. The physical characteristics they attributed to elderly people were generally negative but they did describe the elderly people's personalities in a more positive way. The children had negative perceptions of the physical aspects of growing old but positive perceptions of how they would be as old people, and they had positive feelings toward interacting with elderly people.

Zaki and Zaki (1982) examined the drawings and paintings of children in grades four through eight who entered an art contest on aging, the elderly, and death and dying. The ratio of positive to negative attitudes in the entries was found to be almost two to one. The most positive entries were from the lower grades. Because the art entries probably did not represent a random sample of the population and because those entering artwork may have been motivated by the contest to present a very positive image of aging, the results were not comparable to the other studies.

Children's Perceptions of Elderly People

Studies of children's perceptions of elderly people have drawn various and sometimes conflicting conclusions, often within the same research study. Children's perceptions have ranged from seeing elderly people as friendly, wonderful, and good to seeing them as sick, ugly, and sad. Early studies generally reported negative perceptions of
elderly people by children as well as by all other age groups including the elderly people themselves. McTavish (1971) reviewed the research on perceptions of elderly people and summarized the negative attitudes:

Stereotyped views of the elderly uncovered in various studies include views that old people are generally ill, tired, not sexually interested, mentally slower, forgetful and less able to learn new things, grouchy, withdrawn, feeling sorry for themselves, less likely to participate in activities (except perhaps religion), isolated, in the least happy or fortunate time of life, unproductive, and defensive in various combinations and with varying emphases. (p. 97)

Much of the variation in the research findings is the result of differences among the studies in the traits of the elderly being evaluated. Carstensen, Mason, and Caldwell (1980) and Newman (1982) found negative perceptions of elderly people's physical traits but Carstensen, Mason, and Caldwell found neutral and Newman found positive perceptions of elderly people's personality traits. Seefeldt, Jantz, Galper, and Serock (1977) reported similar findings:

Stereotyping the elderly, categorizing them as sick, tired, and ugly, the children in this study expressed distaste and disgust at the prospect of growing old themselves. The majority of the children stated that older people couldn't do anything but sit and rock, go to church, or be pushed in wheelchairs. The physical characteristics of age—wrinkles, white hair, false teeth—were viewed with horror by the children.

On the other hand, these children expressed strong affective feelings toward the elderly. They described older people as being wonderful, kind, and rich, suggesting that the limited contact they did have with older people was enjoyed. Comments such as "They love me," or "I can sit on their laps and they'll read me a story," were frequently expressed. (p. 303)

Another difference among the research reports that may help account for the apparent inconsistency of the results has been the variety of terms used to refer to the elderly population. Those terms have included "old adult" (Carstensen, Mason, and Caldwell 1980); "people who are old" (Click and Powell 1976); "elderly" (Zaki and Zaki
1982); "grandparents" (Baranowski 1982 and Phenice 1978); "people over 60 years old" (Olejnik and LaRue 1977); "aged" (Marcoen 1979); and "people over 65 years old" (Fabiano 1977). The most common term for elderly people has been "old people." This term was used by Marks (1981); Fusco (1981); Newman (1982); Phenice (1978); Schneider (1977); Hickey, Hickey, and Kalish (1968); Chappell (1977); and others. Some researchers have avoided the problem of choosing the best term and have instead shown pictures of elderly people to the children (Rosenwasser, McBride, Johnston, and Ginsburg 1983) while others have used pictures to clarify the terminology (Click and Powell 1976; Schneider 1977; Carstensen, Mason, and Caldwell 1980).

The instrumentation used to measure the children's perceptions of the elderly has varied greatly in the research. Children have been asked to complete semantic differential scales and questionnaires, to choose pictures of adults they would prefer to do things with, to write stories about elderly people, and to enter artwork about the elderly in a contest.

Several studies have used semantic differential scales with children identifying the position of elderly people between pairs of traits such as weak/strong, poor/rich, foolish/wise, and wrinkled/smooth. These studies have generally identified mixed perceptions of elderly people, high on some characteristics but low on others. Fabiano (1977) measured fourth-grade children's perceptions regarding people 65 years old and older. The results from the semantic differential scale were considered mixed; people 65 years old and older were characterized as old fashioned, slow, and lonely but also as wise, active, busy, and well. Higgens and Faunce (1977) had fifth-grade children rate people
over 60 years old on a semantic differential scale. The children rated them very high on the characteristics friendly, helpful, trustworthy, understanding, pleasant, smart, and important—higher than they rated people of their own age. The children were also asked how much they liked people over 60. Of the 529 children responding, 64 percent said they liked people over 60 a lot. Schneider (1977) examined the perceptions of fifth-grade students regarding old people with the children completing two semantic differential scales, an attitude scale, and a series of cartoons with choices of how elderly people might respond to various situations. It was found that children viewed old people as "usually nice, sometimes mean, and often incompetent and/or sickly" (p. 25). Marks (1981) used a semantic differential scale and an open-ended questionnaire to measure the perceptions of children in grades three, four, and five regarding the aging process and old people. The children were negative about being old but very accepting of old people. Chappell (1977) used a semantic differential to measure and compare 40 fifth- and sixth-grade children's perceptions of elderly people. Information was gathered on how often the children were in contact with their grandparents and that information was used to divide the children into two groups: those with maximum, ongoing contact (MO) and those with minimum, sporadic contact (MS). No difference was found between the two groups in their perceptions of elderly people. The children's overall perceptions were quite positive on the evaluative questions, slightly negative on the potency questions, and neutral on the activity questions.

Phenice (1978) used child and parent interviews to examine the perceptions of 44 preschool children about old people, including some
children who had been involved in a foster grandparent aide program. The children had positive perceptions about elderly people but negative perceptions about their physical attributes.

The questionnaires which children have responded to regarding elderly people have included yes/no response questionnaires where children were asked to either agree or disagree with such statements as, "They are forgetful" and "They have many friends." A second kind of questionnaire has asked open-ended questions such as, "How do you think it feels to be old?" and "How do you think old people spend their time?" These studies have generally identified negative perceptions and stereotypes of old people in general. Click and Powell (1976) examined preschool children's perceptions of "people who are old." Pictures of elderly people were used to assure that the children had the right age group in mind. The questionnaire asked about appearance, personality, and physical and social characteristics of people who were old. No final conclusions could be drawn about children's positive or negative perceptions of elderly people. Olejnik and LaRue (1977) used a yes/no response questionnaire to examine the perceptions of children in grades six through eight regarding stereotypes of older people. They found that the boys held more negative stereotypes than the girls toward people over 60 years old. The boys were more likely to say that old people become less intelligent, feel miserable, spend their time reading or listening to the radio, and would be better off in an old-age home. Marks and Newman (1978) measured the perceptions regarding old people of children in kindergarten, first grade, and grades three through six. They found that young children had begun to formulate attitudes toward elderly people that were negative or conflicting when
they referred to old people in general but were much more positive when they referred to real persons. Fusco (1981) tested the perceptions of first-grade students asking them what an old person was, what old people looked like, and what old people could do. The children's pretest responses were negative and stereotyped describing old people as sad, wrinkled, and doing little of value.

Another way of measuring children's perceptions of elderly people has been to have children write stories. Children have been given assignments such as, "Pick one of these photographs and write a story about that person." The stories written about the elderly people have then been analyzed for stereotypic views of elderly people and for the ratio of positive to negative perceptions. These studies have generally identified stereotyped views of elderly people but have also identified positive feelings toward them. Hickey, Hickey, and Kalish (1968) measured the perceptions of third-grade children regarding old people. The children were asked to write stories about old people with the teachers mentioning grandparents as examples of old people. The children's stories characterized elderly people as being generally feeble and having ambulatory problems. However, elderly people were also characterized as being kind and friendly. Thomas and Yamamoto (1975) had children in grades six, eight, ten, and twelve select one picture from pictures of people of various ages and write stories about them. The children who chose the old person wrote stories that were stereotyped but revealed positive attitudes toward him, picturing the old person as a loving grandfather. Kahn (1981) examined the perceptions of children ages six, nine, and twelve regarding adults and old people. The children wrote or talked about being a male adult, a
female adult, a male old person, or a female old person. The children also identified traits and activities associated with those age and sex groups and then they evaluated the traits and activities as good or not good. Kahn found that children valued adult traits and activities more than the traits and activities of old people. The older children had a more positive view of old people's traits and activities than did the young children. The children also tended to have more positive opinions of old people of the same sex as themselves.

In some research studies children have been asked to choose an adult from a set of pictures of adults of various ages. The children have been asked such questions as, "Which person would you go to for help?" and "Who would be the most fun?" These studies have generally reported negative views of elderly people because younger people were generally preferred by the children. Kogan, Stephens, and Shelton (1961) examined the perceptions of preschool and first graders by having them choose from pictures of adults of various ages. The children were more attracted to the pictures of younger people. Carstensen, Mason, and Caldwell (1980) measured the perceptions of first- through fourth-grade children regarding elderly people. The children were asked to imagine a young adult and an old adult and then to choose between them for various questions. The young adult was favored for items which related to physical attributes but all other areas showed mixed preference for the old and the young adult. Rosenwasser et al. (1983) investigated the attitudes of children ages three to five regarding elderly people by using the picture choice format. Children indicated that they preferred the younger adults to play with, to ask for help, and to read to them. They selected young adults as looking best; as
being the kindest, most fun, and happiest; and as liking to talk with children the most. The only question for which the children consistently chose elderly people was "Which person knows most?"

Baranowski (1982) measured adolescents' perceptions of their grandparents using the Social Value of the Elderly scale. The adolescents had a "moderately positive" view of grandparents, with a mean score of 50.46 where a score of 45 represented neutral feelings. He found that the quality of the time spent with grandparents had an effect on the children's perceptions about grandparents; quantity of time had no measurable effect. Marcoen (1979) also examined children's perceptions of grandparents. Second-, fourth-, and sixth-grade children drew pictures of an aged man, an aged woman, their grandmother, and their grandfather. The children's drawings of the aged people were stereotyped and negative. The drawings of the children's grandparents were less negative than the drawings of the aged people.

In summary, children develop an understanding of the process of aging in a Piagetian sequence, closely related to their development of time and space concepts. Children as young as four years of age can discriminate among pictures of people of various ages. Children hold negative and stereotyped perceptions of the aging process. Children's perceptions of elderly people vary in the research; old people in general are often viewed negatively, while specific old people are usually admired. Much of the reported negative perceptions of children about elderly people has come from studies where children have shown preference for younger people over older people for specific tasks. Apparently children share the same stereotypes about elderly people which the rest of the population holds.
Attempts to Modify Children's Perceptions of Elderly People

Attempts to modify children's perceptions of elderly people have ranged from direct classroom instruction with "aging and elderly people" as the topic to providing interactions between children and elderly people. Children have visited elderly people in nursing homes and elderly people have visited schools, often serving as tutors.

Olejnik and LaRue (1977) measured the perceptions of sixth, seventh, and eighth graders regarding people over 60 before and after having elderly people eat lunch in the children's lunchroom for two months. They found that the female children had more positive perceptions of elderly people than did the males prior to the interactions. After the interactions the females' perceptions of the elderly people had become even more positive while the males' perceptions of the elderly people remained about the same.

Marks and Newman (1978) evaluated the effects of a six-month-long elderly volunteer tutor program on children's perceptions of elderly people. Children in kindergarten, first, third, fourth, fifth, and sixth grades received the tutoring. The children's pretest attitudes which were negative toward old people in general but positive toward specific old people became more positive after the interactions. The perceptions of the children who had been involved in the tutoring program became "more positive, accurate, and less stereotypical" (p. 15).

Marks (1981) measured children's perceptions of old people for children in grades three through five prior to and following a 25- to 35-week volunteer tutoring program involving elderly volunteers. The
children who had contact with the elderly volunteers became more positive about old people than those in the control group.

Carstensen, Mason, and Caldwell (1982) found that children in grades one through four who had been tutored by elderly volunteers over a two-month period had more positive attitudes toward elderly people after the program. All of the children said that they had learned in the program and that they had liked their tutors. An interesting finding was that 27 percent of the children did not view their elderly tutors as being old.

Newman (1982) measured the perceptions of fourth, fifth, and sixth graders about old people before and after the children's participation in a one- or two-year tutoring program using elderly volunteers. The children had more positive perceptions of elderly people after the program and those children who had been tutored for two years became the most positive.

Baggett (1981) measured the perceptions of children in kindergarten through grade three about old people before and after twenty hours of classroom tutoring by elderly people over a ten-week period. The only significant change identified was a decrease in the number of active things that the children said they could do with elderly people. A control group was also tested and the control group's perceptions of elderly people and of the concept "old" became more positive, presumably a result of the attention given the topic when they took the pretest.

Haman (1984) found that second-grade children who had visited a nursing home and had interacted with selected residents over a five-month period had more negative perceptions of elderly people than did a control group. The children's perceptions and knowledge of elderly
people were measured with a semantic differential scale, a closed-ended questionnaire, and a true-false questionnaire. Few significant differences were found between the control group and the group who had attended the interactions at the nursing home. Those who visited the nursing home residents were more apt to say that the oldest person they knew felt bad.

Immorlica (1980) measured the effects of elementary children's interactions with an elderly classroom volunteer on the children's perceptions of elderly people. The elderly volunteer worked with a total of 44 children in a remedial situation. A questionnaire developed from Kogan, Stephens, and Shelton (1961); Hickey, Hickey, and Kalish (1968); and Seefeldt et al. (1977) was used to measure the children's perceptions of elderly people. The perceptions of a group of children who had been exposed to the program but had no direct contact with the volunteer and the perceptions of a control group were also measured and compared. Immorlica found that the tutoring situation had actually fostered negative perceptions of elderly people.

Ianni (1973) measured changes in attitudes about aging and being old in nine- to eleven-year-old children following a three-week social science unit entitled, "Sensitivity to the Aging Process." Elderly people attended the sessions as consultants and resource people. The students interviewed additional elderly people as well. Observations and two attitude surveys indicated that positive changes in children's attitudes toward aging and being old had taken place.

Click and Powell (1976) used a "living history" instructional unit to attempt to modify preschool children's perceptions of elderly people. In one group, four elderly volunteers served as "resource
teachers" for four classroom sessions about elderly people. They demonstrated the use of equipment, told stories of their childhood, taught songs to the children, and involved them in additional projects. In a second group the same material was covered without the elderly "resource teachers." A third group acted as a control. No significant changes were identified among the three groups following the experiment.

Fabiano (1977) measured the effects of five class periods spent on stories and follow-up discussion about people over 65 years old in changing the perceptions of fourth-grade students. One group listened to stories with positive portrayals of elderly people. A second group listened to the same stories with the addition of discussion following. The children's generally neutral-to-positive perceptions of elderly people had not changed after their involvement with the stories.

Schneider (1977) measured the effects of a literature program about elderly people on fifth-grade students' perceptions of elderly people. One group was read stories with non-stereotyped views of elderly people, a second group was read the stories with discussion following, and a control group was read stories not related to elderly people. Between 15 to 20 minutes were spent on the stories for 15 consecutive school days. Little change was found for the experimental groups although a relationship was identified between the sex of the teacher and the student related to attitude change. Attitudes showed positive changes for the students who were of the opposite sex from the teacher. Students who were the same sex as the teacher tended to become more negative toward elderly people.

Fusco (1981) evaluated first graders' perceptions of elderly people before and after a unit of instruction comparing elderly people
and children. The unit included examining stories with elderly characters, drawing assignments with elderly people as a topic, interviewing grandparents, and discussing newspaper pictures of elderly people in different roles. The negative and stereotyped views expressed about elderly people by the children at the beginning were not changed by the instructional program.

In summary, a variety of methods have been used to try to modify children's perceptions of elderly people. Classroom instruction methods have included examining literature with positive portrayals of elderly people and providing direct instruction dealing with the topics of the aging process and elderly people. The direct instruction approach was effective in increasing positive perceptions in two of the three studies examined; the literature approach did not change perceptions in the two studies examined. The effects of other kinds of increased interactions between children and elderly people have also been measured. Several studies measured the effects of having elderly tutors work with children. Nearly all of the child/elderly person interaction programs reviewed were successful in making children's perceptions of elderly people more positive.

**Elderly People's Perceptions of Children**

While a good number of research studies have measured children's perceptions of elderly people, very little research has been done to measure elderly people's perceptions of young children. Seefeldt, Jantz, Serock, and Bredekamp (1982) wrote:

Substantial attention has been given to the attitudes of the young toward the elderly in the United States (Hickey and Kalish, 1968; Jantz, Seefeldt, Galper, and Serock, 1976;
McTavish, 1971; Thomas and Yamamoto, 1975). On the other hand, little information is available on how the elderly view children. (p. 493)

Higgins and Faunce (1977) surveyed 260 senior citizens to identify their feelings about and knowledge of fifth-grade children. It was found that elderly people who had more frequent contacts with children had more favorable perceptions of them. On a semantic differential scale the elderly people rated children highest on the characteristics "friendly" and "important." They rated the children lowest on the characteristics "helpful" and "understanding." Information was also gathered on the elderly people's perceptions of how children spent their time. "When rating students, seniors were more likely than the students themselves to see young people as not caring for younger or older members of the family, not sitting and thinking, and not working for pay" (p. 17).

Seefeldt et al. (1982) surveyed 542 people over age 65 throughout the nation about their perceptions of children under age 12. Information was gathered on the elderly people's feelings about children, their knowledge of children, and their contacts with children. The elderly people's overall feelings about young children were positive. They said children had the right to privacy, to express opinions, and that children's opinions should be valued. They said children would make good friends and were fun to be with. Negative feelings expressed by the elderly people included the beliefs that children were not dependable and they did not appreciate all that they had. They said children asked too many questions and had to be told what to do most of the time. The section of the survey that related to elderly people's knowledge of the developmental stages of children under age 12 indicated that they had
an accurate general knowledge of the behavioral characteristics of children. Female elderly people tended to be more knowledgeable than males and those with higher levels of education tended to know more about child development. Half of the elderly people reported frequent contact with young children. Most elderly people preferred to visit with children who were over eight or nine years old because they were able to do more things than younger children but were not yet "old enough to be smart aleck."

Leitner (1981) measured senior day care participants' perceptions of sixth-grade students before and after a six-week intergenerational music activities program. Eight elderly people were involved in the 24 one-hour interactions while eight others served as a control group. The elderly people's perceptions were measured with an attitudinal questionnaire as a pretest and as a posttest. No significant differences were found between the experimental and the control group in the elderly people's attitudes toward the children. The children's attitudes toward elderly people, which were also measured, did become significantly more positive following the interactions.

In summary, very little research has been done on perceptions of elderly people about young children. The research has been one-sided with concern about children's feelings and perceptions but with little concern about the feelings and perceptions of the elderly people. In the research that was examined, elderly people have held rather positive perceptions of children.
CHAPTER III

THE PROCEDURES

The information presented in this chapter explains the step-by-step procedures used to carry out the research. Following the description of the experimental procedures is information on the development and content of the Children/Elderly People Interaction Program and the Aging and Elderly People Instruction Program.

Populations

The child population consisted of the fourth-, the fifth-, and the sixth-grade children attending the Bottineau Elementary School during the spring of 1983. There were three homeroom sections of each grade, four through six, in the school's departmentalized organization. The writer used a random selection procedure to assign homerooms to their project assignments. One homeroom was designated as a nursing home visits group, one was designated as an aging instruction group, and one was designated as a control group for each grade four through six. Table 1 summarizes the distribution of the children into their assignment groups. A total of 177 children participated in the experiment.

The elderly population consisted of selected residents of the Bottineau Good Samaritan Center. The Center's activities coordinator identified 41 residents as being able to meaningfully complete the
TABLE 1
THE CHILD POPULATION BY GRADE AND ASSIGNMENT

<table>
<thead>
<tr>
<th>Grade</th>
<th>Assignment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Home Visits</td>
</tr>
<tr>
<td>Four</td>
<td>20</td>
</tr>
<tr>
<td>Five</td>
<td>21</td>
</tr>
<tr>
<td>Six</td>
<td>25</td>
</tr>
<tr>
<td>Totals</td>
<td>66</td>
</tr>
</tbody>
</table>

survey instrument and of those 41, 31 residents agreed to participate in the research portion of the experiment. One participant was discharged from the nursing home during the experiment, leaving a total of 30 elderly people participating.

**Instrumentation**

The children's perceptions of the elderly people were measured through the administration of the *Children's Views on Aging Inventory: Adapted* (appendix A) used both as a pretest and as a posttest. The original *Children's Views on Aging Inventory* was an open-ended questionnaire developed by Marks and Newman (1978).

The writer adapted the *Children's Views on Aging Inventory* in order to shorten the administration time. The number of items was reduced from 35 to 15. The items which the writer retained had shown significant changes in children's perceptions following Marks's and Newman's senior citizen tutoring program and/or dealt with aging stereotypes of interest to the writer.
The writer further changed the instrument by adding response choices to 14 of the 15 items. The choices were based upon the open-ended responses reported by Marks and Newman. For example, item two, "How do you think it feels to be old?" was selected from the original instrument to be in the adapted version. Marks and Newman had grouped the responses they had gathered into the categories "positive," "negative," "mixed," and "don't know" for quantification purposes. In the adapted version the writer added the response choices "good," "bad," "both good and bad," and "I don't know."

The writer surveyed the children nine months after their participation in the project with a follow-up questionnaire (appendix B). The children were asked to respond to questions about how interesting their project sessions had been, how worthwhile the sessions had been, and how much fun the sessions had been. They were also encouraged to comment on their participation in the project.

The elderly people's perceptions of children were measured by using the *Perceptions About Young People Survey* (appendix C) as a pretest and as a posttest. The survey was developed with the assistance of the Good Samaritan Center's activities coordinator. The writer had noted in his informal visits with nursing home residents that a general theme of elderly people's perceptions of young children was that "children today are sure different than we were when we were their age." In order to investigate that theme in more detail, the writer and the Good Samaritan Center's activities coordinator brainstormed a list of personal attributes of young people that it was presumed elderly people would have opinions about. From that list the writer selected ten attributes to include in the survey. Those
attributes were "happiness," "respect for parents," "valuing money," "willingness to work," "ability to handle problems," "enjoyment of life," "friendliness," "maturity," "knowledge of the world," and "caring about old people."

The response choices for the Perceptions About Young People Survey were designed to allow the elderly people to compare young people today with themselves when they were young. For each attribute the respondent was asked to rate today's young people as "much more than," "more than," "about the same as," "less than," or "much less than" they (the elderly people) had been as young people.

