A Comparison of Two Methods of Presenting Nutrition Education to Senior Citizens Participating in a Congregate Meal Program

Janice M. Williams
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A COMPARISON OF TWO METHODS OF PRESENTING NUTRITION EDUCATION TO SENIOR CITIZENS PARTICIPATING IN A CONGREGATE MEAL PROGRAM
by
Janice M. Williams

A Thesis Submitted to the Faculty of the Graduate College in partial fulfillment of the requirements for the Degree of Master of Arts Department of Consumer Resources and Technology

Western Michigan University Kalamazoo, Michigan April 1984
Senior citizens participating in a congregate meal program received nutrition education lessons in two different ways. One group received nutrition lectures, a second group received nutrition lectures accompanied by printed material. A third group served as a control. Each group contained an urban and rural site. The nutrition lectures and printed material centered on the Basic Four food groups. The lessons were presented to the subjects once a week in four successive weeks. The length of the nutrition lecture for each food group was twenty minutes. The senior citizens took pre and posttests to measure an increase or decrease in test scores. The urban lecture/booklet group showed the greatest improvement on the posttests than the urban control and lecture group in three out of four lessons. There were no significant differences in any of the rural posttests of any of the treatments.
ACKNOWLEDGEMENTS

I am deeply indebted to Dr. Maija Petersons for her guidance and the hours of struggle and enthusiastic support she gave me during the course of this study and throughout my academic career at Western Michigan University. I would like to thank Dr. Susan Coates and Dr. James Bosco for their constructive criticism of my work while serving as my committee members. I am also indebted to Dr. Janis Van Buren for her unending encouragement and support as well as her valuable ideas for the construction of this study. My thanks to Daryl Stamm for his excellent and humorous illustrations in the booklet. Thanks also goes to Dr. James Van Buren for helping tame the statistics monster. I would also like to thank Gordon Food Service for printing and packaging the nutrition education booklet. It was greatly appreciated. Madolyn Willbrandt has my undying gratitude for typing this manuscript under what has been at best, trying conditions.

Janice M. Williams
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WESTERN MICHIGAN UNIVERSITY M.A. 1984

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CHAPTER I

INTRODUCTION

The elderly segment of the population is growing more rapidly than any of the other segments. Within a period of eighty years, the number of elderly in the United States increased from 3.1 million in 1900 to nearly 25.5 million in 1980, and is expected to reach 35 million by the year 2000 (AARP, 1983).

The growth of this segment of the population has also meant increased demands of agencies and organizations to deal with the special needs of the elderly. A major concern of the organizations has been the unique nutritional needs and the nutrition education issues relating to the elderly. The elderly population has only limited access to nutrition education resources because of prohibitive cost, lack of publicity, inappropriateness of available information for the older individual, and ethnic, cultural, and language diversity of the aged that have not been considered in designing nutrition information (Posner, 1982). Efforts are being made by various organizations and conferences to call attention to these special needs of the elderly and formulate policies to deal with the issue of aging.

The Problem

The problem of this study was to design and evaluate nutrition education programs for the elderly. Two different methods of presenting the nutrition material were utilized to determine which
methods of presenting the nutrition material had the most impact on the elderly subjects.

Its Significance

As people age, they are increasingly susceptible to the incidence of chronic diseases and illnesses. The four most prevalent chronic conditions of the elderly are arthritis, heart disease, hypertension, and diabetes (Kohrs, 1982). Nutrition is believed to play a role in the management of three of these: heart disease, diabetes, and hypertension, but severe dietary modifications combined with a lack of appetite in the older person may cause primary malnutrition, which may be more detrimental than the effect of a less restrictive diet on the chronic condition (Kohrs, 1982).

The concept of "preventive" strategies are also being considered and include: (a) maintaining ideal body weight, (b) reducing total fat and specifically saturated fat, (c) increasing complex carbohydrates as a percent of calories, and (d) increasing "fiber" intake (Posner, 1982). The elderly are clearly in need of nutrition education but there is a scarcity of information on how best to present it.
CHAPTER II

REVIEW OF SELECTED LITERATURE

The problem of nutritional vulnerability in the elderly has other contributing factors that must be considered in order that the nutrition education material reflects these needs. A review of these factors follows.

