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STUDY OF SENIOR CITIZENS IN FARGO, NORTH DAKOTA,  
AND THEIR PERCEPTION OF TELEVISION COMMERCIALS  
AND TELEVISION'S INFLUENCE ON MEDICATION-TAKING HABITS.

BY

JUDITH (LITO) WILKINSON

A thesis submitted  
in partial fulfillment of the requirements for the  
degree Master of Science  
Major in Journalism and Mass Communication  
South Dakota State University  
1983

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STUDY OF SENIOR CITIZENS IN FARGO, NORTH DAKOTA,  
AND THEIR PERCEPTION OF TELEVISION COMMERCIALS  
AND TELEVISION'S INFLUENCE ON MEDICATION-TAKING HABITS.

This thesis is approved as a creditable and independent investigation by a candidate for the degree, Master of Science and is acceptable for meeting the thesis requirements for this degree. Acceptance of this thesis does not imply that the conclusions reached by the candidate are necessarily the conclusions of the major department.

Richard W. Lee, Ph.D.  
Thesis and Major Advisor

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' ' /  
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## CHAPTER I

## INTRODUCTION

For many older individuals television may be one of the more important and influential aspects of their environment. Until recent years, the elderly, as a television audience, received little attention from those studying social behavior and even less from the broadcast industry itself. The influence of television commercials on older viewers is only partially researched. The impact of nonprescribed drug advertisements on the elderly is not known although 50 percent of over-the-counter medications are believed to be purchased by this age group.<sup>1</sup> The purpose of this study was to investigate the elderly's perception and use of television commercials, especially those for nonprescribed drug products.

Elliot Schreiber and Douglas Boyd, colleagues in the Department of Communication at the University of Delaware, conducted a study in 1980 to find out whether the elderly found television commercials useful in making consumer decisions and what other factors might affect their perception of television advertising. These researchers used a self-administered questionnaire to survey 442 persons at group meetings in senior centers and apartment houses for the elderly in Wilmington, Delaware.<sup>2</sup>

The present study was initiated to determine if the same results would be obtained when elderly persons were interviewed individually about their media habits and perceptions of television advertising. The author went a step further and asked participants specifically about

television were designed for the young and had little appeal for them.<sup>5</sup> A survey conducted in 1971 by Richard Davis, publications editor for the Gerontology Center at the University of Southern California, reported nearly 80 percent of respondents denied television advertising influenced their buying habits.<sup>6</sup>

But the 1980 study by Elliot Schreiber and Douglas Boyd found elderly persons had generally a high regard for television advertising. These investigators reported that 68 percent of the elderly they surveyed said commercials were "often" or "always" useful to them, while only 30 percent found commercials never useful.<sup>7</sup>

Commercials chosen as most useful and best-liked in this study were those for food and health products (e.g., Geritol, denture cream). Heavy viewers, defined as those who watch three or more hours of television each day, were more likely to find commercials useful than were lighter viewers, those watching one to two hours daily.<sup>8</sup>

Findings in these studies that health product commercials were favored and that heavy viewers were more likely to find television commercials useful takes on greater significance when coupled with another aspect of aging--the increase in chronic disease and consequent increase in drug use.

Approximately 77 percent of the elderly are taking drugs, the number of drugs increases with age. Almost 40 percent of the elderly must take at least one drug per day to be able to perform the activities of daily living, and as many as 70 percent of elderly persons use self-selected over-the-counter drugs, usually without discussing it with either their physician or pharmacist.<sup>9</sup>

Because the elderly are more likely to have multiple chronic illnesses they are prescribed more medications than any other age group. While persons over 65 constitute 11 percent of the population, they consume over 25 percent of all prescription medications sold in the United States.<sup>10</sup>

Although nonprescribed drug use by the elderly is not as well defined as prescribed drug use, this age group has been reported to purchase half of the nonprescription drugs bought over-the-counter. Almost one-third of the elderly take over-the-counter medications even when they are not feeling ill.<sup>11</sup>