Gathering and Analyzing the Data

The data were gathered and analyzed in order to answer the research questions of this study. In addition, as the data were being examined, apparent trends were discovered and new research questions were added to the existing ones.

Data from the Children

The writer administered the Children's Views on Aging Inventory: Adapted as a pretest during 1983 to the fourth-grade children on March 16, to the fifth-grade children on March 17, and to the sixth-grade children on March 18. The inventory was administered in classroom settings, with the writer reading the items and the response choices and the children marking their choices. Following the reading of the first item, "At what age does a person become old?", and allowing time for everyone to respond, the writer showed a composite picture of elderly people (appendix D) to the group and explained that people of this age group were the old people they were to have in mind as they
answered the remaining questions. After the remaining questions and response choices had been read to the group and they had selected their answers, the pretest inventories were collected.

The writer administered the **Children's Views on Aging Inventory: Adapted** as a posttest during 1983 to the fifth-grade children on May 9, to the fourth-grade children on May 10, and to the sixth-grade children on May 11 following the completion of the experiment. The posttest administration of the instrument followed the same procedures as the pretest administration; the children were in classroom settings and the writer read the items and response choices and the children marked their choices. The posttest inventories were then collected by the writer.

The writer grouped the questionnaire items into topical categories to aid in the analysis of the children's responses. The items are listed in their categories in table 2. Three items were identified for the "aging," "personality of elderly people," and "attraction to elderly people" categories. Four items were identified for the "stereotypes of elderly people" category. Items one and nine were not included in a category. Item one, "At what age does a person become old?", was used primarily to obtain the children's attention when clarifying what was meant by the terms "old" and "old people" (see appendix G). Item nine, "Do you have grandparents who are still living?", was not included in the statistical analysis.

The writer tallied the pretest and the posttest responses for the children in their grade assignment groups. For example, the results of all children in the fourth-grade home visits group were tallied on the same sheet so that group totals and averages could be compared to the other eight groups.
### TABLE 2
THE CHILDREN'S QUESTIONNAIRE CATEGORIES USED IN THE DATA ANALYSIS

<table>
<thead>
<tr>
<th>Children's Questionnaire Category</th>
<th>Questionnaire Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aging</td>
<td>2. How do you think it feels to be old? (feels to be old?)*</td>
</tr>
<tr>
<td></td>
<td>7. How do you think you will feel when you are old? (you will feel?)</td>
</tr>
<tr>
<td></td>
<td>10. Do you think they are old? (grandparents old?)</td>
</tr>
<tr>
<td>Personality of Elderly People</td>
<td>8-b. Do you think old people are usually grouchy? (grouchy?)</td>
</tr>
<tr>
<td></td>
<td>8-d. Do you think old people are usually fun? (fun?)</td>
</tr>
<tr>
<td></td>
<td>8-e. Do you think old people are usually friendly? (friendly?)</td>
</tr>
<tr>
<td>Attraction to Elderly People</td>
<td>4. Do you like doing things with old people? (doing things with?)</td>
</tr>
<tr>
<td></td>
<td>5. If you had a broken toy, would you ask an old person to help fix it? (help fix toy?)</td>
</tr>
<tr>
<td></td>
<td>6. Would you like to have an old person come and help you during school? (help in school?)</td>
</tr>
<tr>
<td>Stereotypes of Elderly People</td>
<td>3. How do you think old people spend their time? (spend their time?)</td>
</tr>
<tr>
<td></td>
<td>8-a. Do you think old people are usually healthy? (healthy?)</td>
</tr>
<tr>
<td></td>
<td>8-c. Do you think old people are usually lonely? (lonely?)</td>
</tr>
<tr>
<td></td>
<td>8-f. Do you think old people are usually busy? (busy?)</td>
</tr>
</tbody>
</table>

*Abbreviated form of questionnaire item used subsequently.
The writer assigned numerical values to the inventory's response choices and each respondent's pretest and posttest responses were recorded side-by-side for each item answered. Any pairs of responses which differed from the pretest to the posttest were circled and the number of changes from the pretest to the posttest for each respondent was recorded. The mean number of changes was calculated for each of the nine grade and assignment groups. The writer also calculated the mean changes for the males and females within each group.

While tallying the children's inventory, the writer noted a potential relationship between the number of pretest-to-posttest changes and the intelligence of the children as perceived by the writer in his role as elementary principal in the school. More specifically, several of the children with the most changes from the pretest to the posttest were children having trouble academically. Therefore, Educational Ability Series (EAS) scores for the participating children were identified from the school district's latest administration of the Science Research Associates (SRA) group achievement test which was given annually to children in grades three through five. This additional variable was included in the statistical analysis.

Table 3 identifies the statistical treatments utilized in the analysis of the children's perceptions of the elderly people. Chi-square, analysis of variance, and Pearson's product-moment correlation were the statistical procedures utilized. The six research questions for the child population referred to in table 3 are listed below.

1. Are there differences between the male and the female children's perceptions of elderly people as measured by the pretest?
<table>
<thead>
<tr>
<th>Research Question*</th>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Statistical Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Sex Group</td>
<td>Pretest Responses</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Two</td>
<td>Grade Group</td>
<td>Pretest Responses</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Three</td>
<td>Assignment Group</td>
<td>Pretest Responses</td>
<td>$\chi^2$</td>
</tr>
<tr>
<td>Four</td>
<td>Assignment Group/Pretest Responses</td>
<td>Follow-up Survey Responses</td>
<td>Two-way Analysis of Variance</td>
</tr>
<tr>
<td>Five</td>
<td>Variable Group</td>
<td>Pretest-to-Posttest Changes</td>
<td>One-way Analysis of Variance</td>
</tr>
<tr>
<td>Six</td>
<td>EAS Scores</td>
<td>Pretest-to-Posttest Changes</td>
<td>Pearson's r</td>
</tr>
</tbody>
</table>

*As listed on pp. 35 and 37.
2. Are there differences among the fourth-, the fifth-, and the sixth-grade children's perceptions of elderly people as measured by the pretest?

3. Are there differences among the home visits, the aging instruction, and the control groups' perceptions of elderly people prior to the experiment?

4. Is there a relationship between the children's perceptions of elderly people as measured by the pretest and their perceptions of the project as measured by the follow-up survey?

5. Are there differences among the variable groups (sex, grade, and assignment) related to the number of changes from the pretest to the posttest?

6. Is there a relationship between the children's Educational Ability Series (EAS) scores and the number of changes from the pretest to the posttest?

Questions one through five were developed as the study was being designed. Question six was developed as the writer tallied the children's responses to the pretest and posttest.

Data from the Elderly People

The Good Samaritan Center's activities coordinator administered the Perceptions About Young People Survey to the elderly population in one-to-one settings over the three-week period from February 25 to March 18, 1983. After explaining to the elderly person that the young people which the instrument referred to were children ages 10 to 12, the coordinator paraphrased the items for the respondent. For example, number seven was paraphrased, "How about friendliness; are today's young people about as friendly as you were at their age, or are they
more friendly, much more friendly, less friendly, or much less friendly?" The respondent's selections were then circled on the survey sheet.

The posttest administration of the Perceptions About Young People Survey to the elderly population was completed by the Good Samaritan Center's activities coordinator following the completion of the experiment. The procedures used in administering the instrument as a pretest were followed for the posttest administration. The elderly people responded in one-to-one settings and the activities coordinator again paraphrased the items and circled the elderly people's responses.

The writer assigned values from one to five to the response choices with the "much less than" choice given a value of one and the "much more than" choice given a value of five. The pretest and posttest scores were tallied together for each elderly person item-by-item and the pretest values were subtracted from the posttest values to yield rating change scores for each item. The rating changes (positive and negative) from the ten items were added together for each elderly person giving a total rating change score.

The writer listed the names of the elderly people with rating changes greater than +4 (n=6) in one group and the names of those with rating changes less than -3 (n=8) in a second group. The writer showed the two lists to the Good Samaritan activities coordinator and asked her to identify any possible differences between the groups.

The activities coordinator identified two possible differences between the two groups. The members of one of the groups were identified as being more withdrawn than the other group, generally preferring to stay in their rooms. These were elderly people whose
posttest scores had moved in a positive direction; they had become more positive about children after the children/elderly people interactions. The other group was identified as more outgoing and sociable. Their scores had moved in a negative direction; they had been more positive about children prior to the children/elderly people interactions. To further examine this new variable the writer asked three Good Samaritan personnel who had worked directly with the elderly people to independently rate them as outgoing, average, or withdrawn. The writer assigned numerical values to the ratings (outgoing = 3, average = 2, withdrawn = 1) and calculated an average rating for each respondent which was used as an additional variable in the statistical analysis.

The second possible difference that the activities coordinator identified between the two lists of elderly people's names was that one group appeared to have had more family contact than the other group. The group identified as having more family contact was the group whose posttest scores had moved in a negative direction; they had more positive feelings about children prior to the children/elderly people interactions. The group identified as having less family contact was the group whose posttest scores had moved in a positive direction; they had more positive feelings about children after the children/elderly people interactions. To further examine this new variable termed "family contact" the writer had the activities coordinator and her staff identify which respondents had, to their knowledge, family contacts at the time of the experiment.

Table 4 identifies the statistical treatments utilized in the analysis of the elderly people's perceptions of children. Analysis of
<table>
<thead>
<tr>
<th>Research Question*</th>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Statistical Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Sex Group</td>
<td>Pretest Responses</td>
<td>One-way Analysis of Variance</td>
</tr>
<tr>
<td>Two</td>
<td>Nursing Home Longevity</td>
<td>Pretest Responses</td>
<td>Pearson's r</td>
</tr>
<tr>
<td>Three</td>
<td>Pretest Responses</td>
<td>Posttest Responses</td>
<td>t-test for Paired Samples</td>
</tr>
<tr>
<td>Four</td>
<td>Sex Group</td>
<td>Pretest-to-Posttest Rating Changes</td>
<td>One-way Analysis of Variance</td>
</tr>
<tr>
<td>Five</td>
<td>Nursing Home Longevity</td>
<td>Pretest-to-Posttest Rating Changes</td>
<td>Pearson's r</td>
</tr>
<tr>
<td>Six</td>
<td>Family Group Contact</td>
<td>Pretest Responses</td>
<td>One-way Analysis of Variance</td>
</tr>
<tr>
<td>Seven</td>
<td>Outgoing/Withdrawn Personality Rating</td>
<td>Pretest Responses</td>
<td>Pearson's r</td>
</tr>
<tr>
<td>Eight</td>
<td>Family Contact Group</td>
<td>Pretest-to-Posttest Rating Changes</td>
<td>One-way Analysis of Variance</td>
</tr>
<tr>
<td>Nine</td>
<td>Outgoing/Withdrawn Personality Rating</td>
<td>Pretest-to-Posttest Rating Changes</td>
<td>Pearson's r</td>
</tr>
</tbody>
</table>

*As listed on p. 41.
variance, Pearson's product-moment correlation, and t-test for paired samples were the statistical procedures utilized. The research questions for the elderly population referred to in table 4 are listed below.

1. Are there differences between the male and the female elderly people's perceptions of children as measured by the pretest?
2. Is there a relationship between longevity in the nursing home and the elderly people's perceptions of children as measured by the pretest?
3. Are there differences in the elderly people's perceptions of children prior to and following the experiment?
4. Are there differences between the male and the female elderly people related to their rating changes from the pretest to the posttest?
5. Is there a relationship between longevity in the nursing home and the elderly people's rating changes from the pretest to the posttest?
6. Are there differences between the elderly people who have family contact and those who do not have family contact in their perceptions of children as measured by the pretest?
7. Is there a relationship between the elderly people's outgoing/withdrawn personality rating and their perceptions of children as measured by the pretest?
8. Are there differences between the elderly people who have family contact and those who do not have family contact in their rating changes from the pretest to the posttest?
9. Is there a relationship between the elderly people's outgoing/withdrawn personality ratings and their rating changes from the pretest to the posttest?

Questions one through five were developed as the study was being designed. Questions six through nine were developed from apparent trends which surfaced as the pretest and posttest data were being examined.

The Children/Elderly People Interaction Program

The Bottineau Good Samaritan Center's administrator and the writer in his role as elementary principal had visited previous to the design of this study about the benefits of some types of interactions between nursing home residents and elementary children. As the study was being designed, the writer solicited ideas from the Good Samaritan Center's administrator and the activities coordinator. This early involvement was very important, both for the valuable ideas generated and for the eventual commitment of the Center personnel to the program.

The writer designed the children/elderly people interaction activities with input from the Center's activities coordinator. The initial activity was designed prior to the interactions but the remaining activities were designed as the program was under way, one week at a time, using ideas and suggestions from completed sessions as guidelines for each following session. The actual topics which were selected and used are listed in table 5. The residents and children met in a total group setting for the first session; in grade group settings for sessions two, three, and four; and in small groups in the residents' rooms for sessions five and six. The outlines which the
TABLE 5
THE CHILDREN/ELDERLY PEOPLE INTERACTION PROGRAM ACTIVITIES

<table>
<thead>
<tr>
<th>Session Number</th>
<th>Activity</th>
<th>Group Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Resident Find</td>
<td>Total Group</td>
</tr>
<tr>
<td>Two</td>
<td>Resident Name Spell Down</td>
<td>Grade Groups</td>
</tr>
<tr>
<td>Three</td>
<td>Time Lines: 1850-1980</td>
<td>Grade Groups</td>
</tr>
<tr>
<td>Four</td>
<td>Paper Airplane Tournament</td>
<td>Grade Groups</td>
</tr>
<tr>
<td>Five</td>
<td>Sharing Family Experiences</td>
<td>Small Groups</td>
</tr>
<tr>
<td>Six</td>
<td>School: Then and Now</td>
<td>Small Groups</td>
</tr>
</tbody>
</table>

teachers used to carry out the activities are found in appendix E.

The time selected for the weekly visits was 2:30-3:30 p.m. on Fridays. The afternoon time was chosen so as not to interfere with the school's "prime learning time" in the morning. The exact time chosen coincided with the Good Samaritan Center's afternoon coffee time, a time when residents were used to assembling.

Classrooms had been randomly assigned (one from each grade, four through six) to participate in the trips to the Center; teachers, however, were assigned by the writer. Two of the nine homeroom teachers in grades four, five, and six were licensed to drive school buses. Those two teachers and a third teacher who had volunteered were assigned to accompany the children to the Good Samaritan Center.
The Aging and Elderly People Instruction Program

The Aging and Elderly People Instruction Program was primarily a compilation of some of the best audio-visual instructional materials on the topic currently available for classroom use. The Bottineau Good Samaritan Center's inservice director provided the writer with numerous sources of instructional material dealing with elderly people, though much of that material appeared to be not directly suitable for a young audience. Some additional sources which aimed more specifically at elementary children were identified by the writer from the school's instructional media catalog collections.

The Aging and Elderly People Instruction Program was designed to run parallel to the Children/Elderly People Interaction Program. Both programs were run at the same times, 2:30-3:30 p.m. on Fridays.

The activities which were selected and used for the aging instruction program are listed in table 6. Activities one and two were developed by the writer as no existing material was found to assist the children in reflecting upon their own attitudes toward elderly people and upon their futures as elderly people. Activities three through seven were film or filmstrip presentations with discussion questions provided. Activity eight, the final exam and follow-up discussion, was developed by the writer. The lesson plans for the Aging and Elderly People Instruction Program are found in appendix F.

The following chapter presents the research findings of this study. Both visual examination and statistical analysis of the data were used to gather the information presented.
<table>
<thead>
<tr>
<th>Session Number</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>Descriptions of Old People</td>
</tr>
<tr>
<td></td>
<td>Future Time Lines</td>
</tr>
<tr>
<td>Two</td>
<td>Film: &quot;Don't Stop the Music&quot;</td>
</tr>
<tr>
<td></td>
<td>Film: &quot;Shopping Bag Lady&quot;</td>
</tr>
<tr>
<td>Three</td>
<td>Films: &quot;Portraits of Aging&quot;</td>
</tr>
<tr>
<td></td>
<td>&quot;There Is a Place for Us&quot;</td>
</tr>
<tr>
<td>Four</td>
<td>Filmstrip: &quot;America's Aged - The Forgotten Many&quot;</td>
</tr>
<tr>
<td>Five</td>
<td>Filmstrip Series: &quot;It's OK to be Old: Approaches to Aging&quot;</td>
</tr>
<tr>
<td>Six</td>
<td>Filmstrip Series: &quot;It's OK to be Old: Approaches to Aging&quot;</td>
</tr>
<tr>
<td></td>
<td>Final Exam</td>
</tr>
</tbody>
</table>
CHAPTER IV

ANALYSIS OF THE DATA

The writer used two approaches in the analysis of the collected data. The first approach, which was used during and immediately following the experiment, was a tallying of pretest and posttest responses. Descriptive statistics were calculated for the variable groups and graphs of these statistics were constructed and examined for possible trends and for differences among the variable groups. The second approach, computer analysis using the Statistical Package for the Social Sciences (SPSS-X) (SPSS Inc. 1983), was used following the completion of the experiment to generate inferential and additional descriptive statistics.

Some of the statistical tests used to answer the research questions contained several elements. For example, the data analyzed to answer children's research question one included chi-square tests for 13 questionnaire items. When significance levels were computed for more than one element, the research question was affirmed only when more than 50 percent of the elements tested within the question or the category of the question were statistically significant at or beyond the .05 level.
Analysis of the Data from the Children

The main source of the data from the children was the Children's Views on Aging Inventory: Adapted which was used as a pretest and as a posttest. Item one of the Children's Views on Aging Inventory: Adapted, "At what age does a person become old?", was not used in the data analysis. Its use was to gain the children's attention as they were shown the composite picture of elderly people as a way of clarifying what was meant by the terms "old" and "old people." The children's pretest responses to question one ranged from "20 years" to "100 years" indicating that this clarification was appropriate. The responses for question one are summarized in appendix G. Item nine, "Do you have grandparents who are still living?", was demographic in nature and was not included in the statistical analysis; 97.1 percent of the children indicated they had grandparents still living. Questions two through eight and question ten were used in the data analysis which follows.

Children's Pretest Perceptions of Elderly People

The children's responses to the pretest provided data on their perceptions of elderly people prior to the experiment. Those data were examined to identify overall trends and to examine possible differences within the sex, grade, and assignment variable groups. Pretest perceptions were also examined in relation to the children's follow-up evaluation of the experiment.

Children's Pretest Survey Results. The writer calculated the percentages of each response for the pretest items for the total group of children. Those percentages are listed in table 7. The items were
### TABLE 7
PERCENTAGES OF THE CHILDREN'S RESPONSES TO THE PRETEST

<table>
<thead>
<tr>
<th>Category and Items</th>
<th>Response Choice</th>
<th>Percent</th>
<th>Category and Items</th>
<th>Response Choice</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Aging</td>
<td></td>
<td></td>
<td>III. Attraction to Elderly People</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. (feels to be old)</td>
<td>good</td>
<td>4.5</td>
<td>4. (doing things with)</td>
<td>yes</td>
<td>90.4</td>
</tr>
<tr>
<td></td>
<td>bad</td>
<td>4.0</td>
<td></td>
<td>no</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>both good &amp; bad</td>
<td>54.2</td>
<td></td>
<td>I don't know</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>37.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. (you will feel)</td>
<td>happy</td>
<td>10.7</td>
<td>5. (help fix toy)</td>
<td>yes</td>
<td>61.0</td>
</tr>
<tr>
<td></td>
<td>sad</td>
<td>2.8</td>
<td></td>
<td>no</td>
<td>16.9</td>
</tr>
<tr>
<td></td>
<td>both happy/sad</td>
<td>57.6</td>
<td></td>
<td>I don't know</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>28.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. (grandparents old)</td>
<td>yes</td>
<td>47.7</td>
<td>6. (help in school)</td>
<td>yes</td>
<td>50.8</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>44.3</td>
<td></td>
<td>no</td>
<td>14.7</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>8.0</td>
<td></td>
<td>I don't know</td>
<td>34.5</td>
</tr>
<tr>
<td>II. Personality of Elderly People</td>
<td></td>
<td></td>
<td>IV. Stereotypes of Elderly People</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-b. (grouchy)</td>
<td>yes</td>
<td>7.9</td>
<td>3. (spend their time)</td>
<td>sitting/TV</td>
<td>15.3</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>77.4</td>
<td></td>
<td>working</td>
<td>10.7</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>14.7</td>
<td></td>
<td>visiting people</td>
<td>46.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>sick in bed</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I don't know</td>
<td>26.6</td>
</tr>
<tr>
<td>8-d. (fun)</td>
<td>yes</td>
<td>77.4</td>
<td>8-a. (healthy)</td>
<td>yes</td>
<td>28.8</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>4.0</td>
<td></td>
<td>no</td>
<td>32.8</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>18.6</td>
<td></td>
<td>I don't know</td>
<td>38.4</td>
</tr>
<tr>
<td>8-e. (friendly)</td>
<td>yes</td>
<td>97.7</td>
<td>8-c. (lonely)</td>
<td>yes</td>
<td>75.7</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>1.1</td>
<td></td>
<td>no</td>
<td>8.5</td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>1.1</td>
<td></td>
<td>I don't know</td>
<td>15.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8-f. (busy)</td>
<td>yes</td>
<td>22.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>no</td>
<td>44.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>I don't know</td>
<td>33.3</td>
</tr>
</tbody>
</table>
examined in the categories "perceptions of aging," "personality of elderly people," "attraction to elderly people," and "stereotypes of elderly people."

The items in the "perceptions of aging" category were items two (feels to be old), seven (you will feel), and ten (grandparents old). The children appeared to have mixed feelings about the aging process. The majority of the children (54.2 percent) said it might feel both good and bad to be old in item two (feels to be old), although 37.3 percent said they didn't know. The percentage of children saying "good" was 4.5 compared with 4.0 percent that said "bad." Similar response percentages were found for item seven (you will feel). The majority of the children (57.6 percent) said in item seven (you will feel) that they might feel both happy and sad when they become old. The children appeared a bit more positive toward the concept of aging on this item with 10.7 percent saying they would feel happy and only 2.8 percent saying they would feel sad; 28.8 percent responded, "I don't know." On item ten (grandparents old) 47.7 percent thought their grandparents were old and 44.3 percent thought their grandparents were not old. Only 8.0 percent said they didn't know.