Physical Changes in the Body

The human body undergoes physical changes as it passes through the decades of life. These changes may contribute to the dietary inadequacy of the elderly.

Poor dental practices and oral disorders may lead the elderly to consume softer, higher carbohydrate foods and reduce the intake of foods that are difficult to chew, such as meat (Learner and Kivett, 1981). Higher taste and smell thresholds are known to decrease preferences for some foods and increase the desire for others (Learner and Kivett, 1981).

Normal alterations in the alimentary tract that increase the incidence of constipation and flatulence may cause the elderly to modify their diets to include foods that contain less fiber and fewer gasforming foods (Learner and Kivett, 1981).

Chronic disease conditions and poor health are widespread among the elderly populations; the older person is often put on a restricted or modified diet. In turn, the elderly may find it difficult to stay on a special diet due to unfamiliarity with changes in the food
preparation, lack of convenience, and increased cost (Learner and Kivett, 1981).

While clinical signs of nutritional deficiency diseases are rare, deficiency of specific nutrients and obesity are common among the elderly. Nutrients most frequently found to be deficient in the diets of persons past 59 years are kilocalories and calcium, and that protein and niacin were the nutrients most frequently found to be adequate. (Learner and Kivett, 1981; Grandjean, Korth, Kara, Smith and Schaefer, 1981). Learner and Kivett (1981) cite evidence that while the longterm consequences of marginal nutrition are not clear, there seems to be a link between such chronic diseases as osteoporosis, peridontal disease, arteriosclerosis, cardiovascular diseases, hypertension, and diabetes to dietary practices over the lifespan.

There is reason to be concerned about nutrition education for the elderly when considering the physical changes in their bodies and their need to know how best to deal with these changes. The nutrition information that the elderly receive may be the first step in maintaining a healthy lifestyle.

Nutrition Education Presentations

Nutrition has been presented to seniors in a variety of methods. A discussion of some of these methods follows.

Nursing home residents were presented with an eight week nutrition program as reported by Sooja, Schriver, and Campbell (1981). The goal of the study was to see if the use of informal
group discussions, demonstrations, audience participation and individual counseling would be effective in improving the diets of the nursing home residents.

The program was apparently presented by "young people" and the sessions were videotaped. This researcher was interested in the videotaping of the nutrition lessons since this device could be used in a program with many senior center sites. The nutrition education sessions were played back immediately after lunch to provide review, which worked well except that the residents were more interested in seeing people they knew on television rather than the nutrition program. There was no mention made of the type of nutrition information being presented to the residents.

During treatment, the residents showed improvement in their dietary intake, which was measured by trained dietary observers. The observers recorded the menu items served to and eaten by each subject and were measured on a gram scale. Mean daily intakes for each group were evaluated against the Recommended Dietary Allowances (RDA) for adequacy, and were analyzed by multivariate analysis of variance to determine significant changes in the periods during and after the presentation of the program. The improvements in the resident's dietary intake was not sustained during the post-treatment period. It appears the residents responded to the increased attention rather that the nutrition education program. (Sooja, Schriver, and Campbell, 1981).

Sorenson and Ford (1981) were concerned with getting nutrition information to the rural elderly. They wanted to see if a seven
hour workshop would have a behavior change in the dietary practices of the elderly. The teaching team of health care specialists gave the program which included lecture segments reinforced by audio-visual materials, demonstrations, audience participation activities, group discussions, and individual consultation. Each participant was given a packet of materials before the program began.

The evaluation made by the participants after the program was very favorable as to the information presented, teaching styles, and the types of activities used. The only problem identified was that the seven hour program was taxing on the elderly.

The second evaluation addressing behavior change was sent out two weeks after the workshop. The results indicated that the dietary patterns of the rural elderly were being changed for the better, such as an alteration of diet patterns and/or weight loss (Sorenson and Ford, 1981).

Rae and Burke (1978) wanted to see if the elderly could achieve weight losses and improve their knowledge of nutrition and food selection by participating in a community nutrition services clinic. One-on-one interviews were utilized, with the first interview lasting fifty minutes and subsequent follow-up visits lasting twenty minutes. Clients also attended meetings designed for weight and diabetes control. Teaching aids such as food-habit records, food models, slides of nutrition information, and recipe-testing sessions were used. A questionnaire testing nutrition knowledge was administered before and after the study.
Data indicated that only three percent of the clients achieved their goal for weight loss. While this may be small, it was based on a short time period (number of clients seen two or more times).