The concomitant use of prescribed and nonprescribed drugs by the elderly has some risk. Over 80 percent of acute drug reactions leading to hospitalizations among the elderly were found to involve the misuse or abuse of legally manufactured and distributed drugs. In another study, about 40 percent of hospitalizations of persons 61 years and older were drug related, a rate disproportionately higher than drug-related admissions of persons under 61.<sup>12</sup>

Several factors contribute to the misuse or abuse of drugs by the elderly: lack of proper instructions, hazards of over-the-counter medications, and loss of sensory capacities. The elderly's lack of knowledge about drugs contributes greatly to improper use of medications. Several studies report misunderstandings regarding the use of both prescribed and nonprescribed medications.

Nearly 90 percent in one senior citizen study thought over-the-counter medicines were completely safe because they could be purchased without a prescription. Two-thirds of this sample reported

not reading the labeled directions for nonprescribed medications.<sup>13</sup>

In the case of self-medication a high reliance is placed on lay rather than professional advice. Advertising was found second only to friends and relatives as the source of recommendation for the use of nonprescribed drugs. Pharmacists were mentioned last as sources of advice.<sup>14</sup>

The elderly find nonprescription drugs particularly appealing for several reasons. Nonprescription drugs are relatively inexpensive, widely accessible, and by and large, effective in providing relief from a wide array of symptoms. Advertisements for nonprescribed health products can be very persuasive as Goldberg observes:

The neighborhood pharmacy, supermarket, shopping mall chain pharmacy, health food store, and department store all carry these drugs. Radio, TV, newspapers, magazines, yes, even coupons entice everyone, everyday, to buy and use marvelous medications. Their potency, reliability, and safety are supported by studies conducted in large university hospitals, by claims that seven out of ten physicians or dentists or pharmacists recommend them. And we can see for ourselves in living color how the drugs race through our plastic model bodies, coating, draining, soothing, relaxing, stimulating, and alleviating. Wonderful!<sup>15</sup>

One aspect of nonprescribed medicine use which has not received sufficient attention is the influence of media advertising, particularly television commercials, on the elderly's preference, knowledge and use of over-the-counter medications.

Given the growth of the elderly population and the large share of the television viewing audience this age group represents, this study explores:

- 1) How are television commercials generally perceived by persons

over age 65;

2) To what extent do television commercials influence preference, knowledge, and use of over-the-counter medications;

3) Is there a relationship between increased television viewing and a corresponding rise in the use of nonprescribed medications.

The extent to which daily television viewing influences perception of television commercials and medication-taking habits of the elderly will be studied. In addition, socio-demographic factors will be identified that demonstrate an effect on perception of television commercials and patterns of medication use reported by this study population.

Results of the study will provide further insight into how elderly Americans currently perceive and use television advertising. Results may also point to a need for more information regarding safe use of medications should elderly people be found more influenced by health product commercials and using greater numbers of nonprescribed drug products than younger members of the population.

### Definition of Terms

Several terms used through the thesis should be defined. They will be defined as follows:

Elderly--This term refers to persons age 65 and over.

Over-the-counter--For the convenience of discussion in this thesis, the phrases nonprescription and over-the-counter will be used interchangeably to refer to those items purchased in a variety of stores for the purpose of alleviating minor ailments. These products, like aspirin, antacids and laxatives, do not require the advice or prescription of the physician.

Medication/drug--These terms will be used interchangeably in referring to both prescribed and non-prescribed preparations.

Footnotes

<sup>1</sup>Jill David, "Do-it-yourself Medicine--3," Nursing Times (February 26, 1981): 371-72.

<sup>2</sup>Elliot S. Schreiber and Douglas A. Boyd, "How the Elderly Perceive Television Commercials," Journal of Communication 30 (Winter 1980): 61-70.