The items in the "personality of elderly people" category were items eight-b (grouchy), eight-d (fun), and eight-e (friendly). The children appeared to have a positive perception of the personality of elderly people. On item eight-b (grouchy) more than three-fourths (77.4 percent) of the children said old people were not usually grouchy; only 7.9 percent said old people were grouchy and 14.7 percent didn't know. On item eight-d (fun) more than three-fourths (77.4 percent) of the children said old people were usually fun; only 4.0 percent said
old people were not usually fun and 18.6 percent didn't know. On item
eight-e (friendly) almost all (97.7 percent) of the children said that
old people were usually friendly; only 1.1 percent said old people were
not usually friendly and 1.1 percent didn't know.

The items in the "attraction to elderly people" category were
items four (doing things with), five (help fix toy), and six (help in
school). The children appeared to have a general attraction to elderly
people which diminished as the questions became more specific. On item
four (doing things with), the most general question in the category,
90.4 percent said they liked doing things with old people; only 0.6
percent said they did not like doing things with old people and 9.0
percent said they didn't know. On item five (help fix toy), where a
task was specified, 61.0 percent said they would ask an old person to
help fix a broken toy; 16.9 percent said they would not and 22.0 percent
were unsure. On item six (help in school), where the question referred
to bringing an elderly person into the children's school setting, 50.8
percent said they would like to have an old person come and help them
in school; 14.7 percent said they would not like to have an old person
come and help them in school and 34.5 percent were unsure.

The items in the "stereotypes of elderly people" category were
items three (spend their time), eight-a (healthy), eight-c (lonely),
and eight-f (busy). The children appeared to have stereotyped
perceptions on two of the four items. On item eight-c (lonely) the
children's responses revealed a stereotyped view of elderly people as
being lonely. Three out of four (75.7 percent) of the children said
that old people were usually lonely; only 8.5 percent said old people
were not usually lonely and 15.8 percent didn't know. The children's
responses to item eight-f (busy) also revealed a stereotyped view of the elderly; twice as many (44.6 percent) of the children said old people were not usually busy than those (22.0 percent) who said old people were usually busy; 33.3 percent didn't know. Two of the items did not reveal strong stereotypes. On item three (spend their time) the more withdrawn response choices "sitting around watching TV" and "sick in bed" were considered stereotyped; the more social response choices "working" and "visiting with people" were considered not stereotyped. A total of 57.6 percent of the children said that old people spent their time either working (10.7 percent) or visiting with people (46.9 percent). A total of 15.9 percent said old people spent their time either sitting around watching television (15.3 percent) or sick in bed (0.6 percent); 26.6 percent didn't know how old people spent their time. Another item in which stereotyped perceptions were not found was item eight-a (healthy). While 32.8 percent of the children said that old people usually were not healthy, 28.8 percent said old people usually were; 38.4 percent of the children were unsure.

Analysis of Research Questions Related to the Children's Pretest Survey Results. Statistical analysis of differences in the children's pretest responses based upon sex, grade, and assignment groupings was used to answer children's research questions one, two, three, and four. Chi-square statistics were computed to identify questionnaire items in which the groups being compared differed. Visual examination of the chi-square tables was used to identify the specific differences among the groups.

For a number of the questionnaire items, more than 20 percent of the cells in the chi-square table had expected frequencies of less
than five. When this was the case, probabilities were skewed by the greater influence of the cells with the low expected frequencies giving a significance level which was unrealistically low (Dinham 1976).

The response choices did not lend themselves to being combined as a way to eliminate the low expected frequencies. For example, for questionnaire item two, "How do you think it feels to be old?", no two of the response choices "good," "bad," "both good and bad," and "I don't know" could be meaningfully combined. Because cells with low expected frequencies tend to lower significance levels, those items which had more than 20 percent of the expected cell frequencies less than five could not be considered as having statistically significant differences even when the reported significance level was less than .05.

Pretest Differences between the Sex Groups. The data analyzed to answer children's research question one, "Are there differences between the male and the female children's perceptions of elderly people as measured by the pretest?", are summarized in table 8. Chi-square statistics, degrees of freedom, and significance levels are presented for the pretest items.

Pretest item six (help in school) was the one item for which a significant difference at or beyond the .05 level between the responses of the males and females was identified. The response percentages of the males and females for item six are reported in table 9 and are shown graphically in figure 1. A higher percentage of the females indicated that they would have liked to have an old person come and help them in school; a higher percentage of males said they would not have liked to have an old person come and help them during school. Because only one of thirteen pretest items was found to differ
### TABLE 8

**CHI SQUARE TESTS FOR DIFFERENCES IN THE CHILDREN'S PRETEST RESPONSES BETWEEN SEX GROUPS**

<table>
<thead>
<tr>
<th>Category</th>
<th>Pretest Item</th>
<th>$\chi^2$</th>
<th>df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Aging</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. (feels to be old)</td>
<td>7.30</td>
<td>3</td>
<td>.063*</td>
<td></td>
</tr>
<tr>
<td>7. (you will feel)</td>
<td>8.99</td>
<td>3</td>
<td>.029*</td>
<td></td>
</tr>
<tr>
<td>10. (grandparents old)</td>
<td>4.71</td>
<td>2</td>
<td>.094</td>
<td></td>
</tr>
<tr>
<td><strong>II. Personality of Elderly People</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-b. (grouchy)</td>
<td>4.46</td>
<td>2</td>
<td>.107</td>
<td></td>
</tr>
<tr>
<td>8-d. (fun)</td>
<td>0.63</td>
<td>2</td>
<td>.729*</td>
<td></td>
</tr>
<tr>
<td>8-e. (friendly)</td>
<td>3.78</td>
<td>2</td>
<td>.151*</td>
<td></td>
</tr>
<tr>
<td><strong>III. Attraction to Elderly People</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. (doing things with)</td>
<td>1.07</td>
<td>2</td>
<td>.584*</td>
<td></td>
</tr>
<tr>
<td>5. (help fix toy)</td>
<td>1.92</td>
<td>2</td>
<td>.382</td>
<td></td>
</tr>
<tr>
<td>6. (help in school)</td>
<td>8.35</td>
<td>2</td>
<td>.014**</td>
<td></td>
</tr>
<tr>
<td><strong>IV. Stereotypes of Elderly People</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. (spend their time)</td>
<td>4.18</td>
<td>4</td>
<td>.381</td>
<td></td>
</tr>
<tr>
<td>8-a. (healthy)</td>
<td>2.23</td>
<td>2</td>
<td>.328</td>
<td></td>
</tr>
<tr>
<td>8-c. (lonely)</td>
<td>1.11</td>
<td>2</td>
<td>.574</td>
<td></td>
</tr>
<tr>
<td>8-f. (busy)</td>
<td>3.85</td>
<td>2</td>
<td>.146</td>
<td></td>
</tr>
</tbody>
</table>

*More than 20 percent of the cells had an expected frequency < 5.

**Significant difference identified at or beyond the .05 level.
TABLE 9
PERCENTAGES OF THE CHILDREN'S RESPONSES BY SEX GROUP TO PRETEST ITEM SIX, "WOULD YOU LIKE TO HAVE AN OLD PERSON COME AND HELP YOU DURING SCHOOL?"

<table>
<thead>
<tr>
<th>Sex</th>
<th>Response</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
<td>I don't know (%)</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>43.5</td>
<td>21.7</td>
<td>34.8</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58.5</td>
<td>7.1</td>
<td>34.1</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>50.8</td>
<td>14.7</td>
<td>34.5</td>
<td></td>
</tr>
</tbody>
</table>

$\chi^2 = 8.53, df = 4, p = 0.014$

Fig. 1. Percentages of the children's responses by sex group to pretest item six, "would you like to have an old person come and help you during school?"
significantly for the males and females, children's research question one could not be affirmed.

Pretest Differences among the Grade Groups. The data analyzed to answer children's research question two, "Are there differences among the fourth-, the fifth-, and the sixth-grade children's perceptions of the elderly as measured by the pretest?", are summarized in table 10. Chi-square statistics, degrees of freedom, and significance levels are presented for the pretest items.

Pretest items five (help fix toy), six (help in school), and eight-a (healthy) were three items in which significant differences, at or beyond the .05 level, among the grade groups were identified. The response percentages of the fourth-, the fifth-, and the sixth-grade children for item five are reported in table 11 and are shown graphically in figure 2. In the comparison of the grade groups, the fourth graders and the sixth graders had higher percentages that said they would have asked an old person to help fix a broken toy, a higher percentage of the fifth graders said that they would not have asked an old person to help fix a broken toy, and a higher percentage of the fourth graders and the sixth graders said they didn't know. The response percentages of the fourth, the fifth, and the sixth graders for item six are reported in table 12 and are shown graphically in figure 3. A higher percentage of the fourth graders said that they would have liked to have an old person come and help them during school. A higher percentage of the fifth graders answered "no" while a higher percentage of the sixth graders answered "I don't know." The response percentages of the fourth, the fifth, and the sixth graders for item eight-a are reported in table 13 and are shown graphically in figure 4. A higher
TABLE 10

CHI SQUARE TESTS FOR DIFFERENCES IN THE CHILDREN'S PRETEST RESPONSES AMONG THE GRADE GROUPS

<table>
<thead>
<tr>
<th>Category</th>
<th>Pretest Item</th>
<th>$\chi^2$</th>
<th>df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Aging</td>
<td>2. (feels to be old)</td>
<td>4.61</td>
<td>6</td>
<td>.594*</td>
</tr>
<tr>
<td></td>
<td>7. (you will feel)</td>
<td>12.91</td>
<td>6</td>
<td>.045*</td>
</tr>
<tr>
<td></td>
<td>10. (grandparents old)</td>
<td>1.53</td>
<td>4</td>
<td>.822*</td>
</tr>
<tr>
<td>II. Personality of Elderly People</td>
<td>8-b. (grouchy)</td>
<td>9.94</td>
<td>4</td>
<td>.042*</td>
</tr>
<tr>
<td></td>
<td>8-d. (fun)</td>
<td>6.30</td>
<td>4</td>
<td>.178*</td>
</tr>
<tr>
<td></td>
<td>8-e. (friendly)</td>
<td>7.85</td>
<td>4</td>
<td>.098*</td>
</tr>
<tr>
<td>III. Attraction to Elderly People</td>
<td>4. (doing things with)</td>
<td>19.36</td>
<td>4</td>
<td>.001*</td>
</tr>
<tr>
<td></td>
<td>5. (help fix toy)</td>
<td>11.69</td>
<td>4</td>
<td>.020**</td>
</tr>
<tr>
<td></td>
<td>6. (help in school)</td>
<td>30.01</td>
<td>4</td>
<td>.000**</td>
</tr>
<tr>
<td>IV. Stereotypes of Elderly People</td>
<td>3. (spend their time)</td>
<td>4.11</td>
<td>8</td>
<td>.846</td>
</tr>
<tr>
<td></td>
<td>8-a. (healthy)</td>
<td>10.45</td>
<td>4</td>
<td>.034**</td>
</tr>
<tr>
<td></td>
<td>8-c. (lonely)</td>
<td>2.15</td>
<td>4</td>
<td>.709</td>
</tr>
<tr>
<td></td>
<td>8-f. (busy)</td>
<td>2.82</td>
<td>4</td>
<td>.589</td>
</tr>
</tbody>
</table>

*More than 20 percent of the cells had an expected frequency < 5.

**Significant difference identified at or beyond the .05 level.
TABLE 11

PERCENTAGES OF THE CHILDREN'S RESPONSES BY GRADE GROUP TO PRETEST ITEM FIVE, "IF YOU HAD A BROKEN TOY, WOULD YOU ASK ON OLD PERSON TO HELP FIX IT?"

<table>
<thead>
<tr>
<th>Grade</th>
<th>Response</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
<td>I don't know (%)</td>
</tr>
<tr>
<td>Four</td>
<td></td>
<td>64.9</td>
<td>10.5</td>
<td>24.6</td>
</tr>
<tr>
<td>Five</td>
<td></td>
<td>52.5</td>
<td>30.5</td>
<td>16.9</td>
</tr>
<tr>
<td>Six</td>
<td></td>
<td>65.6</td>
<td>9.8</td>
<td>24.6</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>61.0</td>
<td>16.9</td>
<td>22.0</td>
</tr>
</tbody>
</table>

\( \chi^2 = 11.69, \text{ df } = 4, \ p = 0.020 \)

Fig. 2. Percentages of the children's responses by sex group to pretest item five, "if you had a broken toy, would you ask an old person to help fix it?"
### TABLE 12

PERCENTAGES OF THE CHILDREN'S RESPONSES BY GRADE GROUP TO PRETEST ITEM SIX, "WOULD YOU LIKE TO HAVE AN OLD PERSON COME AND HELP YOU DURING SCHOOL?"

<table>
<thead>
<tr>
<th>Grade</th>
<th>Response</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
<td>I don't know (%)</td>
<td></td>
</tr>
<tr>
<td>Four</td>
<td>68.4</td>
<td>5.3</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>Five</td>
<td>52.5</td>
<td>27.1</td>
<td>20.3</td>
<td></td>
</tr>
<tr>
<td>Six</td>
<td>32.8</td>
<td>11.5</td>
<td>55.7</td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>50.8</td>
<td>14.7</td>
<td>34.5</td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 30.01, \text{df} = 4, \ p < 0.0001 \]

![Graph](image)

Fig. 3. Percentages of the children's responses by grade group to pretest item six, "would you like to have an old person come and help you during school?"
TABLE 13

PERCENTAGES OF THE CHILDREN'S RESPONSES BY GRADE GROUP TO PRETEST ITEM EIGHT-A, "DO YOU THINK OLD PEOPLE ARE USUALLY HEALTHY?"

<table>
<thead>
<tr>
<th>Grade</th>
<th>Response</th>
<th>Yes (%)</th>
<th>No (%)</th>
<th>I don't know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four</td>
<td></td>
<td>29.8</td>
<td>17.5</td>
<td>52.6</td>
</tr>
<tr>
<td>Five</td>
<td></td>
<td>28.8</td>
<td>39.0</td>
<td>32.2</td>
</tr>
<tr>
<td>Six</td>
<td></td>
<td>27.9</td>
<td>41.0</td>
<td>31.1</td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>28.8</td>
<td>32.8</td>
<td>38.4</td>
</tr>
</tbody>
</table>

\[ \chi^2 = 10.45, \text{ df } = 4, \text{ p } = 0.034 \]

Fig. 4. Percentages of the children's responses by grade group to pretest item eight-a, "do you think old people are usually healthy?"
percentage of the fourth graders said that they didn't know if old people were usually healthy; a lower percentage of the fourth graders said old people were not usually healthy. The fifth- and the sixth-grade response percentages were very similar.

Two of the three items which had significant differences among the grade groups were from the "attraction to the elderly" category. Items five (help fix toy) and six (help in school) were both indicators of children's perceived willingness to interact with elderly people. For both items, the fifth graders had the highest percentage that said they would not like to interact with elderly people and the sixth graders had the highest percentage that said they didn't know. Because the grade groups differed significantly in their attraction to elderly people, children's research question two was affirmed.

Pretest Differences among the Assignment Groups. The data analyzed to answer children's research question three, "Are there differences among the home visits, the aging instruction, and the control groups' perceptions of elderly people prior to the experiment?", are summarized in table 14. Chi-square statistics, degrees of freedom, and significance levels are presented for the pretest items in their categories.

Pretest item eight-a (healthy) was the one item among the assignment groups in which a significant difference at or beyond the .05 level was identified. The response percentages of the home visits, aging instruction, and control groups for item eight-a are reported in table 15 and are shown graphically in figure 5. In the comparison of the assignment groups, the home visits group had the highest percentage that said they thought old people were not usually healthy and the
<table>
<thead>
<tr>
<th>Category</th>
<th>Pretest Item</th>
<th>$\chi^2$</th>
<th>df</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Aging</td>
<td>2. (feels to be old)</td>
<td>1.59</td>
<td>6</td>
<td>.954*</td>
</tr>
<tr>
<td></td>
<td>7. (you will feel)</td>
<td>2.50</td>
<td>6</td>
<td>.869*</td>
</tr>
<tr>
<td></td>
<td>10. (grandparents old)</td>
<td>1.38</td>
<td>4</td>
<td>.847*</td>
</tr>
<tr>
<td>II. Personality of Elderly People</td>
<td>8-b. (grouchy)</td>
<td>7.33</td>
<td>4</td>
<td>.119*</td>
</tr>
<tr>
<td></td>
<td>8-d. (fun)</td>
<td>4.81</td>
<td>4</td>
<td>.307*</td>
</tr>
<tr>
<td></td>
<td>8-e. (friendly)</td>
<td>5.49</td>
<td>4</td>
<td>.241*</td>
</tr>
<tr>
<td>III. Attraction to Elderly People</td>
<td>4. (doing things with)</td>
<td>2.88</td>
<td>4</td>
<td>.579</td>
</tr>
<tr>
<td></td>
<td>5. (help fix toy)</td>
<td>6.19</td>
<td>4</td>
<td>.185</td>
</tr>
<tr>
<td></td>
<td>6. (help in school)</td>
<td>5.13</td>
<td>4</td>
<td>.275</td>
</tr>
<tr>
<td>IV. Stereotypes of Elderly People</td>
<td>3. (spend their time)</td>
<td>10.67</td>
<td>8</td>
<td>.221</td>
</tr>
<tr>
<td></td>
<td>8-a. (healthy)</td>
<td>11.37</td>
<td>4</td>
<td>.023**</td>
</tr>
<tr>
<td></td>
<td>8-c. (lonely)</td>
<td>0.85</td>
<td>4</td>
<td>.932*</td>
</tr>
<tr>
<td></td>
<td>8-f. (busy)</td>
<td>3.19</td>
<td>4</td>
<td>.527</td>
</tr>
</tbody>
</table>

*More than 20 percent of the cells had an expected frequency < 5.

**Significant difference identified at or beyond the .05 level.
### TABLE 15
PERCENTAGES OF THE CHILDREN'S RESPONSES BY ASSIGNMENT GROUP TO PRETEST ITEM EIGHT-A, "DO YOU THINK OLD PEOPLE ARE USUALLY HEALTHY?"

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Response</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes (%)</td>
<td>No (%)</td>
<td>I don't know (%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Home Visits</td>
<td>31.8</td>
<td>43.9</td>
<td>24.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aging Instruction</td>
<td>31.6</td>
<td>26.3</td>
<td>42.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>22.2</td>
<td>25.9</td>
<td>51.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>28.8</td>
<td>32.8</td>
<td>38.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ \chi^2 = 11.37, \text{df} = 4, \ p = 0.023 \]

---

*Fig. 5. Percentages of the children's responses by assignment group to pretest item eight-a, "do you think old people are usually healthy?"*
lowest percentage that said they didn't know. Because only one of thirteen pretest items was found to differ significantly for the assignment groups, children's research question three could not be affirmed.

Children's Evaluation of the Program Related to Pretest Differences. In order to examine whether the children's evaluation of their part of the program was related to their pretest perceptions of elderly people, the following analysis was completed. The follow-up survey responses were assigned the following values as a way to quantify the children's evaluation of the program.

1. How interesting were the sessions that you attended?
   - very interesting = 4
   - interesting = 3
   - boring = 2
   - very boring = 1

2. Was the time spent worthwhile?
   - very worthwhile = 4
   - worthwhile = 3
   - hardly worthwhile = 2
   - waste of time = 1

3. Were your sessions fun?
   - lots of fun = 4
   - fun = 3
   - not much fun = 2
   - no fun = 1

The mean response for each assignment group was computed for the three follow-up questions. Those figures are presented in table 16.
### TABLE 16
THE CHILDREN'S MEAN FOLLOW-UP SURVEY RESPONSES FOR THE ASSIGNMENT GROUPS

<table>
<thead>
<tr>
<th>Assignment Group</th>
<th>N</th>
<th>1. How interesting? ($\bar{X}$)</th>
<th>2. How worthwhile? ($\bar{X}$)</th>
<th>3. How much fun? ($\bar{X}$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Visits</td>
<td>63</td>
<td>3.43</td>
<td>3.46</td>
<td>3.59</td>
</tr>
<tr>
<td>Aging Instruction</td>
<td>48</td>
<td>2.69</td>
<td>2.81</td>
<td>2.65</td>
</tr>
<tr>
<td>Control</td>
<td>52</td>
<td>2.98</td>
<td>3.00</td>
<td>2.77</td>
</tr>
<tr>
<td>Totals</td>
<td>163</td>
<td>3.07</td>
<td>3.12</td>
<td>3.05</td>
</tr>
</tbody>
</table>

Fig. 6. The children's mean follow-up survey responses for the assignment groups.
and are shown graphically in figure 6. All three assignment groups viewed their participation in a positive light. The home visits group was the most positive about their part of the program. They thought their sessions were interesting (3.43), worthwhile (3.46), and lots of fun (3.59). The aging instruction group thought their sessions were interesting (2.69), worthwhile (2.81), and fun (2.65). The control group thought their sessions were interesting (2.98), worthwhile (3.00), and fun (2.77).

The data analyzed to answer children's research question four, "Is there a relationship between the children's perceptions of elderly people as measured by the pretest and their perceptions of the project as measured by the follow-up survey?", are summarized in table 17. A two-way analysis of variance was computed for the three follow-up questions x each pretest item x each assignment group. Items in which more than 20 percent of the choices had response frequencies less than ten were not included in the analysis. The F ratios and F probabilities for each analysis are listed in the table.

A total of 24 two-way analyses were computed. Two significant differences at or beyond the .05 level were identified; one on item six (help in school) related to follow-up question three, "Were your sessions fun?", and one on item eight-b (grouchy) related to follow-up question two, "Was the time spent worthwhile?"

The mean follow-up survey responses for question three x pretest item six (help in school) x assignment group are presented in table 18 and are shown graphically in figure 7. Aging instruction group members who said on the pretest that they didn't know if they would like to have an old person come and help them in school thought their sessions
### TABLE 17

ANALYSIS OF VARIANCE FOR THE CHILDREN'S FOLLOW-UP SURVEY RESPONSES x THE PRETEST RESPONSES x THE ASSIGNMENT GROUPS

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Aging</td>
<td>2. (feels to be old)*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>7. (you will feel)*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>10. (grandparents old)</td>
<td>0.55</td>
<td>0.696</td>
<td>1.81</td>
<td>0.130</td>
</tr>
<tr>
<td>II. Personality of Elderly People</td>
<td>8-b. (grouchy)</td>
<td>2.17</td>
<td>0.075</td>
<td>2.48</td>
<td>0.046**</td>
</tr>
<tr>
<td></td>
<td>8-d. (fun)*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>8-e. (friendly)*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>III. Attraction to Elderly People</td>
<td>4. (doing things with)*</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>5. (help fix toy)</td>
<td>1.41</td>
<td>0.232</td>
<td>1.09</td>
<td>0.362</td>
</tr>
<tr>
<td></td>
<td>6. (help in school)</td>
<td>2.05</td>
<td>0.091</td>
<td>0.89</td>
<td>0.472</td>
</tr>
<tr>
<td>IV. Stereotypes of Elderly People</td>
<td>3. (spend their time)</td>
<td>0.97</td>
<td>0.445</td>
<td>1.86</td>
<td>0.092</td>
</tr>
<tr>
<td></td>
<td>8-a. (healthy)</td>
<td>0.80</td>
<td>0.526</td>
<td>1.14</td>
<td>0.341</td>
</tr>
<tr>
<td></td>
<td>8-c. (lonely)</td>
<td>0.61</td>
<td>0.655</td>
<td>0.85</td>
<td>0.496</td>
</tr>
<tr>
<td></td>
<td>8-f. (busy)</td>
<td>1.34</td>
<td>0.258</td>
<td>0.69</td>
<td>0.603</td>
</tr>
</tbody>
</table>

*Analysis not completed due to low response frequencies.