Recommendations made by the nutritionists to the elderly clients relating mainly to choice of food, quantities of food needed, and caloric intake showed a high level of acceptance. The least accepted item of recommendation was increasing the level of activity. Of the elderly seen two or more times, only eleven percent had initial scores of good or very good; this increased to forty-six percent by the last visit (Rae and Burke 1978).

The evidence presented shows that the elderly are in need of and are receptive to nutrition education. The nutrition education will need to be multi-faceted in order to meet the various needs of the elderly. Social and economic factors, health and personal factors, as well as nutrition knowledge are the various areas that need to be targeted in relation to nutrition education.

The current study utilized the participants in the Community Action Agency of South Central Michigan Senior Nutrition Program in Battle Creek as the subjects for nutrition education. This particular nutrition program has access to a large number of seniors, and is required to present nutrition education to its participants at least once a month.

The senior citizens in this program are used to having speakers come in and make presentations to them. On occasion a program requiring the active participation of the seniors has been
tried, but the seniors felt uncomfortable in these situations. This factor was considered when choosing a method of presenting nutrition education to the seniors. The participants at the congregate nutrition sites are also used to getting printed material concerning various topics of interest to them. The staff has learned that printed material will be utilized by the seniors if it is printed so that they can read it (large type) and packaged attractively.

It was decided to test two different methods of nutrition education presentations: nutrition lectures and nutrition lectures accompanied by printed nutrition material. The seniors would feel comfortable with these two methods since they were already in use at the sites, and would not disrupt the regular routine. There was no extra cost involved with the printed materials, and no extra personnel would be needed to present the nutrition education lessons.

The researcher utilized the observation made by Sorenson and Ford about the length of nutrition education presentations. Because of the observations of Sorenson and Ford, the nutrition education program in the current study was limited to twenty minutes at the maximum. The lessons would be presented before lunch was served to assure that the maximum number of seniors would be present. The seniors were usually in a hurry to leave after lunch was served, or have to leave at a certain time if they were using the van for transportation. The twenty minutes included filling out the questionnaires, presentation of the lesson, and the time for comments.
CHAPTER III
DESIGN AND METHODOLOGY

Data Collection

Senior citizens participating in a congregate nutrition program took part in the study. The subjects were located at six different nutrition sites, three of which were rural and three were urban. The study used rural and urban nutrition sites since the total nutrition program covers two counties and the split between rural and urban is about fifty-fifty. Information about age, sex, and level of education was obtained from each subject.

The subjects, male and female ranged in age sixty years to ninety-five years, with the mean at seventy-five years. Education levels varied from fourth grade to Master's Degree, with the average mean of education at the ten to twelve year category of completion. There were approximately five times as many females participating in the study as there were males. Not all senior citizens participated in all the lessons, some participated only in one or two.

There were three groups, two of which received the same nutrition education material, but presented in a different method. Each group contained one urban and one rural site. One group served as a control, a second group received nutrition lectures, and the third group received both the nutrition lectures and printed nutrition materials.

The nutrition lessons were centered around the Basic Four:
milk and milk products, meat and meat substitutes, fruits and vegetables, and breads and cereals. The lessons were presented to the subjects once a week in four successive weeks.

The printed nutrition material used large type, with black print on white paper, and was packaged in a booklet form. The information used in the printed materials was the same information that comprised the nutrition lecture. The same person presented all the nutrition lectures.

Those subjects who had the printed nutrition materials utilized the materials at the nutrition site only on the appointed day. The booklet could be taken home only after all the food groups had been covered.

A sample nutrition education lesson and questionnaire were pretested at a site not participating in the study.

The subjects of all participating groups completed a pretest on the particular food group before the lesson was given. A posttest on the same food group was administered one week later along with the pretest of the next food group. The pre and posttests were five questions long. Each group had a definite day of the week that the tests and lessons were given. The test scores for the subjects at each site were recorded so that the comparison could be made between the pre and posttests.

Different methods of dealing with the illiterate elderly were used so that they too, could participate in the study. The printed nutrition education information was read to them if necessary, as were the questionnaires. The seniors then told the
person helping them which answer they wanted marked on the
questionnaire.