<sup>3</sup>Lynn W. Phillips and Brian Sternthal, "Age Differences in Information Processing: A perspective on the Aged Consumer," Journal of Marketing Research 14 (November 1977): 444-57.

<sup>4</sup>Robert W. Kubey, "Television and Aging: Past, Present, and Future," The Gerontologist 20 (February 1980): 16-35.

<sup>5</sup>Ibid., p. 29.

<sup>6</sup>Richard H. Davis, "Television and the Older Adult," Journal of Broadcasting 15 (Spring 1971): 153-59.

<sup>7</sup>Schreiber and Boyd, p. 63.

<sup>8</sup>Ibid., p. 64.

<sup>9</sup>Peter P. Lamy, "Drug Interactions and the Elderly - A New Perspective," Drug Intelligence and Clinical Pharmacy 14 (July/August 1980): 513-15.

<sup>10</sup>Dorothy V. Lundin et al., "Education of Independent Elderly in the Responsible Use of Prescription Medications," Drug Intelligence and Clinical Pharmacy 14 (May 1980): 335-42.

<sup>11</sup>David, p. 372.

<sup>12</sup>Lundin et al., p. 336.

<sup>13</sup>J. Daniel Robinson and Ronald B. Stewart, "Understanding Their Nonprescription Needs," American Pharmacy 21 (November 1981): 48.

<sup>14</sup>Patrick J. Kiernan and Jeffrey B. Isaacs, "Use of Drugs by the Elderly," Journal of the Royal Society of Medicine 74 (March 1981): 196-200.

<sup>15</sup>Paula B. Goldberg, "How Risky is Self-care with OTC Medicines?" Geriatric Nursing 1 (November/December 1980): 279-80.



## Chapter II

### REVIEW OF LITERATURE

In 1979, there were approximately 24 million persons over the age of 65 (aged), and an additional 20 million persons between 55 and 64 years of age (aging). This represents 21 percent of the total population in the United States.<sup>1</sup>

For these aging and aged persons, watching television has been identified the dominant leisure-time activity. DeGrazia analyzed data from a national survey in 1961 and found that over 50 percent of persons aged 60 and above mentioned "watching television" more than any other activity "engaged in yesterday."<sup>2</sup> Similarly, in a 1969 survey of 5,000 Social Security beneficiaries in four areas of the United States, Schramm found that the most frequently named daily activity was watching television.<sup>3</sup> Louis Harris conducted a national survey in 1975, which included nearly 2,800 persons over age 65 in its sample, and observed that regardless of income or educational level, more persons 65 and over made use of television than any other mass medium.<sup>4</sup>

A number of research studies have established that, on the average, older persons view from three to five hours of television daily, or from 21 to 35 hours weekly.<sup>5</sup> Nielsen ratings have estimated that among persons over 55, women watch approximately 37 hours and men 33 hours of television per week.<sup>6</sup>

Two studies by Davis in 1970 and 1971 uncovered considerable discrepancies between self-reported viewing by the elderly and Nielsen estimates for the same period. More than 75 percent of respondents in

each of these surveys said they watched television five hours a week or less, in contrast to Nielsen figures for 1971 and 1973 of four to six times higher, that is 25 to 35 hours a week per aged person.<sup>7</sup>

Therefore, in their 1976 study, Davis et al., installed Rustrack event recorders in television sets to more accurately document length of viewing time. Results showed that the 215 elderly in this survey watched television 3.4 hours daily, or nearly 24 hours per week. These findings generally conform to 1976 Nielsen figures that men and women over 50 watch an average of 32 to 35 hours of television per week, respectively. No direct audience age comparisons can be made because Nielsen did not give an age breakdown above the age of 50 in its annual report.<sup>8</sup>