**Significant at or beyond the .05 level.
TABLE 18
THE CHILDREN'S MEAN FOLLOW-UP SURVEY RESPONSES FOR THE QUESTION, "WERE YOUR SESSIONS FUN?" x PRETEST ITEM SIX x ASSIGNMENT GROUPS

<table>
<thead>
<tr>
<th>Assignment Group</th>
<th>Yes</th>
<th>No</th>
<th>I don't know</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Visits Group</td>
<td>3.74</td>
<td>3.78</td>
<td>3.25</td>
<td>3.59</td>
</tr>
<tr>
<td>Aging Instruction Group</td>
<td>2.52</td>
<td>2.57</td>
<td>2.80</td>
<td>2.65</td>
</tr>
<tr>
<td>Control Group</td>
<td>2.84</td>
<td>3.33</td>
<td>2.40</td>
<td>2.77</td>
</tr>
<tr>
<td>Totals</td>
<td>3.12</td>
<td>3.27</td>
<td>2.85</td>
<td>3.05</td>
</tr>
</tbody>
</table>

F = 2.49, df = 4, p = 0.045

Fig. 7. The children's mean follow-up survey responses for the question, "were your sessions fun?" x pretest item six x assignment group.
were more fun than did the others in the aging instruction group.

The mean follow-up survey responses for question two x pretest item eight-b (grouchy) x assignment group are presented in table 19 and are shown graphically in figure 8. Control group members who said on the pretest that old people were usually grouchy thought their session on law and crime prevention was more worthwhile than did the others in the session. Because only two significant differences were identified in the 24 follow-up question x pretest item x assignment group relationships examined, children's research question four could not be affirmed.

Children's Pretest-to-Posttest Changes in Perceptions of Elderly People

Pretest and posttest data were compared in order to examine potential effects of the experiment on the children's perceptions of elderly people. Because the Children's Views on Aging Inventory: Adapted provided nominal data with more than two response choices, direct measurement of pretest-to-posttest changes was not possible. The writer therefore used the derived change score statistic in the analysis of the changes from the pretest to the posttest. The change scores did not indicate direction, either positive or negative, but indicated the amount of change from the pretest to the posttest. Specific pretest and posttest response percentages were examined in detail in the areas in which significant differences were found.

Change Score Differences among the Children's Sex, Grade, and Assignment Groups. The degree and significance of the children's changes from the pretest to the posttest were identified using the
TABLE 19

THE CHILDREN'S MEAN FOLLOW-UP SURVEY RESPONSES FOR THE QUESTION, "WAS THE TIME SPENT WORTHWHILE?" x PRETEST ITEM EIGHT-B x ASSIGNMENT GROUPS

<table>
<thead>
<tr>
<th>Assignment Group</th>
<th>Yes</th>
<th>No</th>
<th>I don't know</th>
<th>Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Visits Group</td>
<td>3.67</td>
<td>3.60</td>
<td>3.50</td>
<td>3.59</td>
</tr>
<tr>
<td>Aging Instruction Group</td>
<td>2.44</td>
<td>2.76</td>
<td>2.76</td>
<td>2.65</td>
</tr>
<tr>
<td>Control Group</td>
<td>3.50</td>
<td>2.76</td>
<td>2.67</td>
<td>2.77</td>
</tr>
<tr>
<td>Totals</td>
<td>2.86</td>
<td>3.10</td>
<td>2.92</td>
<td>3.05</td>
</tr>
</tbody>
</table>

\[ F = 2.48, \text{df} = 4, p = 0.046 \]

Pretest Responses to Children's Survey Item 8-b (grouchy)

Fig. 8. The children's mean follow-up survey responses for the question, "was the time spent worthwhile?" x pretest item eight-b x assignment group.
numbers of response changes for each child (change scores). The writer tallied the total number of response changes for each child and calculated the mean numbers of response changes for the children's grade x assignment x sex groups. That is, the mean number of changes was calculated for the males and females for each assignment group for each grade group, a total of 18 calculations. The mean changes for the total (males plus females) grade x assignment groups were also calculated.

Visual Analysis of Change Score Differences among the Sex, Grade, and Assignment Groups. The mean numbers of response changes from the pretest to the posttest for the children's grade x assignment x sex groups are presented in table 20 and are compared graphically in figure 9. The males changed more than the females from the pretest to the posttest having more changes than the females in eight of the nine grade x assignment groups. The females' responses changed more than the males' responses in only one instance, the fourth-grade home visits group.

The mean number of pretest-to-posttest changes for the total (males plus females) grade x assignment groups are also presented in table 20 and are represented by the solid black bars in figure 9. The aging instruction group had the most pretest-to-posttest changes with more changes than the other two assignment groups in all three grades. The home visits group had the second highest number of changes in grades four and six and the control group had the second highest number of changes in grade five.
TABLE 20

MEAN NUMBER OF THE CHILDREN'S RESPONSE CHANGES FROM THE PRETEST TO THE POSTTEST FOR THE GRADE x ASSIGNMENT x SEX GROUPS

<table>
<thead>
<tr>
<th>Grade Group</th>
<th>Sex Group</th>
<th>Assignment Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Home Visits</td>
</tr>
<tr>
<td>Grade Four</td>
<td>Male</td>
<td>3.25</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>3.75</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>3.55</td>
</tr>
<tr>
<td>Grade Five</td>
<td>Male</td>
<td>3.62</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>3.29</td>
</tr>
<tr>
<td>Grade Six</td>
<td>Male</td>
<td>4.60</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>4.50</td>
</tr>
<tr>
<td></td>
<td>Totals</td>
<td>4.56</td>
</tr>
</tbody>
</table>
Fig. 9. Mean number of the children's response changes from the pretest to the posttest.
Statistical Analysis of Change Score Differences among the Sex, Grade, and Assignment Groups. The data analyzed to answer children's research question five, "Are there differences among the variable groups (sex, grade, and assignment) related to the number of changes from the pretest to the posttest?", are summarized in table 21. One-way analysis of variance was computed for the changes from the pretest to the posttest by sex, grade, and assignment. The group means, F ratios, and F probabilities for each group and change score relationships are listed in the table.

A total of three one-way analyses were computed. A significant difference was found between the change scores of the males and the females. The difference, with the males having significantly more changes from the pretest to the posttest, was significant at or beyond the .05 level. Significant differences in change scores were also found among the assignment groups at or beyond the .05 level. Scheffe's test was used to identify the significant differences as being between the aging instruction group and the home visits group and between the aging instruction group and the control group. The aging instruction group had significantly more changes than the home visits group and the control group. No significant difference in change scores was identified for the grade groups. Because significant differences in the numbers of pretest-to-posttest changes were found among the assignment groups and between the sex groups, children's research question one was affirmed.

Item-by-Item Analysis of the Children's Pretest-to-Posttest Changes for the Sex and Assignment Groups. In order to identify the
TABLE 21
ANALYSIS OF VARIANCE FOR THE NUMBER OF PRETEST-TO-POSTTEST CHANGES BY SEX, GRADE, AND ASSIGNMENT GROUPS

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group</th>
<th>( \bar{X} )</th>
<th>F Ratio</th>
<th>df</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Males</td>
<td>4.47</td>
<td>10.89</td>
<td>176</td>
<td>.001*</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>3.55</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>Four</td>
<td>3.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Five</td>
<td>3.86</td>
<td>1.76</td>
<td>177</td>
<td>.175</td>
</tr>
<tr>
<td></td>
<td>Six</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assignment</td>
<td>Home Visits</td>
<td>3.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Aging Instruction</td>
<td>4.63</td>
<td>4.69</td>
<td>177</td>
<td>.101*</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level
specific questionnaire items where the greatest response changes had taken place, the writer calculated the percentages of the children who changed their responses for the individual questionnaire items. The total change percentages were calculated and compared for the three assignment groups and for the two sex groups, the groups which had been found to differ significantly in the preceding analysis.

Pretest-to-Posttest Changes for the Sex Groups. The percentages of the children's responses which changed from the pretest to the posttest for the males and the females are compared graphically in figure 10. The figure shows that the males had a higher change percentage than the females on 10 of the 13 items. The "aging" and the "stereotypes of elderly people" categories had higher percentages of change than the other two categories. The figure also illustrates that there were greater differences in change percentages between the males and females in the "personality of elderly people" and the "attraction to elderly people" categories than in the other two categories.

In order to examine the direction of the pretest-to-posttest changes for the males and the females the writer computed their pretest and posttest response percentages for each item. Those percentages are presented, along with the change percentages from figure 10, in tables 22 to 25. As the pretest and posttest percentages were examined for each item in relation to its change percentage, it was found that in several instances the high change percentage identified was not reflected in the apparent differences between the pretest and the posttest percentages. In some instances, over half of the children changed their responses yet the pretest and posttest response percentages appeared to have changed very little. In those
Fig. 10. Percentages of the children's responses which changed from the pretest to the posttest for the sex groups.
instances, many of the changes from the pretest to the posttest must have crossed back and forth in no specific direction.

The total change percentages and the pretest and posttest response percentages for the sex groups on the items in the "aging" category are listed in table 22. The males changed more than the females on two of the three items.

Pretest comparisons on item two (feels to be old) identified the females as having been a bit more positive than the males about how they thought it felt to be old with no females describing it as "bad" while 7.6 percent of the males said they thought it probably felt bad to be old. The posttest results showed the males increasing the percentage that thought it would feel both good and bad to be old. The females' posttest results had a decreased percentage answering "I don't know" and increased percentages on the other response choices.

On item seven (you will feel) pretest comparisons identified the males as less sure than the females about how they might feel when they are old with 38.0 percent of the males saying they didn't know compared with 18.8 percent of the females. The males' posttest percentages were very similar to their pretest percentages; the females had become a bit more positive about how they might feel when they are old.

On item ten (grandparents old) pretest comparisons showed a lower percentage (39.0 percent) of the females describing their grandparents as old compared with 55.4 percent of the males. Both groups had a decreased number of members describing their grandparents as old on the posttest.
<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td></td>
</tr>
<tr>
<td>2. (feels to be old)</td>
<td>42.2</td>
<td>good</td>
<td>5.4</td>
<td>3.3</td>
<td>36.9</td>
<td>good</td>
<td>3.5</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>bad</td>
<td>7.6</td>
<td>4.3</td>
<td></td>
<td>bad</td>
<td>0.0</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>both good &amp; bad</td>
<td>52.2</td>
<td>60.9</td>
<td></td>
<td>both good &amp; bad</td>
<td>56.5</td>
<td>65.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>34.8</td>
<td>31.5</td>
<td></td>
<td>I don't know</td>
<td>40.0</td>
<td>24.7</td>
<td></td>
</tr>
<tr>
<td>7. (you will feel)</td>
<td>49.4</td>
<td>happy</td>
<td>10.9</td>
<td>10.9</td>
<td>38.1</td>
<td>happy</td>
<td>10.6</td>
<td>12.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>sad</td>
<td>3.3</td>
<td>3.3</td>
<td></td>
<td>sad</td>
<td>2.4</td>
<td>1.2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>both happy &amp; sad</td>
<td>47.8</td>
<td>52.2</td>
<td></td>
<td>both happy &amp; sad</td>
<td>68.2</td>
<td>62.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>38.0</td>
<td>33.7</td>
<td></td>
<td>I don't know</td>
<td>18.8</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>10. (grandparents old)</td>
<td>28.9</td>
<td>yes</td>
<td>55.4</td>
<td>50.0</td>
<td>33.3</td>
<td>yes</td>
<td>39.0</td>
<td>28.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>38.0</td>
<td>41.3</td>
<td></td>
<td>no</td>
<td>51.2</td>
<td>56.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>6.5</td>
<td>8.7</td>
<td></td>
<td>I don't know</td>
<td>9.8</td>
<td>15.9</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 22
TOTAL CHANGE AND RESPONSE PERCENTAGES FROM THE PRETEST AND THE POSTTEST FOR THE SEX GROUPS ON THE ITEMS IN THE CATEGORY "AGING"
The total change percentages and the pretest and posttest response percentages for the sex groups on the items in the "personality of elderly people" category are listed in table 23. The males changed more than the females on all three items.

The females were more positive than the males toward elderly people on item eight-b (grouchy) in their pretest responses. Only 3.5 percent of the females described old people as usually grouchy compared with 12.0 percent of the males. Both groups appeared more negative in their posttest responses with a decreased number of children saying old people were not grouchy; an increased number of children said they didn't know.

On the pretest responses to item eight-d (fun) the females were more positive than the males; 80.0 percent of the females thought old people were usually fun compared with 75.0 percent of the males. The females' posttest percentages indicated that an increased number of the females saw old people as fun; the males' posttest percentages showed that they had become slightly more positive toward elderly people as being fun.

On the pretest responses to item eight-a (friendly) all of the females and 95.7 percent of the males said that old people were usually friendly. On the posttest, no one said old people were not usually friendly but an increased number of the males and the females answered that they didn't know.

The total change percentages and the pretest and posttest response percentages for the sex groups on the items in the "attraction to elderly people" category are listed in table 24. The males changed more than the females on all three items.
TABLE 23
TOTAL CHANGE AND RESPONSE PERCENTAGES FROM THE PRETEST AND THE POSTTEST FOR THE SEX GROUPS ON THE ITEMS IN THE CATEGORY "PERSONALITY OF ELDERLY PEOPLE"

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
</tr>
<tr>
<td>8-b. (grouchy)</td>
<td>51.8</td>
<td>yes</td>
<td>12.0</td>
<td>12.0</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>75.0</td>
<td>67.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>13.0</td>
<td>20.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-d. (fun)</td>
<td>30.1</td>
<td>yes</td>
<td>75.0</td>
<td>76.1</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>4.3</td>
<td>3.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>20.7</td>
<td>20.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8-e. (friendly)</td>
<td>12.0</td>
<td>yes</td>
<td>95.7</td>
<td>91.3</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>no</td>
<td>2.2</td>
<td>0.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>I don't know</td>
<td>2.8</td>
<td>8.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 24

TOTAL CHANGE AND RESPONSE PERCENTAGES FROM THE PRETEST AND THE POSTTEST FOR THE SEX GROUPS ON THE ITEMS IN THE CATEGORY "ATTRACTION TO ELDERLY PEOPLE"

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td></td>
</tr>
<tr>
<td>4. (doing things with)</td>
<td>18.1</td>
<td>yes</td>
<td>89.1</td>
<td>89.1</td>
<td>9.5</td>
<td>yes</td>
<td>91.8</td>
<td>96.5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>1.1</td>
<td>2.2</td>
<td></td>
<td>no</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>9.8</td>
<td>8.7</td>
<td></td>
<td>I don't know</td>
<td>8.2</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>5. (help fix toy)</td>
<td>37.3</td>
<td>yes</td>
<td>57.6</td>
<td>60.9</td>
<td>26.2</td>
<td>yes</td>
<td>64.7</td>
<td>71.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>20.7</td>
<td>9.8</td>
<td></td>
<td>no</td>
<td>12.9</td>
<td>9.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>21.7</td>
<td>29.3</td>
<td></td>
<td>I don't know</td>
<td>22.4</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>6. (help in school)</td>
<td>45.8</td>
<td>yes</td>
<td>43.5</td>
<td>51.1</td>
<td>25.0</td>
<td>yes</td>
<td>58.8</td>
<td>74.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>21.7</td>
<td>20.7</td>
<td></td>
<td>no</td>
<td>7.1</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>34.8</td>
<td>28.3</td>
<td></td>
<td>I don't know</td>
<td>34.1</td>
<td>23.5</td>
<td></td>
</tr>
</tbody>
</table>
Pretest comparisons of item four (doing things with) showed that the females were a bit more positive than the males toward elderly people in their pretest responses. The percentage of the females that said on the pretest that they liked doing things with old people was 91.8 percent compared with 89.1 percent of the males. The males' percentages on the posttest showed a slight change in the negative direction while the percentage of the females saying they liked doing things with old people increased after the experiment.

On the pretest responses to item five (help fix toy) the females were more positive toward elderly people; 64.7 percent of the females said they would have asked an old person to help fix a broken toy compared with 57.6 percent of the males. Both groups appeared more positive in their posttest responses with an increased number of children saying after the experiment that they would ask an old person to help them fix a toy.

On the pretest responses to item six (help in school) the females were more positive toward elderly people than the males; 58.8 percent of the females said they would like to have an old person come and help them during school compared with 43.5 percent of the males. Both groups appeared more positive in their posttest responses with an increased number of children saying after the experiment that they would like to have an old person come and help them during school.

The total change percentages and the pretest and posttest response percentages for the sex groups on the items in the "stereotypes of elderly people" category are listed in table 25. The males changed more than the females on two of the four items.
<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Males</th>
<th></th>
<th></th>
<th></th>
<th>Females</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
</tr>
<tr>
<td>3. (spend their time)</td>
<td>51.8</td>
<td>sitting/TV</td>
<td>18.5</td>
<td>16.3</td>
<td>41.7</td>
<td>sitting/TV</td>
<td>11.8</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>working</td>
<td>7.6</td>
<td>12.0</td>
<td></td>
<td>working</td>
<td>14.1</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>visiting people</td>
<td>47.8</td>
<td>46.7</td>
<td></td>
<td>visiting people</td>
<td>45.9</td>
<td>47.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sick in bed</td>
<td>0.0</td>
<td>1.1</td>
<td></td>
<td>sick in bed</td>
<td>1.2</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>26.1</td>
<td>23.9</td>
<td></td>
<td>I don't know</td>
<td>27.1</td>
<td>22.4</td>
</tr>
<tr>
<td>8-a. (healthy)</td>
<td>38.6</td>
<td>yes</td>
<td>33.7</td>
<td>32.6</td>
<td>39.3</td>
<td>yes</td>
<td>23.5</td>
<td>32.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>30.4</td>
<td>25.0</td>
<td></td>
<td>no</td>
<td>35.3</td>
<td>28.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>35.9</td>
<td>42.4</td>
<td></td>
<td>I don't know</td>
<td>41.2</td>
<td>38.8</td>
</tr>
<tr>
<td>8-c. (lonely)</td>
<td>32.5</td>
<td>yes</td>
<td>78.3</td>
<td>66.3</td>
<td>35.7</td>
<td>yes</td>
<td>72.9</td>
<td>51.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>8.7</td>
<td>15.2</td>
<td></td>
<td>no</td>
<td>8.2</td>
<td>20.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>13.0</td>
<td>18.5</td>
<td></td>
<td>I don't know</td>
<td>18.8</td>
<td>28.2</td>
</tr>
<tr>
<td>8-f. (busy)</td>
<td>48.2</td>
<td>yes</td>
<td>17.4</td>
<td>19.6</td>
<td>35.7</td>
<td>yes</td>
<td>27.1</td>
<td>35.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>51.1</td>
<td>52.2</td>
<td></td>
<td>no</td>
<td>37.6</td>
<td>31.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>31.5</td>
<td>28.3</td>
<td></td>
<td>I don't know</td>
<td>35.3</td>
<td>32.9</td>
</tr>
</tbody>
</table>
Pretest comparisons of item three (spend their time) showed that more males believed the stereotype of elderly people spending their time sitting and watching television; 18.5 percent of the males answered "sitting and watching TV" compared with 11.8 percent of the females. More females said old people spent their time working, 14.1 percent compared with 7.6 percent of the males. For another common stereotype, only 1.2 percent of the females and none of the males said old people spent their time sick in bed. Both groups decreased in the percentages of the stereotyped response "sitting around watching TV" on the posttest and both groups increased in the percentages saying old people spent their time working. Both groups increased in the percentages of the stereotyped response "sick in bed."

On the pretest responses to item eight-a (healthy) a lower percentage of the males expressed the stereotype of elderly people being ill; 33.7 percent of the males said old people were usually healthy compared with 23.5 percent of the females. The males appeared to have become more unsure in their posttest responses while the females had a higher percentage seeing old people as healthy.

On the pretest responses to item eight-c (lonely) more males believed the stereotype of old people being lonely, 78.3 percent compared with 72.9 percent of the females. Both the males' and the females' responses were less stereotyped after the experiment with a decreased number of children describing elderly people as lonely on the posttest.

On the pretest responses to item eight-f (busy) more males believed the stereotype of old people not having anything to do; 51.1 percent of the males said old people were not usually busy compared
with 37.6 percent of the females. The females' responses were less stereotyped after the experiment with an increased number of the females describing old people as busy. The males' responses changed in a mixed direction with an increased number saying old people were usually busy, an increased number saying old people were not usually busy, and a decreased number saying they didn't know.

Pretest-to-Posttest Changes for the Assignment Groups. The percentages of the children's responses which changed for the home visits, the aging instruction, and the control groups are compared graphically in figure 11. The figure shows that the aging instruction group had a higher change percentage than the other two groups on eight of the thirteen items. The figure also illustrates that there were greater differences in change percentages between the aging instruction group and the other two groups in the "personality of elderly people" and the "stereotypes of elderly people" categories than in the other two categories.

In order to examine the direction of the pretest-to-posttest changes for the three assignment groups the writer computed their pretest and posttest response percentages for each item. Those percentages are presented, along with the change percentages from figure 11, in tables 26 to 29.