In many cases it is difficult for seniors to hear and see a
speaker in large groups. A traveling microphone was utilized in
this study to help alleviate some of that problem.

Hypotheses

The nutrition program has the potential of reaching a large
number of elderly. Utilizing this program would be one method of
dispensing nutrition education to the older population. The
type of nutrition education needed or desired by the elderly varies
from individual to individual. Therefore, for the purposes of
this study, it was hypothesized that senior citizens receiving
nutrition education lectures accompanied by printed nutrition
education material, would have a greater increase in nutrition
knowledge scores than senior citizens receiving nutrition education
lectures only. Those senior citizens receiving nutrition education
lectures would have a greater increase in nutrition knowledge
scores than those senior citizens designated as the control group.

Stated in the null form, it was hypothesized that there would
be no difference in nutrition knowledge scores between those
subjects receiving no treatment, those receiving nutrition lectures
with printed nutrition material, and those receiving nutrition
lectures only.
Data Analysis

After the final lessons were completed, the scores were compiled and the means and the standard deviations calculated. The small-sample confidence interval (Steel and Torrie, 1960) was used to calculate and estimate the common standard deviation for each lesson and each treatment group. Fisher's Least Significant Difference formula (Steel and Torrie, 1960) was used in determining population mean differences between pre and posttests.
CHAPTER IV

FINDINGS

Significant differences were found among pretest scores. The urban control group scored significantly higher on the milk, fruits/vegetables and bread pretest than any other urban group (see table 1). The urban lecture group scored as high as the urban control group on the bread pretest, while in the meat pretest there were no significant differences among urban groups. There were no significant differences among any rural groups on the pretest scores.

Table 1
Mean scores and standard deviation of scores on the pretest of control and treatment groups.

<table>
<thead>
<tr>
<th></th>
<th>Control Mean</th>
<th>Control Standard Deviation</th>
<th>Lecture Mean</th>
<th>Lecture Standard Deviation</th>
<th>Lecture/Booklet Mean</th>
<th>Lecture/Booklet Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3.000</td>
<td>1.069</td>
<td>3.185</td>
<td>0.921</td>
<td>3.420</td>
<td>0.787</td>
</tr>
<tr>
<td>Urban</td>
<td>4.000</td>
<td>1.171</td>
<td>2.800</td>
<td>0.775</td>
<td>2.889</td>
<td>1.167</td>
</tr>
<tr>
<td>Meat</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3.425</td>
<td>1.098</td>
<td>3.590</td>
<td>0.908</td>
<td>2.778</td>
<td>0.972</td>
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<tr>
<td>Urban</td>
<td>3.417</td>
<td>0.974</td>
<td>3.610</td>
<td>0.776</td>
<td>2.875</td>
<td>0.991</td>
</tr>
<tr>
<td>Fruits/Veg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1.708</td>
<td>0.892</td>
<td>1.765</td>
<td>0.831</td>
<td>1.940</td>
<td>0.827</td>
</tr>
<tr>
<td>Urban</td>
<td>2.291</td>
<td>1.122</td>
<td>1.301</td>
<td>0.498</td>
<td>1.200</td>
<td>0.789</td>
</tr>
<tr>
<td>Breads</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1.578</td>
<td>0.866</td>
<td>2.214</td>
<td>1.188</td>
<td>2.063</td>
<td>1.063</td>
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<tr>
<td>Urban</td>
<td>2.000</td>
<td>0.885</td>
<td>2.050</td>
<td>0.999</td>
<td>1.167</td>
<td>0.718</td>
</tr>
</tbody>
</table>

Means with a different superscript (a,b) are significantly different (PL .05).

Calculations among the posttest scores showed that there were no significant differences between the control, lecture, and
lecture/booklet group with the exception that the urban control group scored higher on the fruit/vegetable posttest than either treatment group (see table 2).