Research studies, conducted in settings with various levels of confinement and independence, show that the importance of television viewing for older people is relatively independent of their living arrangements. For example, Doolittle conducted an in-depth survey of 108 participants at senior citizens centers in Indiana in 1977. A majority (82 percent) of the sample reported watching television daily, with the mean daily viewing time just over four hours.<sup>9</sup>

Similarly, in 1980, Boyd and Schreiber surveyed 442 independent elderly in Delaware and found that nearly 90 percent reported watching television everyday, with two-thirds of the sample (64 percent) watching three or more hours per day.<sup>10</sup> Also in 1980, Korzenny and Neuendoff interviewed 112 individuals age 60 and over in their residences of a medium sized Midwestern community. Their average weekly exposure to television was reported to be 4.5 hours per day, or 31.5 hours per

week.<sup>11</sup>

Most recently, Rubin and Rubin interviewed 128 hospitalized patients in a Wisconsin community in 1982 and reported that patients 60 and over, who rented the hospital's television service, watched an average of five hours of television per day. The same investigators found that for a different Wisconsin sample of 340 persons age 55 and over, who were interviewed at home or at senior group meetings that same year, daily television viewing averaged nearly five hours.<sup>12</sup>

Not only are the elderly frequent viewers of television, but such activity increases with age.<sup>13</sup> An extensive nationwide survey on aging by Louis Harris and Associates found that television viewing continued to increase until age 70, after which it declined slightly. Even for those over 80, viewing levels remained higher than for any age group younger than 64. Furthermore, older adults plan their viewing and carefully allot time for favorite programs.<sup>14</sup>

Several studies report that with increasing age news and information programming, including talk-interview shows (such as "Donahue") and documentary-magazine programs (such as "60-Minutes") are programs consistently preferred. Elderly persons are also partial to game shows, light music programs and family dramas.<sup>15</sup>

The personal motives and social gratification of older viewers are less clearly defined than are their viewing patterns and preferences. Information and entertainment have been identified as salient motivations for viewing, in addition to social engagement, companionship and compensation.<sup>16</sup>

The information function of media for older persons is emphasized

by both Davis and Wenner. Davis proposes:

Perhaps this more mature audience attributes greater value to that which can be readily identified as practical information rather than that which seems to only have an entertainment function.<sup>17</sup>

To explain the elderly's preference for non-fiction programming, Wenner suggests that the elderly's need to know exceeds their desire for pure diversion. Because many of the elderly are retired, it is plausible television is not depended upon for relaxation after a day's work as it frequently is for the younger population.<sup>18</sup> Further supporting this notion, Doolittle reported that news usage in all media is highest among those elderly who have the least social interaction.<sup>19</sup>

Television also serves a companionship function in the lives of older persons. Schramm concludes that mass communications serve as a deterrent to social disengagement of the elderly by maintaining their sense of participation in society.<sup>20</sup>

Television can substitute for the face-to-face communication among those older persons who are physically isolated. As Hess states:

Television permits the older person, especially those who live alone, to maintain the illusion of being in a populated world, and to this extent must reduce feelings of isolation.<sup>21</sup>

Hess also noted that television personalities can become substitutes for individuals no longer available to the viewer on a daily basis, and that the afternoon soap operas "bring people into their lives."<sup>22</sup>

Graney sums up the function of mass communications in maintaining the social-psychological well-being among older people:

The media of mass communication are valuable and socially acceptable resources to the aging individual because they can be used anonymously, inexpensively, and more or less at will.<sup>23</sup>

The withdrawal of the elderly population from active participation in the mainstream of modern American society, encouraged for economic and other reasons, tends to severely limit their realm of social activity. Television has increasingly come to represent a unique opportunity for the aged to entertain themselves and to survey their environment.<sup>24</sup>

At the same time, due to its pervasiveness and documented popularity among them, television has the potential to shape the ways in which the aged see themselves, both as individuals and as members of society. As Ward explains:

A person's world view and self-perceptions are based in large part on his interaction and self-comparison with others, particularly through self-assignment to reference groups . . .<sup>25</sup>

Television may become the social referent for many elderly individuals whose social interaction is curtailed, and their self-concept may be particularly affected by the nature of what they see and perceive on television.<sup>26</sup>

Research has only begun to examine the association among older persons' needs and motivations for watching television, and viewing behaviors and attitudes. However, a 1980 study by Korzenny and Neuendorf provides an initial comparison between patterns of television viewing and an individual's self concept.