The total change percentages and the pretest and posttest response percentages for the assignment groups on the items in the "aging" category are listed in table 26. The control group changed more than the other two groups on two items and the home visits group changed more than the other two groups on one item.
Fig. 11. Percentages of the children's responses which changed from the pretest to the posttest for the assignment groups.
<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Home Visits Group</th>
<th>Aging Instruction Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Change (%)</td>
</tr>
<tr>
<td></td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Pretest (%)</td>
</tr>
<tr>
<td>2. (feels to be old)</td>
<td>33.3</td>
<td>good</td>
<td>38.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>bad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>both good &amp; bad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td></td>
</tr>
<tr>
<td>7. (you will feel)</td>
<td>50.0</td>
<td>happy</td>
<td>43.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>both happy &amp; sad</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td></td>
</tr>
<tr>
<td>10. (grandparents old)</td>
<td>22.7</td>
<td>yes</td>
<td>33.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td></td>
</tr>
</tbody>
</table>
On item two (feels to be old) pretest comparisons identified the home visits group as having been most positive about how it feels to be old with 6.1 percent saying "good" compared with 3.5 percent of the aging instruction group and 3.7 percent of the control group. The posttest responses showed the home visits group as having become more negative with an increased percentage saying they thought it felt bad to be old. The aging instruction and the control groups both had become more positive toward aging with a decreased number of children saying it felt bad to be old on the posttest.

On the pretest responses to item seven (you will feel) the control group had the most positive expectations of how they might feel when they were old; 13.0 percent predicted they would feel happy compared with 10.6 percent in the home visits group and 8.8 percent in the aging instruction group. The posttest responses showed the aging instruction group as having become more positive with no one predicting they would feel sad as an old person. The home visits group had mixed changes and the control group had similar pretest and posttest response percentages.

On the pretest responses to item ten (grandparents old) more control group members (52.9 percent) viewed their grandparents as old compared with 47.0 percent of the home visits group and 43.9 percent of the control group. On the posttest all three groups had a decreased number of members who described their grandparents as "old."

The total change percentages and the pretest and posttest response percentages for the assignment groups on the items in the "personality of elderly people" category are listed in table 27. The aging instruction group changed more than the other two groups on all
TABLE 27
TOTAL CHANGE AND RESPONSE PERCENTAGES FROM THE PRETEST AND THE POSTTEST FOR THE
ASSIGNMENT GROUPS ON THE ITEMS IN THE CATEGORY "PERSONALITY OF ELDERLY PEOPLE"

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Home Visits Group</th>
<th></th>
<th></th>
<th>Aging Instruction Group</th>
<th></th>
<th></th>
<th>Control Group</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
</tr>
<tr>
<td>8-b. (grouchy)</td>
<td>25.8</td>
<td>yes</td>
<td>4.5</td>
<td>7.6</td>
<td>43.8</td>
<td>yes</td>
<td>15.8</td>
<td>7.0</td>
<td>31.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>80.3</td>
<td>69.7</td>
<td></td>
<td>no</td>
<td>71.9</td>
<td>71.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>15.2</td>
<td>22.7</td>
<td></td>
<td>I don't know</td>
<td>12.3</td>
<td>21.1</td>
<td></td>
</tr>
<tr>
<td>8-d. (fun)</td>
<td>22.7</td>
<td>yes</td>
<td>78.8</td>
<td>78.8</td>
<td>26.3</td>
<td>yes</td>
<td>68.4</td>
<td>78.9</td>
<td>13.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>4.5</td>
<td>1.5</td>
<td></td>
<td>no</td>
<td>5.3</td>
<td>1.8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>16.7</td>
<td>19.7</td>
<td></td>
<td>I don't know</td>
<td>26.3</td>
<td>19.3</td>
<td></td>
</tr>
<tr>
<td>8-e. (friendly)</td>
<td>6.1</td>
<td>yes</td>
<td>100.0</td>
<td>93.9</td>
<td>12.2</td>
<td>yes</td>
<td>94.7</td>
<td>93.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>0.0</td>
<td>0.0</td>
<td></td>
<td>no</td>
<td>3.5</td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>0.0</td>
<td>6.1</td>
<td></td>
<td>I don't know</td>
<td>1.8</td>
<td>7.0</td>
<td></td>
</tr>
</tbody>
</table>
three items.

On the pretest responses to item eight-b (grouchy) the aging instruction group was more negative toward elderly people than the other two groups with 15.8 percent describing old people as grouchy compared with 4.5 percent of the home visits group and 3.7 percent of the control group. The posttest response percentages showed the aging instruction group as having become less negative with a decreased number of children saying old people were grouchy. The home visits group and the control group had become more negative on item eight-b (grouchy) with increased percentages of children viewing elderly people as grouchy.

On the pretest responses to item eight-d (fun) the aging instruction group was again more negative toward elderly people than the two assignment groups with 68.4 percent describing elderly people as fun compared with 78.8 percent of the home visits group and 85.2 percent of the control group. The posttest response percentages showed the aging instruction group as having become more positive toward elderly people with an increased number of children describing old people as fun. The other two assignment groups' posttest percentages had become a bit more positive.

On the pretest responses to item eight-e (friendly) all three groups were very positive about whether old people were friendly with 100.0 percent of the home visits group, 98.1 percent of the control group, and 94.7 percent of the aging instruction group agreeing that old people were usually friendly. The posttest response percentages showed the home visits group had become a bit unsure with 6.1 percent changing their responses to "I don't know." The aging instruction group also had become less certain although the percentage that had said old
people were not friendly did drop to 0.0 percent. The control group had no change from the pretest to the posttest.

The total change percentages and the pretest and posttest response percentages for the assignment groups on the items in the "attraction to elderly people" category are listed in table 28. Each assignment group changed more than the other two groups on one of the three items.

On the pretest responses to item four (doing things with) the control group was more positive toward elderly people than the other two groups with 94.4 percent saying they liked doing things with old people compared with 89.5 percent of the aging instruction group and 87.9 percent of the home visits group. The posttest response percentages showed the home visits group and the aging instruction group as having become more positive toward elderly people with an increased number of children saying on the posttest that they liked doing things with old people. The control group had become less sure with an increased number of children saying they didn't know if they liked doing things with old people.

On the pretest responses to item five (help fix toy) the aging instruction group was more negative toward elderly people than the other two assignment groups with 26.3 percent saying they would not ask an old person to help fix a broken toy compared with 10.6 percent of the home visits group and 14.8 percent of the control group. The posttest response percentages showed the home visits group and the aging instruction group as having become more positive toward elderly people with an increased number of children saying they would ask an old person to fix a broken toy. The control group had become more
TABLE 28

TOTAL CHANGE AND RESPONSE PERCENTAGES FROM THE PRETEST AND THE POSTTEST FOR THE ASSIGNMENT GROUPS ON THE ITEMS IN THE CATEGORY "ATTRACTION TO ELDERLY PEOPLE"

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Home Visits Group</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
<td>Change (%)</td>
<td>Response Choice</td>
<td>Pretest (%)</td>
<td>Posttest (%)</td>
</tr>
<tr>
<td>4. (doing things with)</td>
<td>18.1</td>
<td>yes</td>
<td>87.9</td>
<td>92.4</td>
<td>12.3</td>
<td>yes</td>
<td>89.5</td>
<td>94.7</td>
<td>7.4</td>
<td>yes</td>
<td>94.4</td>
<td>90.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>1.5</td>
<td>1.5</td>
<td></td>
<td>no</td>
<td>0.0</td>
<td>1.8</td>
<td></td>
<td>no</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>10.6</td>
<td>6.1</td>
<td></td>
<td>I don't know</td>
<td>10.5</td>
<td>3.5</td>
<td></td>
<td>I don't know</td>
<td>5.6</td>
<td>9.3</td>
</tr>
<tr>
<td>5. (help fix toy)</td>
<td>27.2</td>
<td>yes</td>
<td>66.7</td>
<td>71.2</td>
<td>38.6</td>
<td>yes</td>
<td>50.9</td>
<td>61.4</td>
<td>24.1</td>
<td>yes</td>
<td>64.8</td>
<td>64.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>10.6</td>
<td>9.1</td>
<td></td>
<td>no</td>
<td>26.3</td>
<td>8.8</td>
<td></td>
<td>no</td>
<td>14.8</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>22.7</td>
<td>19.7</td>
<td></td>
<td>I don't know</td>
<td>22.8</td>
<td>29.8</td>
<td></td>
<td>I don't know</td>
<td>20.4</td>
<td>24.1</td>
</tr>
<tr>
<td>6. (help in school)</td>
<td>30.3</td>
<td>yes</td>
<td>56.1</td>
<td>65.2</td>
<td>33.3</td>
<td>yes</td>
<td>38.6</td>
<td>54.4</td>
<td>35.2</td>
<td>yes</td>
<td>57.4</td>
<td>66.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>no</td>
<td>13.6</td>
<td>9.1</td>
<td></td>
<td>no</td>
<td>17.5</td>
<td>15.8</td>
<td></td>
<td>no</td>
<td>13.0</td>
<td>11.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I don't know</td>
<td>30.3</td>
<td>25.8</td>
<td></td>
<td>I don't know</td>
<td>43.9</td>
<td>29.8</td>
<td></td>
<td>I don't know</td>
<td>29.6</td>
<td>22.2</td>
</tr>
</tbody>
</table>
unsure with an increased number of children saying they didn't know if they would ask an old person to help fix a broken toy.

On the pretest responses to item six (help in school) the aging instruction group was more negative than the other two assignment groups with 17.5 percent saying they would not like an old person to come and help them during school compared with 13.6 percent of the home visits group and 13.0 percent of the control group. The posttest response percentages showed that all three groups had become more positive toward elderly people with an increased number of children saying on the posttest that they would like to have an old person come and help them during school.

The total change percentages and the pretest and the posttest response percentages for the assignment groups on items in the "stereotypes of elderly people" category are listed in table 29. The aging instruction group changed more than the other two assignment groups on all four items.

On the pretest responses to item three (spend their time) the home visits group held a more stereotyped view of elderly people as spending their time sitting around watching television with 21.2 percent choosing that response compared with 12.3 percent of the aging instruction group and 11.1 percent of the control group. A higher percentage of the home visits group said old people spent their time working than did the other two assignment groups and a lower percentage said old people spent their time visiting people. The posttest response percentages showed the stereotype of elderly people sitting around watching television as having decreased in the home visits and the control groups while it stayed the same in the aging instruction group.
| Pretest/Posttest Item | Home Visits Group | | | Aging Instruction Group | | | Control Group | |
|----------------------|-------------------|-----------------|-----------------|-------------------|-----------------|-----------------|-------------------|
|                      | Change (%)        | Response Choice | Pretest (%)     | Posttest (%)     | Change (%)        | Response Choice | Pretest (%)     | Posttest (%)     |
| 3. (spend their time) | 43.9              | sitting/TV      | 21.2            | 15.2             | 47.3              | sitting/TV      | 12.3            | 12.3             |
|                      |                   | working         | 16.7            | 12.1             |                   | visiting people | 5.3             | 14.0             |
|                      |                   | visiting        | 40.9            | 47.0             |                   | sick in bed     | 52.6            | 47.4             |
|                      |                   | sick in bed     | 0.0             | 1.5              |                   | I don't know    | 0.0             | 5.3              |
|                      |                   | I don't know    | 21.2            | 24.2             |                   | I don't know    | 29.8            | 21.1             |
| 8-a. (healthy)       | 40.9              | yes             | 31.8            | 16.7             | 50.9              | yes             | 31.6            | 49.1             |
|                      |                   | no              | 43.9            | 42.4             |                   | I don't know    | 26.3            | 15.8             |
|                      |                   | I don't know    | 24.2            | 40.9             |                   |                 |                 |                  |
| 8-c. (lonely)        | 25.8              | yes             | 77.3            | 59.1             | 38.6              | yes             | 75.4            | 61.4             |
|                      |                   | no              | 7.6             | 12.1             |                   | no              | 7.0             | 24.6             |
|                      |                   | I don't know    | 15.2            | 28.8             |                   | I don't know    | 17.5            | 14.0             |
| 8-f. (busy)          | 37.9              | yes             | 18.2            | 24.2             | 42.1              | yes             | 22.8            | 24.6             |
|                      |                   | no              | 50.0            | 43.9             |                   | no              | 47.4            | 45.6             |
|                      |                   | I don't know    | 31.8            | 31.8             |                   | I don't know    | 29.8            | 29.8             |
The percentages that said old people spent their time working increased in the aging instruction group and control group but decreased in the home visits group. The percentages that said old people spent their time visiting people increased in the home visits and aging instruction groups and stayed the same in the control group.

On the pretest responses to item eight-a (healthy) the home visits group held a more stereotyped view of elderly people with 43.9 percent saying old people were not usually healthy compared with 26.3 percent of the aging instruction group and 25.9 percent of the control group. The posttest response percentages showed the aging instruction and the control groups as having become less stereotyped in their perceptions with an increased number of children saying that old people were usually healthy. The percentage of the home visits group members who said old people were usually healthy decreased from the pretest to the posttest.

On the pretest responses to item eight-c (lonely) all three groups held a more stereotyped view of elderly people with 77.3 percent of the home visits group, 75.4 percent of the aging instruction group, and 74.1 percent of the control group saying old people were usually lonely. The posttest response percentages showed that all three groups' responses had become less stereotyped with a decreased number of children describing old people as usually lonely.

On the pretest responses to item eight-f (busy) the home visits group held a more stereotyped view of elderly people with 18.2 percent saying old people were usually busy compared with 22.8 percent of the aging instruction and 25.9 percent of the control group. The posttest response percentages showed that the home visits and the aging
instruction groups had become less stereotyped in their perceptions with an increased number of children describing old people as usually busy; the control group showed increases in the percentages that said old people were usually busy and increases in the percentages that said old people were not usually busy with a decreased number of children saying they didn't know.

Children's Pretest-to-Posttest Changes Related to EAS Scores.
The data analyzed to answer children's research question six, "Is there a relationship between the children's Educational Ability Series (EAS) scores and the number of changes from the pretest to the posttest?", are summarized in table 30. Pearson's r and the significance of r were identified to describe the relationship.

**TABLE 30**
CORRELATION BETWEEN THE CHILDREN'S EAS SCORES AND THEIR PRETEST-TO-POSTTEST CHANGES

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>r</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>168</td>
<td>-.127</td>
<td>.050*</td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level

A correlation coefficient of -.127 was identified which was significant at the .05 level. The negative correlation indicated that children with higher educational ability scores tended to have fewer changes from the pretest to the posttest; children with lower educational ability scores tended to have more changes. Because a significant relationship was found between the children's EAS scores
and the number of changes from the pretest to the posttest, children's research question six was affirmed.

Review of the Children's Research Questions

The results of examining the children's research questions are summarized in the text which follows. Three of the six research questions had sufficient significant relationships and were affirmed.

Children's research question one, "Are there differences between the male and the female children's perceptions of elderly people as measured by the pretest?", could not be affirmed. Only one of thirteen chi-square tests was found to be significant; the females were more willing to have an elderly person come and help them during school.

Children's research question two, "Are there differences among the fourth-, the fifth-, and the sixth-grade children's perceptions of elderly people as measured by the pretest?", was affirmed. Two of the three items in the "attraction to elderly people" category were significantly related to the children's grade groups; fifth graders were less willing to have old people help fix a toy and come and help during school.

Children's research question three, "Are there differences among the home visits, the aging instruction, and the control groups' perceptions of elderly people prior to the experiment?", could not be affirmed. Only one of thirteen chi-square tests was found to be significant; more members of the aging instruction group thought old people were not healthy.

Children's research question four, "Is there a relationship between the children's perceptions of elderly people as measured by the
pretest and their perceptions of the project as measured by the follow-up survey?", could not be affirmed. Only two of twenty-four analyses of variance were found to be significant. Aging instruction group members who said they didn't know if they wanted an old person to come and help them during school enjoyed their sessions more than the others in the group.

Children's research question five, "Are there differences among the variable groups (sex, grade, and assignment) related to the number of changes from the pretest to the posttest?", was affirmed. The aging instruction group had significantly more changes than the other two assignment groups. The males had significantly more changes than the females.

Children's research question six, "Is there a relationship between the children's Educational Ability Series (EAS) scores and the number of changes from the pretest to the posttest?", was also affirmed. Children with higher EAS scores tended to have fewer changes from the pretest to the posttest.

**Analysis of the Data from the Elderly People**

The main source of the data from the elderly people was the Perceptions About Young People Survey which was used as a pretest and as a posttest. The survey asked the elderly people to rate young people on ten characteristics comparing them to what young people were like in the elderly people's day. The ten survey items were examined individually in their relationships to the other variables. Pretest-to-posttest rating changes for each individual were also calculated and were used in the analysis of pretest-to-posttest changes. Because
the survey provided interval data, positive and negative directions
and degrees of change in the elderly people's ratings of children
could be identified.

Elderly People's Pretest
Perceptions of Children

The elderly people's responses to the pretest provided data
on their perceptions of children prior to the experiment. Those data
were examined to identify overall trends and to identify possible
differences within the sex, nursing home longevity, family contact,
and outgoing/withdrawn personality rating variable groups.

Elderly People's Pretest Survey Results. The writer calculated
the percentages of each response and the mean response rating for
items one through ten of the pretest for the total group of elderly
people. Those data are listed in table 31. The mean response ratings
corresponded to the response choices from the Perceptions About Young
People Survey as follows:

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>much less</td>
<td>less</td>
<td>about as much</td>
<td>more</td>
<td>much more</td>
</tr>
</tbody>
</table>

For example, questionnaire item one (happy) received a mean
response rating of 3.23, falling between "about as happy as" and "more
happy than." This indicated that the elderly people felt that young
people were about as happy as the elderly people had been as young
people.

Item two (respect parents) received a mean response rating of
2.20. This indicated that the elderly people felt that young people
respected their parents less than the elderly people had as young
people.
### TABLE 31
PERCENTAGES AND MEAN RESPONSE RATINGS FROM THE ELDERLY PEOPLE'S RESPONSES TO THE PRETEST

<table>
<thead>
<tr>
<th>Pretest Item</th>
<th>Response Choice</th>
<th>%</th>
<th>Mean Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Today's young people are <strong>much less happy than</strong> (happy)*</td>
<td></td>
<td>6.7</td>
<td>3.23</td>
</tr>
<tr>
<td></td>
<td><strong>less happy than</strong></td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as happy as</strong></td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>more happy than</strong></td>
<td>36.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much more happy than</strong></td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td>2. Today's young people respect their parents <strong>much less than</strong> (respect parents)</td>
<td></td>
<td>30.0</td>
<td>2.20</td>
</tr>
<tr>
<td></td>
<td><strong>less than</strong></td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as much as</strong></td>
<td>43.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>more than</strong></td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much more than</strong></td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>3. Today's young people value money <strong>much more than</strong> (value money)</td>
<td></td>
<td>0.0</td>
<td>2.07</td>
</tr>
<tr>
<td></td>
<td><strong>more than</strong></td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as much as</strong></td>
<td>27.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less than</strong></td>
<td>20.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less than</strong></td>
<td>41.4</td>
<td></td>
</tr>
<tr>
<td>4. Today's young people are <strong>much more willing to work than</strong> (willing to work)</td>
<td></td>
<td>0.0</td>
<td>2.36</td>
</tr>
<tr>
<td></td>
<td><strong>more willing to work than</strong></td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as willing to work as</strong></td>
<td>39.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less willing to work than</strong></td>
<td>35.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less willing to work than</strong></td>
<td>17.9</td>
<td></td>
</tr>
<tr>
<td>5. Today's young people are <strong>much more able to handle their problems than</strong> (able to handle problems)</td>
<td></td>
<td>3.7</td>
<td>3.07</td>
</tr>
<tr>
<td></td>
<td><strong>more able to handle their problems than</strong></td>
<td>25.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as able to handle their problems as</strong></td>
<td>51.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less able to handle their problems than</strong></td>
<td>11.1</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less able to handle their problems than</strong></td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td>6. Today's young people seem to enjoy life <strong>much more than</strong> (enjoy life)</td>
<td></td>
<td>33.3</td>
<td>3.83</td>
</tr>
<tr>
<td></td>
<td><strong>more than</strong></td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as much as</strong></td>
<td>26.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less than</strong></td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less than</strong></td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>7. Today's young people are <strong>much more friendly than</strong> (friendly)</td>
<td></td>
<td>0.0</td>
<td>3.19</td>
</tr>
<tr>
<td></td>
<td><strong>more friendly than</strong></td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as friendly as</strong></td>
<td>55.6</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less friendly than</strong></td>
<td>7.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less friendly than</strong></td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>8. Today's young people are <strong>much more mature than</strong> (mature)</td>
<td></td>
<td>17.9</td>
<td>3.68</td>
</tr>
<tr>
<td></td>
<td><strong>more mature than</strong></td>
<td>46.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as mature as</strong></td>
<td>21.4</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less mature than</strong></td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less mature than</strong></td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>9. Today's young people know <strong>much more about the world than</strong> (know about the world)</td>
<td></td>
<td>53.3</td>
<td>4.30</td>
</tr>
<tr>
<td></td>
<td><strong>more about the world than</strong></td>
<td>30.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about as much about the world as</strong></td>
<td>10.0</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less about the world than</strong></td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less about the world than</strong></td>
<td>0.0</td>
<td></td>
</tr>
<tr>
<td>10. Today's young people care about old people <strong>much more than</strong> (care about old people)</td>
<td></td>
<td>0.0</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td><strong>more than</strong></td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>about the same as</strong></td>
<td>40.7</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>less than</strong></td>
<td>25.9</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>much less than</strong></td>
<td>29.6</td>
<td></td>
</tr>
</tbody>
</table>

*Abbreviated questions used in text subsequently.*
Item three (value money) received a mean response rating of 2.07. This indicated that the elderly people felt that young people valued money less than the elderly people had as young people.

Item four (willing to work) received a mean response rating of 2.36. This indicated that the elderly people felt that young people were less willing to work than the elderly people had been as young people.

Item five (able to handle problems) received a mean response rating of 3.07. This indicated that the elderly people felt that young people were about as able to handle their problems as the elderly people had been as young people.

Item six (enjoy life) received a mean response rating of 3.83. This indicated that the elderly people felt that young people seemed to enjoy life more than the elderly people had as young people.

Item seven (friendly) received a mean response rating of 3.19. This indicated that the elderly people felt that young people were about as friendly as the elderly people had been as young people.

Item eight (mature) received a mean response rating of 3.68. This indicated that the elderly people felt that young people were more mature than the elderly people had been as young people.

Item nine (know about the world) received a mean response rating of 4.30. This indicated that the elderly people felt that young people knew more about the world than the elderly people had as young people.

Item ten (care about old people) received a mean response rating of 2.19. This indicated that the elderly people felt that young people cared less about old people than the elderly people had as young people.
Analysis of Research Questions
Related to the Elderly People's
Pretest Survey Results

Statistical analysis of differences in the elderly people's pretest responses related to sex, nursing home longevity, family contact, and outgoing/withdrawn personality rating was used to answer the elderly people's research questions one, two, six, and seven. One-way analysis of variance and Pearson's r statistics were computed to identify questionnaire items in which the groups being compared differed. Significance levels were computed and probabilities at or beyond the .05 level were considered significant.