Table 2

<table>
<thead>
<tr>
<th></th>
<th>Control Mean</th>
<th>Standard Deviation</th>
<th>Lecture Mean</th>
<th>Standard Deviation</th>
<th>Lecture/Booklet Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Milk</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3.100</td>
<td>1.036</td>
<td>4.074</td>
<td>0.997</td>
<td>3.857</td>
<td>1.215</td>
</tr>
<tr>
<td>Urban</td>
<td>3.560</td>
<td>1.157</td>
<td>3.530</td>
<td>0.915</td>
<td>4.000</td>
<td>1.118</td>
</tr>
<tr>
<td><strong>Meat</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>3.531</td>
<td>0.952</td>
<td>3.863</td>
<td>1.037</td>
<td>3.667</td>
<td>1.581</td>
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<tr>
<td>Urban</td>
<td>3.125</td>
<td>1.035</td>
<td>4.056</td>
<td>0.938</td>
<td>3.750</td>
<td>0.707</td>
</tr>
<tr>
<td><strong>Fruits/Veg.</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1.833</td>
<td>0.907</td>
<td>2.059</td>
<td>1.088</td>
<td>2.059</td>
<td>1.088</td>
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<tr>
<td>Urban</td>
<td>2.416*</td>
<td>1.213</td>
<td>1.524*</td>
<td>0.750</td>
<td>1.700*</td>
<td>1.160</td>
</tr>
<tr>
<td><strong>Breads</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>2.516</td>
<td>1.065</td>
<td>3.143</td>
<td>1.099</td>
<td>2.375</td>
<td>1.544</td>
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<tr>
<td>Urban</td>
<td>2.083</td>
<td>1.100</td>
<td>1.850</td>
<td>0.933</td>
<td>2.417</td>
<td>0.900</td>
</tr>
</tbody>
</table>

Means with a different superscript (a,b) are significantly different (PL .05).

There were no differences between the urban lecture and urban lecture/booklet treatment group when the pre and posttest scores were compared. However, the pre-post score differences were significantly greater for both urban treatment groups compared to the control group for the milk and meat tests (see table 3). This may be due to the fact that the urban control group actually had lower scores on the posttest compared with the pretest.
Table 3
Pre/Posttest Treatment Difference

<table>
<thead>
<tr>
<th></th>
<th>Control Mean</th>
<th>Standard Deviation</th>
<th>Lecture Mean</th>
<th>Standard Deviation</th>
<th>Lecture/Booklet Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Milk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>1.395</td>
<td>0.516</td>
<td>0.889</td>
<td>0.801</td>
<td>0.714</td>
<td>0.489</td>
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<tr>
<td>Urban</td>
<td>0.480</td>
<td>0.327</td>
<td>0.733</td>
<td>0.799</td>
<td>1.111</td>
<td>1.453</td>
</tr>
<tr>
<td>Meat</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Rural</td>
<td>0.106</td>
<td>1.068</td>
<td>0.273</td>
<td>1.032</td>
<td>0.889</td>
<td>1.364</td>
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<tr>
<td>Urban</td>
<td>0.292</td>
<td>1.459</td>
<td>0.444</td>
<td>0.984</td>
<td>0.875</td>
<td>0.991</td>
</tr>
<tr>
<td>Fruit/Veg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>0.146</td>
<td>1.148</td>
<td>0.294</td>
<td>1.104</td>
<td>0.118</td>
<td>1.269</td>
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<tr>
<td>Urban</td>
<td>0.125</td>
<td>1.393</td>
<td>0.476</td>
<td>0.805</td>
<td>0.500</td>
<td>1.080</td>
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<tr>
<td>Breads</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>0.622</td>
<td>1.093</td>
<td>0.929</td>
<td>1.328</td>
<td>0.313</td>
<td>1.350</td>
</tr>
<tr>
<td>Urban</td>
<td>0.125</td>
<td>1.227</td>
<td>-0.200</td>
<td>1.542</td>
<td>1.417</td>
<td>1.240</td>
</tr>
</tbody>
</table>

Means with a different superscript (a,b) are significantly different (P < .05).

The urban lecture/booklet group had a significantly greater improvement in its scores on the bread pre and posttest than the urban lecture and urban control group. There was no significant difference between the urban control and urban lecture group on the bread pre and posttest (see table 3).

There were no significant differences for the urban groups in the fruit/vegetable tests. There were no significant differences in any of the rural tests of any of the treatments.
CONCLUSIONS AND RECOMMENDATIONS

The null hypothesis was rejected in three out of four nutrition lessons presented in the urban group. Only in the bread lessons did the urban lecture/booklet group make significantly greater increases in scores compared with the urban lecture and urban control group. There were no differences in score improvement between urban lecture and urban control groups on the bread lesson. It is believed that the urban lecture group was losing interest in the nutrition lessons, which resulted in a lower score on the posttest. In the milk and meat tests there were no differences in score improvement between the urban lecture booklet and the urban lecture group. However, both treatment groups made significantly greater improvements in scores than did the urban control group. This may have been due to the fact that the urban control group scored lower on the posttest. The null hypothesis was supported in all four lessons in the rural groups.