This investigation demonstrated that older people who watch a lot of television tended to have poorer "self-concepts" and were more

likely to watch fantasy content and for escape. Old people with more positive self-concepts tended to prefer reality content and also perceived the aged portrayed on television as assets, not hindrances to society. The link established between self-concept and television content in this research is an important one, for previous content analysis studies have pointed out both infrequent and highly stereotypic portrayals of the aged on television.<sup>27</sup>

Several investigators have reported that television programs and advertising often present inaccurate and misleading representations of the elderly.

Examining videotapes of prime-time dramatic programming from 1969 to 1971, Arnoff found the elderly comprised less than 5 percent of nearly 2,800 television characters monitored, or about half their share of the real population. The aging process was associated with increasing evil, failure, and unhappiness according to this researcher. Only 40 percent of older males and 10 percent of female characters could be described as successful, happy and good. Arnoff also noted that older men outnumbered older women nearly three to one and that the average female character was almost 10 years younger than the male.<sup>28</sup>

Similarly, Northcott reported that not only do the elderly appear infrequently, they usually were characterized as incompetent and suffering a disproportionate amount of problems. Content analysis of 41 prime-time drama programs on commercial television networks in 1976 revealed elderly portrayals accounted for less than 2 percent of the 464 roles Northcott examined.<sup>29</sup>

When older persons did appear, they were portrayed as

ineffective in solving problems confronting crime, health or interpersonal crisis. Episodes were generally resolved by the mature adult male, who represents the dominant figure on television both in terms of competency and relative frequency.<sup>30</sup>

The problem of older persons on television is one of quality rather than quantity, according to a study by Harris and Feinberg in 1977. Expanding their inquiry beyond prime-time into several different segments and categories, these investigators observed and rated a total of 312 characters.

They found that although 8.3 percent of the characters could be categorized as over 60, their portrayal was "remarkably one-dimensional." Rarely were the elderly cast in well-developed characterizations exhibiting a wide range of emotions. There was, for example, not one romantic involvement in characters over 60 in this study.<sup>31</sup>

In addition, older characters were found two and one-half times more likely to be shown with health problems than all other characters. While health is in fact poorer among the aged, these researchers noted the significance of television writers choosing to reflect problems of failure rather than success for this age group.<sup>32</sup>

Also observed was the particularly harsh portrayal of older women on television. In contrast to men, women experience tragic declines in esteem as age increases note Harris and Feinberg.<sup>33</sup>

Results of a ten-year longitudinal study concur with the earlier findings that older people are both infrequently and negatively portrayed on television. Gerbner et al. examined over 1,300 dramatic

programs and over 16,000 characters on commercial television programs from 1969 through 1978.<sup>34</sup>

Their study revealed that while persons over 65 comprise 11 percent of the United States population, they make up less than 3 percent of the roles on fictional, prime-time television. Collaborating previous findings of Arnoff, these researchers found elderly men were far more successful and outnumbered elderly women three to one.<sup>35</sup>

Gerbner et al. reported that older characters were likely to be cast in comic rather than serious roles and portrayed as eccentric or foolish, held in low esteem and treated discourteously more often than any other age group.<sup>36</sup>

The authors propose that the gross under-representation of elderly on television leads viewers to believe "old people are a vanishing breed," and that television cultivates negative images of elderly persons being ineffective, unhealthy, and unadaptable to change. These inaccurate depictions may indicate that television reinforces and perpetuates negative cultural stereotypes and societal myths of aging.<sup>37</sup>