Pretest Differences between Males and Females. The data analyzed to answer the elderly people's research question one, "Are there differences between the male and female elderly people's perceptions of the children as measured by the pretest?", are summarized in table 32 and are shown graphically in figure 12. An analysis of variance was computed for each questionnaire item to compare the pretest responses of the males and the females. Group means, degrees of freedom, sum of squares, mean of squares, value of F, and probability of F are listed for pretest items one through ten.

A total of ten one-way analyses were computed. No significant differences were found between the sex groups on their pretest ratings. Because no significant differences were found, the elderly people's research question one could not be affirmed.

Pretest Differences Related to Nursing Home Longevity. The data analyzed to answer the elderly people's research question two, "Is there a relationship between longevity in the nursing home and the
# TABLE 32

**ANALYSIS OF VARIANCE FOR THE ELDERLY PEOPLE'S PRETEST ANSWERS BETWEEN SEX GROUPS**

<table>
<thead>
<tr>
<th>Pretest Item</th>
<th>Group Means</th>
<th>df</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. (happy)</td>
<td>3.43</td>
<td>3.06</td>
<td>29</td>
<td>0.815</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>2.14</td>
<td>2.25</td>
<td>29</td>
<td>0.097</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>2.07</td>
<td>2.07</td>
<td>28</td>
<td>0.000</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>2.50</td>
<td>2.21</td>
<td>27</td>
<td>0.748</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>3.00</td>
<td>3.14</td>
<td>26</td>
<td>0.158</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>4.21</td>
<td>3.50</td>
<td>29</td>
<td>3.514</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>3.08</td>
<td>3.29</td>
<td>26</td>
<td>0.553</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>3.79</td>
<td>3.57</td>
<td>27</td>
<td>0.351</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>4.00</td>
<td>4.56</td>
<td>29</td>
<td>3.016</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>2.08</td>
<td>2.29</td>
<td>26</td>
<td>0.337</td>
</tr>
</tbody>
</table>
Fig. 12. Male and female elderly people's mean pretest ratings of children.
elderly people's perceptions of the children as measured by the pretest?", are summarized in table 33. A Pearson product-moment correlation coefficient was computed for each pretest item and the nursing home longevity variables. Pearson's r and the probability of r are listed for each pretest item.

A total of ten correlation coefficients were computed. No significant correlations were identified between the pretest answers and nursing home longevity. Because no significant correlations were found, the elderly people's research question two could not be affirmed.

Pretest Differences between Elderly People with and without Family Contact. The data analyzed to answer the elderly people's research question six, "Are there differences between the elderly people who have family contact and those who do not have family contact in their perceptions of children as measured by the pretest?", are summarized in table 34 and are shown graphically in figure 13. An analysis of variance was computed for each pretest item to compare the responses of the elderly people with and without family contact. A total of ten one-way analyses were compared. No significant differences in pretest ratings were found between the group with family contact and the group without family contact. Because no significant differences were found, the elderly people's research question six could not be affirmed.

Pretest Differences Related to Outgoing/Withdrawn Personality Rating. The data analyzed to answer the elderly people's research question seven, "Is there a relationship between the elderly people's outgoing/withdrawn personality rating and their perceptions of the
### TABLE 33

**PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS OF THE ELDERLY PEOPLE'S PRETEST ANSWERS IN RELATION TO NURSING HOME LONGEevity**

<table>
<thead>
<tr>
<th>Pretest Item</th>
<th>N</th>
<th>r</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (happy)</td>
<td>30</td>
<td>.198</td>
<td>.158</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>30</td>
<td>.027</td>
<td>.445</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>29</td>
<td>-.101</td>
<td>.302</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>28</td>
<td>.045</td>
<td>.411</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>27</td>
<td>.011</td>
<td>.478</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>30</td>
<td>-.241</td>
<td>.100</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>27</td>
<td>.093</td>
<td>.322</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>28</td>
<td>-.055</td>
<td>.392</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>30</td>
<td>.088</td>
<td>.321</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>27</td>
<td>.129</td>
<td>.261</td>
</tr>
</tbody>
</table>
TABLE 34
ANALYSIS OF VARIANCE FOR THE ELDERLY PEOPLE'S PRETEST ANSWERS BETWEEN THOSE WITH AND THOSE WITHOUT FAMILY CONTACT

<table>
<thead>
<tr>
<th>Pretest Item</th>
<th>Group Means</th>
<th>df</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With Family Contact</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. (happy)</td>
<td>3.15</td>
<td>29</td>
<td>0.334</td>
<td>.568</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>2.25</td>
<td>29</td>
<td>0.170</td>
<td>.683</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>2.00</td>
<td>28</td>
<td>0.262</td>
<td>.613</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>2.22</td>
<td>27</td>
<td>1.223</td>
<td>.279</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>3.00</td>
<td>26</td>
<td>0.409</td>
<td>.528</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>3.95</td>
<td>29</td>
<td>0.686</td>
<td>.415</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>3.28</td>
<td>26</td>
<td>0.850</td>
<td>.365</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>3.83</td>
<td>27</td>
<td>1.371</td>
<td>.252</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>4.40</td>
<td>29</td>
<td>0.709</td>
<td>.407</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>2.22</td>
<td>26</td>
<td>0.084</td>
<td>.774</td>
</tr>
</tbody>
</table>
Fig. 13. Family contact groups' mean pretest ratings of children.
children as measured by the pretest?", are summarized in table 35. A Pearson product-moment correlation coefficient was computed for the personality rating and the pretest variable for each item. Pearson's r and the probability of r are listed in the table for each pretest item.

A total of ten correlation coefficients were computed. No significant correlations were identified between the elderly people's pretest answers and their outgoing/withdrawn personality ratings. Because no significant relationships were found, the elderly people's research question seven could not be affirmed.

Elderly People's Pretest-to-Posttest Changes in Perceptions of Children

The elderly people's pretest and posttest ratings of children and their total rating changes were used to examine the effects of the program on the elderly people's perceptions of children. The data were analyzed for the total group and for the elderly people's sex, nursing home longevity, family contact, and outgoing/withdrawn personality variable groups.

Elderly People's Total Group Pretest-to-Posttest Changes. The number and direction of the elderly people's total rating changes from the pretest to the posttest were calculated for each individual to provide an indication of changes in perceptions. A positive rating change represented a more positive overall rating of today's young people after the interaction program.

The distribution of rating changes is shown graphically in figure 14. Each cube represents one elderly person's rating change
TABLE 35
PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS OF THE ELDERLY PEOPLE'S PRETEST ANSWERS IN RELATION TO OUTGOING/WITHDRAWN PERSONALITY RATING

<table>
<thead>
<tr>
<th>Pretest Item</th>
<th>N</th>
<th>r</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (happy)</td>
<td>30</td>
<td>0.1781</td>
<td>.173</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>30</td>
<td>0.0415</td>
<td>.414</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>29</td>
<td>0.0322</td>
<td>.434</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>28</td>
<td>-0.2932</td>
<td>.065</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>27</td>
<td>-0.0547</td>
<td>.393</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>30</td>
<td>-0.2071</td>
<td>.136</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>27</td>
<td>0.1945</td>
<td>.165</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>28</td>
<td>0.0067</td>
<td>.486</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>30</td>
<td>0.1472</td>
<td>.219</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>27</td>
<td>-0.0623</td>
<td>.379</td>
</tr>
</tbody>
</table>
Fig. 14. Frequency distribution of the total elderly group's pretest-to-posttest rating changes.
from the pretest to the posttest. Fifteen people changed in the negative direction with -4 as the most frequent rating change. One person changed -11, while -5 was the next lowest rating change. Eleven people changed in the positive direction. One person changed +13, while +7 was the next highest rating change.

To answer the elderly people's research question three, "Are there differences in the elderly people's perceptions of children prior to and following the experiment?", the writer computed t-tests comparing the pretest and posttest responses. Pretest and posttest means, degrees of freedom, t-values, and the probability of t are listed for each questionnaire item in table 36. The comparisons are shown graphically in figure 15. A total of ten paired t-tests were computed. The one questionnaire item that showed a significant difference from the pretest to the posttest was item eight (mature). The mean response changed from 3.70 to 3.19, a significant drop, indicating that the elderly people's perceptions of how mature young people were had changed from "more mature than" before the interactions to "about as mature as" the elderly people had been as young people. Because only one of ten questionnaire items was found to be significant, the elderly people's research question three could not be affirmed.

Analysis of Rating Change Differences between the Sex Groups. The data analyzed to answer the elderly people's research question four, "Are there differences between the male and the female elderly people related to their rating changes from the pretest to the posttest?", are summarized in table 37 and are shown graphically in figure 16. An analysis of variance was computed for each questionnaire item
TABLE 36

t-TESTS FOR PAIRED SAMPLES FOR THE ELDERLY PEOPLE'S PRETEST RESPONSES PAIRED WITH THEIR POSTTEST RESPONSES

<table>
<thead>
<tr>
<th>Questionnaire Item</th>
<th>Means</th>
<th>df</th>
<th>t</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pretest</td>
<td>Posttest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. (happy)</td>
<td>3.23</td>
<td>3.17</td>
<td>29</td>
<td>0.26</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>2.20</td>
<td>2.33</td>
<td>29</td>
<td>-0.70</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>2.07</td>
<td>2.10</td>
<td>28</td>
<td>-0.12</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>2.36</td>
<td>2.39</td>
<td>27</td>
<td>-0.24</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>3.08</td>
<td>3.04</td>
<td>25</td>
<td>0.23</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>3.90</td>
<td>3.69</td>
<td>28</td>
<td>1.14</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>3.19</td>
<td>3.26</td>
<td>26</td>
<td>-0.35</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>3.70</td>
<td>3.19</td>
<td>26</td>
<td>2.05</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>4.30</td>
<td>4.13</td>
<td>29</td>
<td>0.78</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>2.19</td>
<td>2.59</td>
<td>26</td>
<td>-1.95</td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level
Fig. 15. Elderly people's mean pretest and posttest ratings of children.
### TABLE 37

**ANALYSIS OF VARIANCE FOR THE ELDERLY PEOPLE’S PRETEST-TO-POSTTEST RATING CHANGES BETWEEN SEX GROUPS**

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Mean Rating Change</th>
<th>df</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Males</td>
<td>Females</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. (happy)</td>
<td>+.14</td>
<td>-.25</td>
<td>29</td>
<td>0.569</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>+.36</td>
<td>-.06</td>
<td>29</td>
<td>1.221</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>-.07</td>
<td>+.13</td>
<td>28</td>
<td>0.131</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>-.14</td>
<td>+.21</td>
<td>27</td>
<td>1.444</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>+.08</td>
<td>-.15</td>
<td>25</td>
<td>0.446</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>-.46</td>
<td>.00</td>
<td>28</td>
<td>1.635</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>+.38</td>
<td>-.21</td>
<td>26</td>
<td>2.054</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>-1.00</td>
<td>-.07</td>
<td>26</td>
<td>3.733</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>+.29</td>
<td>-.56</td>
<td>29</td>
<td>4.323</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>+.85</td>
<td>.00</td>
<td>26</td>
<td>4.696</td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level
Fig. 16. Mean rating changes from the pretest to the posttest for the elderly people's sex groups on items one to ten.
to identify differences between the sex groups. Degrees of freedom, value of F, probability of F, and the mean rating changes for the males and females are listed in the table for each item.

A total of ten analyses of variance were computed. Significant differences in change from the pretest to the posttest were found on two of the ten items. The males changed their perceptions in a positive direction (+.29) on item nine (know about the world) while the females changed in a negative direction (-.56). This indicated that after the interactions the males saw children as knowing more about the world; the females saw children as knowing less about the world. The males also changed their perceptions in a positive direction (+.85) on item ten (care about old people) while the females' perceptions remained the same. After the interaction the males saw children as caring more about old people; the females saw the children the same on this item as before the interactions. Because only two of ten differences between the males and females were found to be significant, the elderly people's research question four could not be affirmed.

Analysis of Rating Change Differences Related to Nursing Home Longevity. The data analyzed to answer the elderly people's research question five, "Is there a relationship between longevity in the nursing home and the elderly people's change scores from the pretest to the posttest?", are summarized in table 38. A Pearson product-moment correlation coefficient was computed for the longevity and rating change variables for each questionnaire item. Degrees of freedom, Pearson's r, and the probability of r are listed in the table.

A total of ten correlation coefficients were computed. No correlations were found to be significant. Because no significant
<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>N</th>
<th>r</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (happy)</td>
<td>30</td>
<td>-.169</td>
<td>.187</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>30</td>
<td>-.149</td>
<td>.216</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>29</td>
<td>.086</td>
<td>.328</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>28</td>
<td>-.056</td>
<td>.388</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>26</td>
<td>-.112</td>
<td>.293</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>29</td>
<td>.153</td>
<td>.213</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>27</td>
<td>-.139</td>
<td>.244</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>27</td>
<td>.066</td>
<td>.372</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>30</td>
<td>-.172</td>
<td>.181</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>27</td>
<td>-.205</td>
<td>.153</td>
</tr>
</tbody>
</table>
relationships were found between the nursing home longevity and rating change variables, the elderly people's research question five could not be affirmed.

Analysis of Rating Change Differences between Elderly People with and without Family Contact. The data analyzed to answer the elderly people's research question eight, "Are there differences between the elderly people who have family contact and those who do not have family contact in their change scores from the pretest to the posttest?", are summarized in table 39 and are shown graphically in figure 17. An analysis of variance was computed for each questionnaire item to compare the rating changes of the two groups. Degrees of freedom, value of F, probability of F, and mean rating changes for the group with and the group without family contact are listed in the table.

A total of ten one-way analyses were computed. No significant differences were identified between the group with family contact and the group without family contact. Because no significant differences were found, the elderly people's research question eight could not be affirmed.

Analysis of Rating Change Differences Related to Outgoing/Withdrawn Personality Rating. The data analyzed to answer the elderly people's research question nine, "Is there a relationship between the elderly people's outgoing/withdrawn personality ratings and their change scores from the pretest to the posttest?", are summarized in table 40. A Pearson product-moment correlation coefficient was computed for the personality and rating change variables for each questionnaire item. Degrees of freedom, Pearson's r, and the probability of r are
TABLE 39
ANALYSIS OF VARIANCE FOR THE ELDERLY PEOPLE'S PRETEST-TO-POSTTEST RATING CHANGES FOR THE FAMILY CONTACT GROUPS

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>Mean Rating Change</th>
<th>df</th>
<th>F Ratio</th>
<th>F Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With Family Contact</td>
<td>Without Family Contact</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. (happy)</td>
<td>-.15</td>
<td>+.10</td>
<td>29</td>
<td>0.203</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>.00</td>
<td>+.40</td>
<td>29</td>
<td>0.983</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>-.15</td>
<td>+.44</td>
<td>28</td>
<td>0.974</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>+.22</td>
<td>-.30</td>
<td>27</td>
<td>2.997</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>+.06</td>
<td>-.25</td>
<td>25</td>
<td>0.673</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>-.25</td>
<td>-.11</td>
<td>28</td>
<td>0.121</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>-.17</td>
<td>+.56</td>
<td>26</td>
<td>2.724</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>-.78</td>
<td>.00</td>
<td>26</td>
<td>2.207</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>-.35</td>
<td>+.20</td>
<td>29</td>
<td>1.480</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>+.28</td>
<td>+.67</td>
<td>26</td>
<td>0.766</td>
</tr>
</tbody>
</table>
Fig. 17. Mean rating changes from the pretest to the posttest for the elderly people's family contact groups on items one to ten.
TABLE 40
PEARSON PRODUCT-MOMENT CORRELATION COEFFICIENTS OF THE ELDERLY PEOPLE'S PRETEST-TO-POSTTEST RATING CHANGES IN RELATION TO OUTGOING/WITHDRAWN PERSONALITY RATING

<table>
<thead>
<tr>
<th>Pretest/Posttest Item</th>
<th>N</th>
<th>r</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (happy)</td>
<td>30</td>
<td>-.436</td>
<td>.008*</td>
</tr>
<tr>
<td>2. (respect parents)</td>
<td>30</td>
<td>-.117</td>
<td>.270</td>
</tr>
<tr>
<td>3. (value money)</td>
<td>29</td>
<td>-.053</td>
<td>.392</td>
</tr>
<tr>
<td>4. (willing to work)</td>
<td>28</td>
<td>.433</td>
<td>.011*</td>
</tr>
<tr>
<td>5. (able to handle problems)</td>
<td>26</td>
<td>-.134</td>
<td>.256</td>
</tr>
<tr>
<td>6. (enjoy life)</td>
<td>29</td>
<td>.240</td>
<td>.105</td>
</tr>
<tr>
<td>7. (friendly)</td>
<td>27</td>
<td>-.283</td>
<td>.076</td>
</tr>
<tr>
<td>8. (mature)</td>
<td>27</td>
<td>.137</td>
<td>.247</td>
</tr>
<tr>
<td>9. (know about the world)</td>
<td>30</td>
<td>-.030</td>
<td>.436</td>
</tr>
<tr>
<td>10. (care about old people)</td>
<td>27</td>
<td>.003</td>
<td>.494</td>
</tr>
</tbody>
</table>

*Significant at or beyond the .05 level
listed in the table.

A total of ten correlation coefficients were computed. Two significant correlations were identified. On item one (happy) a significant negative correlation was found between the elderly people's pretest-to-posttest rating changes and their outgoing/withdrawn personality ratings \( r = -.436 \). The negative correlation indicated that the elderly people who had been described as more withdrawn tended to view children as happier after the interactions than before their interactions with the children. The more outgoing elderly people tended to view children as less happy after the interactions. On item four (willing to work) a significant positive correlation was found between the elderly people's pretest-to-posttest rating changes and their outgoing/withdrawn personality ratings \( r = .433 \). The positive correlation indicated that the elderly people who had been described as more outgoing tended to view children as more willing to work after their interactions with the children. The more withdrawn elderly people tended to view children as less willing to work after the interactions. Because only two significant relationships were identified between the elderly people's outgoing/withdrawn personality ratings and their pretest-to-posttest changes, the elderly people's research question nine could not be affirmed.

**Review of the Elderly People's Research Questions**

The results of examining the elderly people's research questions are summarized in the text which follows. None of the nine research questions had sufficient significant relationships to be affirmed.
The elderly people's research question one, "Are there differences between the male and the female elderly people's perceptions of children as measured by the pretest?", could not be affirmed. No significant differences were found between the males and the females on their responses to the ten pretest items.

The elderly people's research question two, "Is there a relationship between longevity in the nursing home and the elderly people's perceptions of children as measured by the pretest?", could not be affirmed. No significant relationships were identified between the elderly people's nursing home longevity and their responses to the ten pretest items.

The elderly people's research question three, "Are there differences in the elderly people's perceptions of children prior to and following the experiment?", could not be affirmed. Only one significant pretest-to-posttest change was identified; the elderly people's mean rating of the maturity of children decreased after the children/elderly people interactions.

The elderly people's research question four, "Are there differences between the male and the female elderly people related to their change scores from the pretest to the posttest?", could not be affirmed. Significant differences were found between the males and females on only two of the ten questionnaire items. The males' mean rating of the children's knowledge increased after the children/elderly people interactions; the females' mean rating of the children's knowledge decreased. The males' mean rating of how much children cared about old people increased after the interactions; the females' mean rating stayed the same.
The elderly people's research question five, "Is there a relationship between longevity in the nursing home and the elderly people's change scores from the pretest to the posttest?, could not be affirmed. No significant relationships were identified between the elderly people's nursing home longevity and their pretest-to-posttest rating changes on the ten questionnaire items.

The elderly people's research question six, "Are there differences between the elderly people who have family contact and those who do not have family contact in their perceptions of children as measured by the pretest?, could not be affirmed. No significant differences were found between the elderly people's group with and the group without family contact on their responses to the ten pretest items.

The elderly people's research question seven, "Is there a relationship between the elderly people's outgoing/withdrawn personality rating and their perceptions of children as measured by the pretest?, could not be affirmed. No significant relationships were identified between the elderly people's outgoing/withdrawn personality ratings and their responses to the ten pretest items.

The elderly people's research question eight, "Are there differences between the elderly people who have family contact and those who do not have family contact in their change scores from the pretest to the posttest?, could not be affirmed. No significant differences were found between the elderly people's group with and the group without family contact on their pretest-to-posttest rating changes on the ten questionnaire items.

The elderly people's research question nine, "Is there a relationship between the elderly people's outgoing/withdrawn personality
ratings and their rating changes from the pretest to the posttest?", could not be affirmed. Significant relationships were found between only two of the elderly people's pretest-to-posttest changes and their outgoing/withdrawn personality ratings. The outgoing elderly people's mean rating of how willing children were to work increased after the interactions; the withdrawn people's mean rating of how willing children were to work decreased. The withdrawn elderly people's mean rating of how happy children were increased after the interactions; the outgoing people's mean rating of how happy children were decreased.

Summary of the Analysis of the Data

The analysis of the data from the children and the data from the elderly people are summarized in the text which follows.

Summary of Analysis of the Data from the Children

The main source of data from the children was the Children's Views on Aging: Adapted. The items were grouped into the categories "aging," "personality of elderly people," "attraction to elderly people," and "stereotypes of elderly people" for the analysis of the children's responses.

The children's overall pretest responses indicated that they had mixed feelings about aging and roughly half of the children thought their grandparents were old. The children had positive perceptions about the personality of elderly people with 77 to 97 percent giving favorable ratings on the three personality traits. The children had a general attraction to elderly people that seemed to diminish as the questions became more specific. The children also expressed stereotyped perceptions of elderly people as being lonely and not being busy.
One significant difference between the males and the females in their pretest responses was identified with the females being more open to having an old person come and help them in school. Significant differences were identified among the grade groups with the fifth graders less positive than the other children about having an old person help fix a broken toy. The fourth graders were more positive about having an old person come help in school. The fifth graders were more negative about both of those items; the sixth graders were more unsure about having an old person come and help them in school. The fourth graders also were more unsure than the other children about whether or not old people were usually healthy. One significant difference in the pretest responses was identified among the assignment groups where more members of the home visits group said that old people were not healthy.

The pretest responses were examined in relation to the children's evaluation of their sessions following the experiment. A significant difference was found in the aging instruction group's evaluation of their sessions related to their feelings about having an old person come help in school. A significant difference was also found in the control group's evaluation of their sessions on law and crime prevention related to their perceptions of whether or not old people were usually grouchy.