The urban control group scored significantly higher in three pretests than any of the other urban groups. It is possible that the control group had previous exposure to the Basic Four food groups, or it may have the means to obtain nutrition education materials more easily than the other urban groups.

The fact that the urban control group was significantly lower than the other treatment in the pre/posttest differences for all the food groups except the fruits and vegetables, could be that
the subjects were uncertain if the answers given on the pretest were, indeed, correct. Changes in the answers may have been made on the posttest.

When checking the means of the treatments in each food group, it seems that the milk and meat group had higher means than the fruit/vegetable and bread groups. It may indicate that the seniors were less familiar with these last two food groups than the first two. A questionnaire covering various areas of general nutrition may be helpful in assessing the needs of the seniors, and prevent covering "old ground" or presenting topics that are not of interest to the elderly. It may also give an indication of the character of each site, and special problems that may need to be taken care of before implementing a study.

The short time utilized in this study for the presentation of the nutrition lessons may not have given the seniors time enough to assimilate the information and ask questions. Instead of a twenty minute presentation, a thirty minute program may cover the topic thoroughly and not have everyone feeling rushed.

The printed material was commented on favorably by the seniors. The print was large enough for them to see, and printed on white paper, not colored which can cause difficulty in seeing the print. The illustrations were also said to be helpful and humorous. The printed nutrition education material was packaged attractively for the senior to use both at the site, and at home as a reference.

The illiterate elderly need not be excluded from nutrition
education lessons in ways that isolate them from the main group. In this particular study, those seniors who couldn't read or write appreciated the efforts to include them in the lessons, and were just as interested in learning as the rest of the seniors were. The illustrations in the printed material also worked well with this group.

The traveling microphone utilized in this study was found to be helpful. The nutrition sites had different size rooms, large and small numbers of seniors, and varying degrees of deafness among the seniors. It is vital that the seniors can hear, otherwise they quickly lose interest in the program.

The weather can wreak havoc with a carefully planned study. The summer months would be the best time to conduct nutrition education studies or lessons. Bad weather keeps the elderly home, especially if they don't have reliable transportation. Transportation can be a problem for seniors who can no longer drive, afford the upkeep of a car, or live in rural areas.

The elderly can be suspicious of and hostile to anyone who ventures on their "turf" if they don't know who they are. This researcher was fortunate in that, as Director of the program, my credentials, so to speak, were known and approved. It would be smart politics to establish good relations with the groups of elderly taking part in the study before actually implementing it.

The older adult has had a whole lifetime to establish dietary
practices and may be reluctant to change these practices without knowing the reasons why. The manner in which the reasons are presented to them may influence the level of acceptance by the elderly. The method of presenting nutrition education to the elderly should include accommodation. Consideration must be given to the special needs of the elderly before designing the presentation.

While the method of using nutrition education lectures accompanied by printed material did not completely support the hypothesis, it will continue to be used at the senior nutrition program meal sites with minor modifications. The method was useful in that it can be adapted to the needs of each site and the personalities of the seniors. The seniors enjoyed receiving attractive looking materials that they can call their own and refer to when necessary. The material was easy for them to read and understand. The current study used basic nutrition information, but more complex materials can be adapted to this same format. The lessons were of short duration and not in danger of losing the attention of the older adults. The lessons were also adaptable for those seniors who were unable to read and otherwise might have felt left out.

It is sometimes thought that the elderly are too old to learn, or that they don't want to learn. There will always be some people that don't want to learn, yet this researcher found that most of the seniors in the study were interested in how their nutrition affects their daily lives and wanted to participate in
learning process.

Those working in the aging network have many demands on their time and energy, but nutrition education for the elderly needs to be a high priority. Senior citizens are too important a resource to ignore and fritter away through inattention.


Light, L. 1976. *Cameras help the Elderly to Improve Food Patterns.* *Journal of Nutrition Education.* 8: 80-82,