Negative images of aging have been documented in television commercials as well as in other aspects of the medium. Such portrayals have drawn heavy criticism from the public and elderly persons in particular. Analysis of commercial content largely support this negative reaction.<sup>38</sup>

Francher assessed a random sample of 100 television commercials in 1973 and found that over one-half (57 percent) promised youth, youthful appearance or the energy to act youthful. The inescapable message emerged:



What is or appears youthful is good and desirable; all that is otherwise, is not.<sup>39</sup>

Analyzing one commercial in depth, Francher showed how a product otherwise universal in its appeal and consumption, becomes directed toward youth and those who aspire to youth, by emphasizing "the triumph of new over old, action over intellect, impulse over moderation."<sup>40</sup>

This author went so far as to hypothesize that television advertising could contribute to senility and emotional breakdown in the aged. He argued that the television commercial, in its glorification of youth, tends to alienate and disenfranchise the elderly.

Disenfranchisement is accompanied by anxiety and tension which both have been identified as frequently underlying senility.<sup>41</sup>

An overwhelming number of commercials use young, attractive people. Older characters appeared in only two of the 100 television commercials monitored in Francher's study. They were used when the commercial was humorous in tone or when the product was especially designed for the elderly and made more sense when advertised by a member of that age group.<sup>42</sup>

A 1977 study by Harris and Feinberg found that advertisers clearly favor younger women to sell their products, while considering age an asset for men.<sup>43</sup>

Evaluating 198 individuals in 80 commercials, these researchers reported that females advertising products appeared five times more often than males in the 20-30 age group. In the 50-60 group, the number of males doubled and the number of females used declined by nearly 80 percent.<sup>44</sup>

This study noted that as age increased, females in commercials declined in authority and esteem to a much greater extent than the male, supporting similar findings reported earlier for overall television programming.<sup>45</sup>

The fact that older men do occupy positions of authority and status in the real world is reflected in the use of male celebrities in television commercials. After the age of 50, celebrities account for nearly 40 percent of all appearances in television advertisements. Twice as many celebrities appearing in television commercials were male as were female.<sup>46</sup>

Television commercials in particular, exhibit the elderly as having more physical ailments and general health problems than younger people. Harris and Feinberg found older people in television commercials were ten times more likely to have a health problem than other adult characters.<sup>47</sup>

These investigators also reported that the elderly appeared in advertisements selling health aid products more than any other type of commercials. Dividing commercials into seven product categories, Harris and Feinberg found 21 percent of the people seen in health aid advertisements were over 60, in contrast to 6 percent elderly appearing in food commercials, and no older persons cast in car, clothing or cleaning product advertisements.<sup>48</sup>

How the elderly themselves perceive and use television commercials appears to be changing. Older people interviewed by Schalinske in 1968 reported that television advertising had little appeal for them because the products were designed for the young.<sup>49</sup>

Davis, in 1971, distributed questionnaires to members of the American Association of Retired Persons living independently in Southern California. Nearly 80 percent of older viewers in this study denied the influence of television advertising on their buying habits.<sup>50</sup>

A 1980 survey by Schreiber and Boyd, however, found that the elderly held generally a high regard for television advertising. Focusing their investigation not only on media habits but specifically on perception and use of television commercials, these authors distributed a self-administered questionnaire to 442 participants in senior centers and apartment houses for the elderly in Wilmington, Delaware.<sup>51</sup>

Survey results showed that most of the elderly respondents viewed television commercials in a favorable light and felt that elderly characters in television commercials were positively portrayed.