Change scores were calculated to identify where the major changes had taken place. The males were identified as having changed more from the pretest to the posttest than the females and the aging instruction group was identified as having changed more than the home visits group and the control group. No significant differences in the
amount of change from the pretest to the posttest were found among the three grade groups.

The pretest and posttest response percentages were compared for the sex groups and the assignment groups to investigate the directions that the changes had taken. Change score percentages provided measures of the total changes on each item but not the directions of the changes. Examination of the pretest and the posttest percentages revealed that on a number of the items many of the children who changed responses from the pretest to the posttest had not changed in a uniform direction. The total posttest percentages for those response choices were very similar to the pretest percentages but the specific children had changed their responses.

Few significant differences in the directions of changes were found for the sex groups. In most cases the posttest responses had changed in the same direction for both the males and the females although the males had often changed more. An increased number of females described old people as busy after the experiment; while the number of males describing old people as busy also increased, so did the number of males describing old people as not busy.

The pretest-to-posttest changes indicated that after the experiment the children in all three assignment groups were more attracted to elderly people. An increased number of children said they would ask old people for help and an increased number of children wanted old people to come and help them during school. The aging instruction group appeared to have become more positive about personality characteristics of elderly people while the other two assignment groups appeared to have become more negative or showed mixed changes. The home visits
group saw elderly people as less healthy after the experiment while the aging instruction group saw elderly people as more healthy.

The number of children's pretest-to-posttest changes was found to be related to their educational ability scores. Students with higher educational ability scores tended to have fewer changes from the pretest to the posttest.

Summary of Analysis of the Data from the Elderly People

The main source of data from the elderly people was the Perceptions About Young People Survey which was used as a pretest and as a posttest. The survey asked the elderly people to compare today's young people to the elderly people themselves when they had been young on ten characteristics.

The elderly people's overall pretest responses indicated that they viewed the children as being about as happy, as able to handle problems, and as friendly as the elderly people had been when they were children. They viewed the children as respecting parents less, valuing money less, caring less about old people, and being less willing to work. The elderly people viewed the children as being more mature, enjoying life more, and knowing more about the world.

No significant differences in initial perceptions of children were found between the male and the female elderly people nor between the elderly people with and without family contact. No significant relationships were found between the elderly people's initial perceptions of children and their longevity in the nursing home nor their outgoing/withdrawn personality ratings. One significant pretest-to-posttest change was identified for the total group of elderly people.
Before the elderly people's interactions with the children they had described young people as being more mature than they themselves had been as young people. After the interactions they described young people as being about as mature as the elderly people had been as young people.

A comparison of the pretest-to-posttest changes for the elderly people's sex groups showed that the males and the females differed on two items. The males perceived children as knowing more about the world after the interactions; the females saw the children as knowing less about the world. The males saw the children as caring more about old people after the interactions; the females' perceptions on that item remained the same. No significant differences in pretest-to-posttest changes were found between the elderly people's group with family contact and the group without family contact. No significant relationship was identified for the pretest-to-posttest changes and the elderly people's longevity in the nursing home. Two significant relationships were identified for the pretest-to-posttest changes and the elderly people's outgoing/withdrawn personality rating. The more withdrawn elderly people tended to view children as happier after the interactions; the more outgoing elderly people tended to view children as less happy after the interactions. The more outgoing elderly people tended to view children as more willing to work after the interactions; the more withdrawn elderly people tended to view children as less willing to work after the interactions.

Chapter 4 has presented an analysis of the data. Chapter 5 presents observations and conclusions from the research. Limitations of the study and recommendations are also presented.
CHAPTER V

OBSERVATIONS/CONCLUSIONS AND RECOMMENDATIONS

The final chapter discusses the limitations, conclusions, and recommendations identified in this research study. Where possible, other studies are cited to provide a wider perspective.

Limitations

During the preparation of this study four limiting factors were identified. Two of the limitations related to the instrumentation, one factor related to the project's duration, and one factor related to interaction among the children in different assignment groups.

1. The survey instruments used to measure the perceptions of the children and the elderly people were not tested for reliability. The children's survey was adapted from the instrument developed by Marks and Newman in their 1978 study and further developed by Marks in 1981. Marks (1981) did measure his instrument for reliability and found it to be adequate although the alpha coefficients did not exceed .70 on any of the scales.

2. The value of the children's survey as a pretest-posttest measure was diminished by the high percentages of positive responses especially to two of the pretest items. The overall responses to items four (doing things with) and eight-e (friendly) had positive pretest responses of 90.4 percent and 97.7 percent, respectively,
allowing little room on those two items for change in a positive direction. The problem of high percentages of positive responses is even more apparent in some of the subgroups. For example, 100 percent of the females indicated on the pretest that they thought old people were usually friendly. That provided no chance to improve the females' perceptions of how friendly old people were as measured by the instrument. The posttest did show a slight decrease in the percentage of females who described old people as usually friendly, from 100 percent on the pretest to 98.8 percent on the posttest. The slight drop was certainly not significant statistically but it may be important to note that after all of the interactions, almost no one saw elderly people as less friendly than they had described them on the pretest.

3. The six-week duration of the program may have been too short a time period to significantly effect changes in the participants' perceptions. The research studies which the writer reviewed which had been successful in changing children's perceptions of elderly people were, for the most part, eight weeks in duration or longer (Carstensen, Mason, and Caldwell 1982; Marks 1981; Marks and Newman 1978; Olejnik and LaRue 1977). An exception was Ianni (1973) who measured positive changes in children's perceptions of elderly people following a three-week interaction period; however, in that study the child and elderly person interactions were supplemented by direct instruction dealing with aging and elderly people.

4. The three assignment groups—the home visits group, the aging instruction group, and the control group—could not be kept separate. Although teachers were asked not to encourage discussions related to aging and elderly people outside of the experiment sessions,
some discussions among the different group members did occur. Four members of the control group and ten members of the aging instruction group indicated in their follow-up survey comments that they would have preferred to visit the nursing home. A sixth grader wrote, "The sessions [aging instruction] were ok but the people I talked to that went to the Samaritan home had more fun." These kinds of discussions about their respective sessions may have significantly altered children's perceptions of elderly people. Desiring to go to the Good Samaritan Center because others were having so much fun there may have enhanced the aging instruction and control group children's views of elderly people.

Observations/Conclusions

For the purpose of discussion, the conclusions for this study will be identified separately for the two population groups. The conclusions from the children's data will be examined first, followed by the conclusions from the elderly people's data. The conclusions are limited to the Bottineau fourth-, fifth-, and sixth-grade students and to those nursing home residents who were judged to be able and were willing to complete the survey instrument.

Observations/Conclusions from the Children's Data

The analysis of the data collected to measure the children's pretest and posttest perceptions of elderly people supports the following observations/conclusions.

1. The children in this study had mixed feelings about the concept of aging prior to the experiment and approximately half of the children thought their grandparents were old. The children were asked
to define "old" in the survey by giving an age. It was interesting that a few of the children expressed difficulty in assigning an age at which a person becomes old; one child was bold enough to put "no age" down as her response to that item on the posttest, explaining to the writer that "you can't say one age when people get old." The idea that "old" is less related to chronological age than to the person's attitude or personality had not been directly discussed with the children, and the writer was impressed that some of the children seemed to reach that conclusion on their own.

2. The children had positive feelings about the personality of elderly people with 77 to 97 percent of the children giving favorable ratings on the pretest for the three personality traits, 8-b (grouchy), 8-d (fun), and 8-e (friendly). This positive view of the personality characteristics of elderly people is similar to the findings of Seefeldt et al. (1977); Carstensen, Mason, and Caldwell (1980); and Newman (1982)---three studies in which physical and personality characteristics of elderly people were considered separately. In all three studies the personality characteristics of elderly people were also viewed rather positively.

3. The children had a general attraction to elderly people with 90.4 percent of the children responding on the pretest that they liked doing things with old people. On the more specific question, "Would you ask an old person to help fix a broken toy?", the positive response dropped to 61.0 percent and on the even more specific question, "Would you like to have an old person to come and help you during school?", the positive responses dropped further to 50.8 percent. A similar pattern was noted in Marks's and Newman's original
administration of the instrument (1978). In that study 100 percent of the fourth graders reported on the pretest that they liked doing things with old people but only 72 percent said they would like to have an old person in their classroom. The children as a group found it very easy to say they liked doing things with old people, less easy to say they would ask an old person to help fix a broken toy, and even less easy to say they would like to have an old person come and help them during school. It is assumed that the more specific tasks were not in themselves less desirable for the children. Therefore, these responses may have been an indication of children liking the abstract concept of elderly people more than specific elderly people—liking old people as long as they don't come too close.

4. The children held stereotyped perceptions of elderly people, viewing them as being lonely and not busy. These perceptions are similar to the stereotypes reported by Shanas (1979) and Butler (1978). Shanas described the concept that old people in our society are alienated and lonely as one of our society's "social myths." In reality, most elderly people are in close contact with their children and remain actively involved in life. The common stereotypes of elderly people spending their time sick in bed or sitting and watching television were not strongly identified in the children's responses to the pretest. While the children responded with the stereotype that old people were not busy, they did not express the generally held image of elderly people being sick in bed or simply sitting and watching television. The children described old people as primarily spending their time visiting with people; this may be viewed as a contradiction to their response to item eight-c where they described old people as
lonely. This contradiction may have been an indication that some of the children's perceptions of elderly people were not well-thought-out prior to responding to the pretest.

5. The female children were more open than the male children to the idea of having an old person come and help them in school. This finding is supported by the research of Olejnik and LaRue (1977) who found in their assessment of adolescent perceptions that females had more positive perceptions of people over 60 years old than did males. This may be a reflection of our society's general assigning of the care of elderly people to their female children. Barrow and Smith (1979) described our society's sexual division of labor in providing aged parents with companionship and services. "The sons may take care of business matters, but the daughters keep the emotional bond strong by visiting and helping with daily chores. The major burden for physical care and social activity has traditionally fallen on the shoulders of the female relatives" (p. 148).

6. The fourth graders were more unsure than the other children in their responses to the pretest about whether or not old people were usually healthy. The fifth- and sixth-grade children's responses were more stereotyped with higher percentages describing old people as not usually healthy. The fourth graders may have been more unsure because of their younger age; they had not been exposed to the stereotyped beliefs about elderly people's health for as long as had the older children.

7. The fourth graders were more attracted to elderly people than were the fifth and sixth graders. The fourth-grade children in the home visits group also seemed to exhibit more enthusiasm during
their visits than did the fifth- and sixth-grade children. This may be a reflection of the preceding finding; fourth graders held a less stereotyped view of the health of elderly people and were therefore more attracted to them.

8. The children in the aging instruction group who had said on the pretest that they didn't know if they would like to have an old person come and help them in school thought their sessions were more fun than did the others in the aging instruction group. This finding indicated that children who were unsure of interacting with elderly people before the project enjoyed learning about them more than did the others in the group. This finding suggests that those individuals who had not already formed an opinion on interacting with old people liked learning about them more than those with fixed opinions, whether positive or negative.

9. The children in the control group who said on the pretest that old people were usually grouchy thought their sessions on law and crime prevention were more worthwhile than did the others in the control group. This indicated that those children who did not feel positive about elderly people appreciated their control group topic more than the others in the control group who may have been upset because they did not have the opportunity to visit the nursing home.

10. The male children changed their responses from the pretest to the posttest more than did the females. Female children's responses to pretest questions in the categories "personality of elderly people," "attraction to elderly people," and "stereotypes of elderly people" were generally more positive than the male children's responses although the difference was significant on only one item, item six
Female children's more positive attitude toward elderly people was also noted in the research of Olejnik and LaRue (1977) who found that "males have a more negative stereotyped perception of old people than females, and that females have more positive stereotyped perceptions and are more willing to work with old people" (p. 14). Relating to elderly people in our society has been a typically female activity. Ward (1979) reviewed the research on aging and society and reported that women "tend to be closer to their kin, to consider them more important, to interact more with family, and to be more active in kinship activities and obligations than men." He also reported that older people "are more likely to have contact with daughters than sons and to live with the daughters' family" (p. 303). Because of this, the males' perceptions of elderly people may not have been as firmly established prior to the experiment.

11. On several items the pretest and the posttest percentages for the response choices were very similar and yet a large percentage of the children had changed their individual responses. That indicated that on those items the children were changing their responses but not in a specific direction. This may have reflected a test/retest reliability problem with those questionnaire items.

12. The percentage of females viewing elderly people as healthy increased from the pretest to the posttest while the males had become more unsure about elderly people's health. The percentage of females who described old people as healthy increased from 23.5 to 32.9 percent. The percentage of males who described old people as healthy dropped slightly from 33.7 to 32.9 percent. The percentage of males saying that old people were not usually healthy decreased from 30.4 to 25.0
percent while the percentage of males saying they didn't know increased from 35.9 to 42.4 percent. A smaller percentage of the females had seen elderly people as healthy prior to the experiment. This may have again been related to the females' societal role as caring for unhealthy elderly people. The experiment changed the stereotyped view held by a number of the females—especially those in the aging instruction unit—that elderly people were usually unhealthy.

13. The percentage of females describing old people as busy increased from 27.1 percent on the pretest to 35.3 percent on the posttest. The percentage of males describing old people as busy increased slightly but so did the percentage of males describing old people as not busy. The percentage of males describing old people as busy changed slightly from 17.4 percent on the pretest to 19.6 percent on the posttest. The females may have held a different idea than did the males about the meaning of being busy. The male perception of being busy may have been more related to work (when we retire we aren't as busy anymore) while the female perception of maintaining a household would continue after retirement.

14. The children in all three assignment groups were more attracted to elderly people following the experiment. The aging instruction materials were apparently successful in promoting the desire to interact with elderly people. The home visits activity was also successful in promoting a more positive attitude toward interacting with elderly people. The control group did not change as much as the other two groups but they too had become more positive about interacting with elderly people, possibly as a result of many children's desire to attend the nursing home—the most desired group assignment.
15. The aging instruction group appeared to have become more positive about the personality characteristics of elderly people after the sessions while the other two assignment groups had become more negative or showed mixed changes. This enhanced image of elderly people in the eyes of the aging instruction group may be explained by the very positive way that elderly people were portrayed in the aging instruction materials. In contrast, the home visits group was exposed to nursing home residents who were not typical of the elderly population. For various reasons they had been confined where they could receive assistance with specific and often obvious ailments. This could have led to increased negative stereotypes with the home visits group describing an increased percentage of old people as grouchy after the interactions. The control group may have been influenced by reports from the home visits group for they too described old people as more grouchy on the posttest.

16. The home visits group saw elderly people as less healthy after the experiment while the aging instruction group saw elderly people as more healthy. The home visits group had been significantly more negative than the other two groups on the concept of old people's health on the pretest, presumably due to chance. The fact that they became even more negative after the interactions indicates that their exposure to the nursing home residents had reinforced the stereotypes of ill health in elderly people. In contrast, the aging instruction group, who were provided with materials designed to counter negative stereotypes of elderly people, saw elderly people as more healthy after the sessions.
The number of children's pretest-to-posttest changes was related to their educational ability scores. Children with higher educational ability scores tended to have fewer pretest-to-posttest changes. Less capable students may have put less thought into their responses as they answered the pretest and posttest questions. These somewhat random answers could result in several changes from the pretest to the posttest. The more capable children were assumed to have responded more carefully and more accurately, resulting in fewer changes.

Observations/Conclusions from the Elderly People's Data

The analysis of the data collected to measure the elderly people's pretest and posttest perceptions of children supports the following observations/conclusions.

1. This study found that on the pretest the elderly people viewed children as being about as happy, as able to handle problems, and as friendly as the elderly people had been when they were children. It is interesting that the elderly people viewed children as about as happy as the elderly people had been as children. Elderly people have often expressed the belief that today's children have so much more in material possessions and opportunities than the elderly people had as children. The elderly people appeared to believe that happiness could not be directly associated with material things or with the opportunities available; these "excesses" have not increased happiness. A related area was today's young people's ability to deal with problems which also was described as about the same for today's young people as for the elderly people when they were children. While the specific
problems faced by the two age groups may have been very different, the elderly people viewed children as being as able to deal with today's problems as the elderly people were at dealing with the problems of their day. It is also important to note that the elderly people described children as about as friendly as the elderly people had been as children; it would appear that prior to the experiment the elderly people were fairly positive about interacting with the child population. This was verified by the general excitement which the residents expressed when preparing for the children's visits. Most of the nursing home residents welcomed children as guests into their home environment.

2. The elderly people described children on the pretest as respecting parents less, as valuing money less, as caring less about old people, and as being less willing to work than the elderly people had been when they were children. These areas in which today's young people fell short in the eyes of the elderly people reflected the often expressed image of a pampered generation. Today's young people were described as respecting their parents less, perhaps as being ungrateful for the relatively high life-style their parents had given to them. Today's young people were viewed as valuing money less, presumably because children today seem to always have much money. They were described as less willing to work, possibly the result of growing up with modern conveniences while many of the elderly people had grown up with the hard manual labor of rural farmlife. Children were described on the pretest as not caring as much about old people, possibly a reflection of the rejection many elderly people in nursing homes feel.

3. On the pretest the elderly people viewed children as being more mature than the elderly people had been when they were children,
as enjoying life more, and as knowing more about the world. In describing today's young people as more mature than they had been, the elderly people may have been expressing the common idea that children today are growing up faster than previous generations and that they are learning more at an earlier age. Describing children as enjoying life more than the elderly people had may reflect the idea that children today have life easier; they have more time to play and enjoy an enhanced standard of living. The children were also described as knowing more about the world, probably a result of the increases in world-wide communications prevalent today.

4. The elderly people's high rating of the maturity of today's children dropped following the experiment. Before the experiment the children had been described as being more mature than the elderly people had been as children. After the experiment the children were described as being about as mature as the elderly people had been as children. The elderly people's idea of young people who were very mature changed after interacting with them; they found that today's young people were not more mature than they had been. The elderly people may have discovered that while today's young people are more "worldly" because of our society's emphasis on youth, young people are still immature in many ways.

5. The male elderly people's perceptions of how much children knew about the world had changed in a positive direction after the interactions, describing children as more knowledgeable about the world on the posttest than on the pretest. The female elderly people's perceptions changed in the opposite direction; they described children as less knowledgeable about the world on the posttest than on
the pretest. The male elderly people had described today's young people on the pretest as knowing more about the world than the elderly people had as young people; the female elderly people had described today's young people as knowing much more about the world than they had as young people. The main interaction activity which would have demonstrated children's knowledge of the world was the timeline activity in which the children displayed their knowledge of world events which had happened in the last 100 years. This activity may have been more impressive to the male elderly people than to the females. During the first part of this century—the developmental years for the elderly people in this study—American males were expected to be more involved and interested in world events; females were expected to be primarily interested in the home. In a similar discussion, Ward (1979) points out that elderly women are less likely to vote than males and many "may not be used to voting, since they were socialized prior to women's suffrage" (p. 356).

6. The male elderly people's perceptions of how much children cared about old people had changed in a positive direction after the interactions; they described children as caring more about old people on the posttest than on the pretest. The female elderly people's perceptions of how much children cared about old people remained relatively the same from the pretest to the posttest. Both the male and female groups of elderly people had described young people as caring less about old people than the elderly people had when they were young but the male elderly people changed their view and described young people as caring more about old people after the interactions. The fact that the elderly women did not change their perceptions on
this item is an interesting contrast to the males. The difference may be related to different perceptions between the elderly males' and females' ideas of the concept "caring about" old people. For the female elderly people the idea of "caring about" old people may be more like "caring for" elderly people; they may have had the main responsibility for caring for their parents or grandparents in earlier years. The male elderly people may have had a less personal concept of "caring about" old people and therefore would have been more impressed by visits by children who came visiting as a class project.

7. The more withdrawn elderly people's perceptions of how happy children were had changed in a positive direction after the interactions. The more withdrawn elderly people described children as happier on the posttest than they had on the pretest while the more outgoing elderly people described children as less happy after the interactions. The more withdrawn elderly people had tended to describe today's young people as less happy on the pretest while the more outgoing elderly people had tended to describe today's young people as more happy than they had been. The interactions evidently caused the perceptions of both groups to move closer to the opposing view; the elderly people were more in agreement after the interactions.

8. The more outgoing elderly people's perceptions of how willing to work children were had changed in a positive direction following the interactions. They described children as more willing to work on the posttest than they had on the pretest. The more withdrawn elderly people described children as less willing to work after the interactions. The more outgoing elderly people had tended to describe today's young people as less willing to work while the more
withdrawn elderly people tended to describe today's young people as more willing to work. The interactions evidently caused the perceptions of both groups to move closer to the opposing view; the elderly people were more in agreement after the interactions.

9. No differences were found in this study between the male and the female elderly people's pretest perceptions of children, nor between the elderly people with and the elderly people without family contact. No significant differences were found in the pretest-to-posttest changes for the elderly people's group with and the group without family contact. No significant relationships were found between the elderly people's pretest perceptions of children and their longevity in the nursing home nor in the elderly people's outgoing/withdrawn personality ratings. No significant relationships were found between the elderly people's pretest-to-posttest changes and their longevity in the nursing home.

**Recommendations**

The conclusions drawn from this study and the practical knowledge gained from organizing and implementing a program of this kind have provided a basis for the following recommendations.

1. Studies should continue to examine children's perceptions of the concept of aging separately from perceptions about elderly people. Many early studies reported negative attitudes toward elderly people when in actuality many of the questions were measuring negative attitudes toward the aging concept.

2. Research should be undertaken to examine in detail the actual attraction of children to elderly people. This study identified
what appeared to be an artificial attraction; children said they liked doing things with old people but as the questions related to more specific potential interactions, the responses became less positive.

3. Future studies which deal with differences between male and female children's perceptions of elderly people should examine the differences in relation to the current societal expectations for the males and females. This study concluded that the differences between male's and female's perceptions of the elderly people which were identified may have been related to the female children having a societal role of caring for and therefore being more cognizant of elderly people.

4. Because the fourth-grade students in this study were more attracted to elderly people than the other two grades, those planning interaction programs for children and elderly people should consider this finding in targeting the child population. Fourth grade and younger students may be more likely to be positive toward this type of interaction. On the other hand, older children may benefit more by a program which takes their reduced attraction toward elderly people into account.

5. Programs designed to increase the accuracy of children's perceptions of aging and elderly people should include both interactions with elderly people and an aging instruction component. In this study, children's interactions with nursing home residents resulted in the children describing elderly people as less healthy than they had described them prior to the interactions. This change in perceptions is explained by the fact that the children interacted with nursing home residents, several of the residents having notable health problems.
This apparently changed the children's views of the health of elderly people in general. It is the responsibility of educators who would implement nursing home visits for children to help the children understand prior to the visits that the population they will be visiting is not representative of all people over 65 years of age. A typical nursing home population represents only the approximate five percent of the elderly population who can no longer care for themselves.

6. Due to the problems which were encountered in this study with the control group interacting with the other two groups during the rest of the school week, in future studies of this type, an aging instruction group and a control group should be identified in schools in similar but separate communities. The excitement of the children who went to the nursing home was apparent to the other children and informal discussions about the visits took place.

7. Additional research should be done to examine the relationship between intelligence measures and consistency from pretest to posttest. This study found a correlation between the children's educational ability scores and the number of pretest-to-posttest changes. Intelligence may be a confounding factor in much of the research done on people's pretest and posttest perceptions.

8. Additional research should be done to examine the perceptions of elderly people about children. As noted in the review of the literature, there has been very little research done in this area. With the elderly population increasing and their influence growing stronger, more attention should be paid to the perceptions of that group.

9. Stereotypes about children should be examined as the perceptions of elderly people about children are identified. The
elderly people's pretest perceptions of children may have reflected current generalizations about our youth. Their perceptions that young people are more mature and care less about elderly people were two commonly held perceptions which changed after the elderly people interacted with the children.

10. The sex of the elderly people should be considered when designing children/elderly people interaction programs. The results of this study indicated that the male nursing home residents seemed to appreciate the formal, structured format of this interaction program more than did the female elderly people.

11. Additional research should be done on examining elderly people's perceptions of children with respect to the personalities of the elderly people. Two differences were found in this study in the reactions to the interactions of the more outgoing and the more withdrawn elderly people.

In this study the writer examined the perceptions of children about elderly people and the perceptions of elderly people about children. Interactions between the children and the elderly people and an instructional unit for the children on aging and elderly people were evaluated as to their value in changing perceptions. The major findings point out the need for careful planning before implementing programs intended to improve perceptions between these diverse groups. In fact, as this study pointed out, the popular practice of providing interactions between school children and nursing home residents without discussing the special nature of the nursing home population may actually be providing children with negative perceptions unrepresentative of the elderly population as a whole.
Providing instruction to children about aging and elderly people can educate children to answer questions about elderly people in a less negative and stereotyped way. However, as this study noted, children may indicate very positive perceptions of elderly people in the abstract but less positive perceptions as the possibility of actually interacting with the elderly people increases.

Both components—instruction and interaction—are important in providing meaningful and accurate perceptions of elderly people for our children. And, as the elderly population increases in size, more attention will need to be given to the other half of the interactions, the elderly people's perceptions of children.
APPENDIX A

CHILDREN'S VIEWS ON AGING INVENTORY: ADAPTED
CHILDREN'S VIEWS ON AGING INVENTORY (ADAPTED)

Do not begin until you are given the directions.

1. At what age does a person become old? _____ years

2. How do you think it feels to be old?
   _____ good
   _____ bad
   _____ both good and bad
   _____ I don't know

3. How do you think old people spend their time?
   _____ sitting around watching TV
   _____ sick in bed
   _____ working
   _____ I don't know
   _____ visiting with people

4. Do you like doing things with old people?
   _____ yes
   _____ no
   _____ I don't know

5. If you had a broken toy, would you ask an old person to help fix it?
   _____ yes
   _____ no
   _____ I don't know

6. Would you like to have an old person come and help you during school?
   _____ yes
   _____ no
   _____ I don't know

7. How do you think you will feel when you are old?
   _____ happy
   _____ sad
   _____ both happy and sad
   _____ I don't know

8. Do you think old people are usually:
   a. healthy?
      _____ yes
      _____ no
      _____ I don't know
   b. grouchy?
      _____ yes
      _____ no
      _____ I don't know
   c. lonely?
      _____ yes
      _____ no
      _____ I don't know
   d. fun?
      _____ yes
      _____ no
      _____ I don't know
   e. friendly?
      _____ yes
      _____ no
      _____ I don't know
   f. busy?
      _____ yes
      _____ no
      _____ I don't know

9. Do you have grandparents who are still living?
   _____ yes
   _____ no
   _____ I don't know

10. Do you think they are old?
    _____ yes
    _____ no
    _____ I don't know
Follow-up Questionnaire

Name ______________________________

Who was your homeroom teacher last year? ______________________________

Which group were you in during Mr. Andrus's experiment last spring?
(check one)

_____ the group that visited the Good Samaritan Center

_____ the group that studied aging and the elderly

_____ the group that studied law and crime prevention

Check one answer for each question:

1. How interesting were the sessions that you attended?
   ____ very interesting  ____ interesting  ____ boring  ____ very boring

2. Was the time spent worthwhile?
   ____ very worthwhile  ____ worthwhile  ____ hardly worthwhile  ____ waste of time

3. Were your sessions fun?
   ____ lots of fun  ____ fun  ____ not much fun  ____ no fun

Write any comments about the session here:
APPENDIX C

PERCEPTIONS ABOUT YOUNG PEOPLE SURVEY
1. Today's young people are much less happy than I was at their age.  

2. Today's young people respect their parents much less than I did at their age.  

3. Today's young people value money much more than I did at their age.  

4. Today's young people are much more willing to work than I was at their age.  

5. Today's young people are much more able to handle their problems than I was at their age.  

6. Today's young people seem to enjoy life much more than I did at their age.  

7. Today's young people are much more friendly than I was at their age.  

8. Today's young people are much more mature than I was at their age.  

9. Today's young people know much more about the world than I did at their age.  

10. Today's young people care about old people much more than I did at their age.
APPENDIX D

COMPOSITE PICTURE OF ELDERLY PEOPLE
APPENDIX E

CHILDREN/RESIDENTS INTERACTION ACTIVITIES
The introductory activity for the children and the home residents will be the Good Samaritan Resident Find. Students will work in pairs to visit with residents and fill in as many resident names as possible on the Resident Find sheet.

Materials needed (per two student team):

1 GOOD SAMARITAN RESIDENT FIND WORKSHEET
1 PENCIL

Procedure:

A. Explain the procedures to the class before we leave for the Home.

B. As the children arrive in the lunch room they may begin interviewing the residents to complete the worksheet.

C. Students should be advised to ask a resident about several of the items before moving on.

D. After 15 minutes the sheets will be collected; students are to sit at the tables and cookies and punch will be served.

E. Students are encouraged to visit with the residents, perhaps asking more about something they found out during the opening activity.
GOOD SAMARITAN RESIDENT FIND

Find someone who:

1. likes sports ______________________________
2. likes to dance _____________________________
3. plays horse shoes __________________________
4. plays piano ________________________________
5. was a school teacher _________________________
6. lived in Roth ______________________________
7. had at least 8 children _______________________ 
8. lived in California __________________________
9. was married for at least 50 years ______________
10. is a gardener ______________________________
11. collects dolls ______________________________
12. owns a straw hat ___________________________
13. has been a farmer __________________________
14. does wood work ____________________________
15. knows how to type __________________________
16. worked in a store __________________________
17. was in a war ______________________________
18. is from Willow City _________________________
19. baked the cookies __________________________
20. owned a Model T ___________________________
Activity: SPELL DOWNS

Grouping: Children will be separated according to grade groups and will be with residents in three separate areas of the building.

Materials needed:
Teachers edition of the grade's spelling book
List of residents' names for each student

Procedure:

Spell Down 1 - Regular

A. Clarify spell down rules (whatever you generally use)
B. All students stand up
C. Read words and students try to spell them orally; if they miss they sit down and are out of spell down.
D. Begin with easier words and move to more advanced words.
E. The spell down is over when only one student remains up or at 2:55 p.m., whichever comes first. Give everyone a round of applause and begin spell down 2.

Spell Down 2 - Residents' Names

A. The word list is the list of the residents' names - first and last. Students should be given a study copy of this list earlier in the week.
B. When it is a student's turn, he or she is to walk over to a resident and touch them on the shoulder. That person's name will then be read to the student to spell. If the student spells it correctly, a name tag will be put on the resident and that resident may not be chosen again. If the student spells the name incorrectly, the student must sit down. The next speller may choose either the same resident or another one.
Activity: TIME LINE: 1900-1980

Grouping: Three Separate Groups

Procedure:
I. Before we go to the home:
   A. Assign pairs of students a decade from 1980 back as far as your group needs to go.
   B. The pairs are to find as many world, national, state, and local events as possible for their decade and write them on their timelines.
   C. If they wish, they are encouraged to draw and color pictures to illustrate the events.

II. At the Home:
   A. Starting with the earliest year, students will read the events for their decade and tape the timeline sheet on the wall.
   B. Students will continue through the decades reading the events and connecting their sheets into a continuous timeline.
   C. When they have finished, the students and residents will have refreshments together and students should visit with residents about events which the residents would have lived through.
Activity: PAPER AIRPLANE TOURNAMENT

Grouping: Separated into grade groups into the same three areas of the home as in Visit III

Procedure:

I. Before we go the home:

A. Students design, construct, and test fly paper airplanes. To qualify for any event, a plane must fly 2 seconds

B. Airplanes can be built using only the following materials:
   8 1/2" x 11" white paper - provided
   Glue and/or Scotch tape

C. The following categories will be available for students to enter:
   1. Most realistic looking airplane
   2. Smallest airplane
   3. Most original design
   4. Best stunts
   5. Longest flight (time) - tournament

D. Selected residents will serve as judges.

E. Prizes will be given.

F. Students may enter as many categories as they wish but they may only enter one airplane in each category.
II. At the home:

A. One at a time students fly airplanes to qualify for 2 second time minimum. Planes that fail to qualify may not be used in any of the competitions.

1. Most realistic: Students are asked to bring entries up to the judges' table. (If there are many entries, this may be done in heats of 4 or 5.) Judges confer and announce a winner. (If heat system is used, heat winners then present planes for judging again.) Decision of the judges will be final.

2. Smallest airplane: Use same format as most realistic.

3. Most original design: Use same format as most realistic.


5. Longest flight (time) - tournament
   a. Have students fill in names on the first column of tournament sheet. Complete sheets for the first round using byes if necessary.
   b. Announce first two contestants and start their flights by saying, "One, two, three, throw."
   c. Winner is moved to next level of the round.
   d. Continue competition until a champion is found.

B. Keep track of winners - Prizes will be awarded at the Middle School Awards Program.

C. Lunch will be served at 3:00 p.m. You may or may not wish to stop the tournament as lunch is being served depending upon how things are moving.
Activity: FAMILY PICTURES

Materials: Students are to bring family pictures

Procedure:

I. Students are to bring family pictures with them to show to the residents. Students can tell about their families and ask about the families of the residents. Encourage students to ask about pictures they see set out in residents rooms.

II. Students will be visiting residents in their rooms in the same wing that they have had activities before. (4th graders will visit residents in east wing, 5th graders in west wing, and 6th graders in north wing.) Residents who don't wish to be visited will have their doors closed or their curtains pulled.

III. At 3:00 pm we will have lunch in the dining room. Students may escort residents who wish to come for lunch to the dining room. Encourage students to have lunch with the residents and visit with the residents about families or other topics of interest.
Activity: SCHOOL: THEN AND NOW

Materials: Students are to bring 1 textbook each to the home.

Procedure:

I. Students are to bring one school textbook with them to show to the residents. Students can tell about school now and ask about school when the residents attended.

II. The same visiting procedures will be used as for the last visit. Students can visit residents in their rooms if the resident's door and curtain is open.

III. Lunch will be served in the dining room at 3:00 p.m. and students are again encouraged to escort residents to the dining room and continue conversations about anything they wish.

IV. There will be a short sing-a-long in the dining room at the end of the session.
APPENDIX F

AGING AND ELDERLY PEOPLE LESSON PLANS
DESCRIPTIVE WORDS ACTIVITY

Purpose: Students will learn more about their own perceptions of the elderly.

Procedure:

A. Students are given a blank sheet of paper.

B. Students are to list describing words and phrases that they feel describe old people. They should list as many words as they can think of in 5 minutes.

C. When the time is up, have the students go back through the list and "code" the items as follows:

   1. Put a "+" by each word or phrase that describes a good or positive quality. e.g. "smart"

   2. Put a "-" by each word or phrase that describes a bad or negative quality. e.g. "weak"

   3. Total up your pluses and your minuses and record them at the bottom.

   e.g. pluses 16
   minuses 17

D. Solicit student comments.
Future Timeline Activity

Purpose: Students will look into the future and consider their lives as elderly people.

Procedure:

A. Pass out the sheet "Future Time Line".
B. Students put their names on the sheet.
C. Teacher gives the following instructions:
   1. "On the top line of years, find 1983. Put a mark there and write in 1983."
   2. "Above 1983 write your age. Above 1985 write how old you will be in that year."
   3. "For each of the years given, write how old you will be above it." (see example)
   4. "Students are to begin filling in the timeline in pencil with events they think could happen to them. (show transparency example)"
   5. As the students finish they may move around the room viewing other students' timelines."
Future Time Line
FILMS USED IN THE AGING AND ELDERLY PEOPLE UNIT

Shopping Bag Lady
21 min / color / 1975

Starring actress Mildred Dunnock, this film is the story of how unthinking attitudes can inflict needless cruelties on others. A group of young teenaged girls ridicule one of New York City's old women who roam the streets collecting other people's castoffs which they carry around in shopping bags. When one of the girls discovers an old family picture album in the shopping bag of the older woman showing her as she once was, young and lovely, she realizes the "shopping-bag lady" is a person, is lead to re-examine her own relationship with her grandmother. Award winning.
Released by: Learning Corporation of America, New York

Portraits of Aging
28 min / color / 1978

This film is a positive view of aging. The people profiles reveal an abundance of wisdom, dignity and joy in living. Their backgrounds are diverse: a world-famous philosopher, a factory worker, a former Globetrotter, a retired attorney, a woman who has lost and regained the use of her legs, a beekeeper. Their situations are different, but their message is the same - the later years of life can be most enriching and satisfying; learning to cope with problems is the key.
Producer: Fred Miller, Miller Productions, Austin TX

Don't Stop the Music
18 min / color / 1973

In this film older Americans speak for themselves, dispelling myths as they show their various capacities for enjoyment, productivity, and an active life, and proving that each person does not suddenly change his lifestyle when he reaches 60 or 65. Not all of them, however, are "older Americans in action," and there are problems about which communities can help offer solutions.

There is a Place for Us
20 min / color /

This documentary, filmed in Mandan, North Dakota, deals with the developing of Liberty Heights housing and activity center for the elderly. According to Evelyn Remmick, North Dakota Aging Services Librarian at the State Capitol in Bismarck, some of the information in the film was not accurate and the film has been removed from circulation.
FILMSTRIPS USED IN THE AGING AND ELDERLY PEOPLE UNIT

I. "America's Aged: The Forgotten Many"
Sound Filmstrip
74 frames
1975
Current Affairs Films
24 Danbury Road, Wilton, Conn. 06897
Library of Congress Card No. 75-735208

Discussion Questions for: "America's Aged: The Forgotten Many"

1. What would be different if most people lived 100 years?
2. Are nursing homes needed? Will they be more or less necessary in the future? Why?
3. What is the reason for having retirement? Should people have to retire when they reach a certain age?
4. Do you think older people will get more involved in politics?

II. Filmstrip Series: "It's OK to be Old: Approaches to Aging"

Produced for: The American Health Care Association
By: Jacoby/Storm Productions, Inc.
Westport, Conn.

Copyright 1980
American Health Care Association
1200 15th Street, NW
Washington, D.C. 20005

Available from: Sunburst Communications
Department TG
39 Washington Avenue
Pleasantville, NY 10570

Part One: How Old is Old? 108 frames, 14 min.
Part Two: When You Grow Old 106 frames, 13 min.
Part Three: Bridging the Gap 109 frames, 14 min.
Discussion Questions for: "It's OK to be Old: Approaches to Aging"

PART 1: HOW OLD IS OLD?

1. Think of the elderly people that you know. Do they have any of the symptoms of what is called "senility"?
2. How many of these common fears about old age do you share?
   - fear of getting ill or weak
   - fear of being poor
   - fear of loneliness
   - fear of death
   - fear of being unwanted or unneeded
   - fear of being helpless
   - fear of being put in a nursing home or hospital
3. What did the man mean when he said, "Some people are old at 30; others at 90."
4. How has what you have seen on TV changed how you feel about old people?

PART 2: WHEN YOU GROW OLD

1. What can you do now that will change the kind of old age you'll have?
2. What are the reasons for and against "adults-only" buildings and communities?
3. What do you think of the services our nation has for its older citizens? What changes would you make?
4. Do you think younger people should be taxed to provide services to the elderly?
5. Would you like to live in a nursing home? Why or why not?

PART 3: BRIDGING THE GAP

1. Do you think people should have to retire at a certain age? Are there some jobs that should have age limits and some that should not?
2. In the program a woman said, "If you're not working, are you living?" Is work important to a happy life?
3. Do people's personalities change when they get older? If so, what kinds of personality changes take place? What kinds of things might cause changes in the personalities of people of any age?
True or False:

1. Most people over 65 are living in nursing homes. [F]
2. Most old people are sick and weak. [F]
3. Old people become confused, forgetful, and depressed because they are growing old. [F]
4. Our nation is beginning to pay more attention to our elderly people. [T]
5. The Grey Panthers are a group of old people working to change our society. [T]
6. Many of the things people used to think were caused by growing old were really caused by such things as poor nutrition, loneliness, and other diseases. [T]
7. We are going to have a senior boom in our country in the next 50 years. [T]
8. Gerontology is the study of music. [F]
9. Some older societies value the elderly more than we do. [T]
10. All old people are happy to retire. [F]

List three things you learned in your study of Aging & Elderly People:

1. 
2. 
3. 
APPENDIX G

FREQUENCIES OF CHILDREN'S RESPONSES TO PRETEST ITEM ONE,

"AT WHAT AGE DOES A PERSON BECOME OLD?"
### TABLE 41

FREQUENCIES OF CHILDREN'S RESPONSES TO PRETEST ITEM ONE, "AT WHAT AGE DOES A PERSON BECOME OLD?"

<table>
<thead>
<tr>
<th>Age</th>
<th>Absolute Frequency</th>
<th>Relative Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>1</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>26</td>
<td>1</td>
<td>0.6</td>
<td>1.1</td>
</tr>
<tr>
<td>35</td>
<td>1</td>
<td>0.6</td>
<td>1.7</td>
</tr>
<tr>
<td>40</td>
<td>7</td>
<td>4.0</td>
<td>5.6</td>
</tr>
<tr>
<td>44</td>
<td>1</td>
<td>0.6</td>
<td>6.2</td>
</tr>
<tr>
<td>45</td>
<td>2</td>
<td>1.1</td>
<td>7.3</td>
</tr>
<tr>
<td>48</td>
<td>1</td>
<td>0.6</td>
<td>7.9</td>
</tr>
<tr>
<td>50</td>
<td>34</td>
<td>19.2</td>
<td>27.1</td>
</tr>
<tr>
<td>51</td>
<td>1</td>
<td>0.6</td>
<td>27.7</td>
</tr>
<tr>
<td>55</td>
<td>7</td>
<td>4.0</td>
<td>31.6</td>
</tr>
<tr>
<td>59</td>
<td>1</td>
<td>0.6</td>
<td>32.2</td>
</tr>
<tr>
<td>60</td>
<td>30</td>
<td>16.9</td>
<td>49.2</td>
</tr>
<tr>
<td>64</td>
<td>1</td>
<td>0.6</td>
<td>49.7</td>
</tr>
<tr>
<td>65</td>
<td>15</td>
<td>8.5</td>
<td>58.2</td>
</tr>
<tr>
<td>66</td>
<td>1</td>
<td>0.6</td>
<td>58.8</td>
</tr>
<tr>
<td>67</td>
<td>1</td>
<td>0.6</td>
<td>59.3</td>
</tr>
<tr>
<td>68</td>
<td>2</td>
<td>1.1</td>
<td>60.5</td>
</tr>
<tr>
<td>70</td>
<td>19</td>
<td>10.7</td>
<td>71.2</td>
</tr>
<tr>
<td>71</td>
<td>1</td>
<td>0.6</td>
<td>71.8</td>
</tr>
<tr>
<td>74</td>
<td>1</td>
<td>0.6</td>
<td>72.3</td>
</tr>
<tr>
<td>75</td>
<td>9</td>
<td>5.1</td>
<td>77.4</td>
</tr>
<tr>
<td>78</td>
<td>2</td>
<td>1.1</td>
<td>78.5</td>
</tr>
<tr>
<td>79</td>
<td>2</td>
<td>1.1</td>
<td>79.7</td>
</tr>
<tr>
<td>80</td>
<td>16</td>
<td>9.0</td>
<td>88.7</td>
</tr>
<tr>
<td>82</td>
<td>2</td>
<td>1.1</td>
<td>89.8</td>
</tr>
<tr>
<td>84</td>
<td>1</td>
<td>0.6</td>
<td>90.4</td>
</tr>
<tr>
<td>85</td>
<td>1</td>
<td>0.6</td>
<td>91.0</td>
</tr>
<tr>
<td>86</td>
<td>1</td>
<td>0.6</td>
<td>91.5</td>
</tr>
<tr>
<td>89</td>
<td>3</td>
<td>1.7</td>
<td>93.2</td>
</tr>
<tr>
<td>90</td>
<td>5</td>
<td>2.8</td>
<td>96.0</td>
</tr>
<tr>
<td>93</td>
<td>1</td>
<td>0.6</td>
<td>96.6</td>
</tr>
<tr>
<td>95</td>
<td>1</td>
<td>0.6</td>
<td>97.2</td>
</tr>
<tr>
<td>99</td>
<td>1</td>
<td>0.6</td>
<td>97.7</td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.3</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Total | 177 | 100.0 |

Mean = 64.48, SD = 15.05
REFERENCES


Chappell, G. "The Effect of Frequent, Ongoing Contact With An Old Person On Young Children's Attitudes Toward the Elderly." Doctoral dissertation, American University, 1977. (University Microfilms No. 77-25619)


Leitner, M. J. "The Effects of Intergenerational Music Activities On Senior Day Care Center Participants and Elementary School Children." Doctoral dissertation, University of Maryland, 1981. (University Microfilms No. 82-02620)


Olson, R. A. "Children's Understanding and Attitudes About Aging." Doctoral dissertation, University of Missouri, 1980. (University Microfilms No. 81-08838)