Over two-thirds (69 percent) of participants said commercials were "often" or "always" useful to them, while only 30 percent found commercials never useful. Heavy viewers, persons watching three or more hours of television daily, were more apt to find commercials useful than were light viewers, those watching one to two hours per day.<sup>52</sup>

Commercials for food and health products were most often chosen as best-liked and most useful by these elderly. Cited as least liked were commercials for children's toys, pet food, and detergents.<sup>53</sup>

More than one-half (57 percent) of those questioned believed the elderly whom they saw in television commercials were either active, healthy or likable. These results are in contrast to previous content analyses suggesting that older people in television commercials are

portrayed negatively and demonstrate that the elderly themselves may not feel that way. Interestingly, 31 percent of respondents also noted that elderly persons were not often shown in commercials.<sup>54</sup>

Results of studies showing that television commercials for health products were more often advertised for and by elderly persons, coupled with reports that health product commercials were named as best-liked and most useful, particularly among heavy viewers of television, become more important when considered with another aspect of an aging population--the increase in chronic disease and consequent increase in drug use.

The elderly are, and will increasingly be, the greatest consumers of health care services in the United States. Currently, the growth of the over-65 segment is twice that of the population as a whole, with this trend expected to continue until the end of the century. Furthermore, the population of the old-old, those over 75 years, is increasing by about 40 percent each year. These demographic changes are important for it is among this age group that increased susceptibility to disease and drug use are observed.<sup>55</sup>

The elderly already account for one-quarter of the nation's health expenditures and are the major users of long-term care facilities.<sup>66</sup> Their drug use is also significant. Although persons over age 65 constitute about 11 percent of the population, they consume over 25 percent of all prescription drugs.<sup>57</sup>

People over 65 years old are prescribed more drugs per person than any other age group. Over 85 percent of the ambulatory elderly and 95 percent of those living in nursing homes use drugs on a regular

basis. This is because the incidence of chronic disease rises with age. Over 80 percent of the non-institutionalized aged population suffers from one or more chronic illnesses, compared with 40 percent of those below 65. Some of the most frequently reported chronic conditions for elderly people are heart disease, hypertension, diabetes mellitus, and arthritis--illnesses for which long-term maintenance drugs are the treatment of choice.<sup>58</sup>

Prescription patterns reflect a greater distribution of multiple chronic conditions among hospitalized elderly as well. Upon discharge from the hospital, 25 percent of people 65 and older received six or more drugs, while only 3 percent of those between the ages of 17 and 44 receive the same number.<sup>59</sup>

The elderly also suffer from emotional distress. Feelings of loneliness, boredom, depression, anxiety, and worthlessness often accompany old age. Psychotropic medications, designed to alter such moods and emotions, have found a ready market among the elderly.<sup>60</sup>

While prescription drug purchases increase with age, patterns of nonprescription drug use are less clearly understood. Studies report both a greater and smaller proportion of the elderly using nonprescribed products than younger people. There is an assumption that everyone uses self-prescribed, self-acquired medications to some extent. Several studies support this notion.<sup>61</sup>

The number of over-the-counter drugs in a single home is reported to be between 17 and 24. A study by Knapp and Knapp in 1972 found that 84 percent of the households surveyed during a 30-week period procured at least one nonprescribed drug; the mean number of

nonprescribed drugs in the home was 17.2.<sup>62</sup> Roney and Hall reported in 1966 that a sample of 86 households purchased a total of 90 nonprescription drugs in a two-week period. From the analysis of these families, it was concluded that the mean number of nonprescription drugs maintained in the home was 24.4.<sup>63</sup>

Bush and Rabin, conducting a household survey of nearly 3,500 persons in the Baltimore area, reported that over one-third (36 percent) of the population said they had used a nonprescribed drug during a two-day period. Nonprescription drug use averaged 1.4 different kinds per person in this study.<sup>64</sup>

Although healthy persons of any age group are less likely to be consumers of nonprescription medications, in general, women and the elderly have highest rates of use.<sup>65</sup>

Krupka and Vener reported a slightly higher use of over-the-counter medications by the elderly in 1979. Studying the total drug exposure of noninstitutionalized elderly, these investigators found that 67 percent used at least one prescription drug, 65 percent took at least one over-the-counter drug, and 98 percent consumed a social drug (alcohol, caffeine or nicotine) daily.<sup>66</sup>

In terms of range, 24 percent used zero to two drugs, 55 percent used three to five drugs, and 22 percent consumed six or more drugs. Of those who used drugs, the average of 2.0 prescription, 1.8 over-the-counter, and 1.8 social drugs amounted to a total of 5.6 drugs per individual, with males averaging 7.5 and females 4.7.<sup>67</sup> Excluding social drug use, the average total drugs used would be 3.8 per person, 5.7 for men and 2.9 for women.

Further information on the use of prescribed and nonprescribed drug use by persons over 65 was reported by May et al. in 1982. These investigators conducted a screening program of over 3,000 ambulatory elderly in Florida between 1978 and 1980.<sup>68</sup>

The average number of drugs used by participants in this study was 3.2, almost half of which were nonprescription drugs. Women used an average of 3.5 and men 2.8 drugs. Seventy percent of the medications used by participants was either prescribed or used under the direction of a physician, with less than one-third of the medications obtained independently by the consumer.<sup>69</sup>

Multiple drug use by the elderly is not without risk. Hazards exist for two reasons. The first is that sensitivity to the therapeutic and toxic effects of drugs changes with age; the second reason is that taking several drugs concurrently increases the chance of adverse effects from drug interaction.<sup>70</sup>

In general, the likelihood of an adverse reaction is directly related to the number of medications used. In a study of acute drug reactions leading to hospitalizations, 81 percent of all these reactions among the elderly were found to involve the misuse or abuse of legally manufactured and distributed drugs.<sup>71</sup>

Nearly 20 percent of all patients entering the geriatric service of one general hospital displayed disorders directly attributable to the effects of prescribed drugs. In another study, over-the-counter medications were implicated in 18 percent of all drug-related admissions.<sup>72</sup>

Yet only about 5 percent of the elderly live in institutionalized

settings (e.g., nursing facilities) in the United States. The overwhelming majority of older people live in the community, in varying degrees of self-sufficiency, and have minimal supervision regarding their overall exposure to drugs.<sup>73</sup>

Although little is known about health and illness behavior outside the formal system of health care provided through physicians, self-medication appears a frequent initial response to either illness or its prevention. It is estimated that some 65 percent to 85 percent of all illnesses are treated through self-care, and that professional help is sought only when self-help fails to bring about desirable results.<sup>74</sup>

A study of diary-reported illness and injuries revealed that 70 percent of all episodes were treated with nonprescribed medicines. Data also indicated that generally nonprescribed drugs were used for the more common and trivial illnesses that respond to symptomatic treatment.<sup>75</sup>

Other studies relate self-medication behavior to prevention as well as to treatment of perceived illnesses. Bush and Rabin suggest:

Many persons use medicines that are neither prescribed or suggested by a physician both in the absence and presence of illness.<sup>76</sup>

Almost one-fourth of healthy persons as well as 40 percent of ill persons were reported by these investigators to use self-prescribed drugs.<sup>77</sup> Crooks also found that 29 percent of the elderly in his study took over-the-counter drugs even when they were not feeling ill.<sup>78</sup>

Although extensive documentation regarding total nonprescribed drug use by the elderly is lacking, 50 percent of nonprescription drugs bought over-the-counter were shown to be purchased by people over 65



years of age.<sup>79</sup>

Over-the-counter preparations the aged use extensively include analgesics and anti-inflammatory drugs, vitamins and minerals, antacids and laxative, cough medicines, nasal decongestants, sedatives and various topical remedies for skin ailments.<sup>80</sup>

Problems may result from the use of nonprescribed drugs. For example, in order for aspirin to be an effective analgesic-anti-inflammatory, usually the drug must be taken in doses larger than those required for headache alone. At the higher doses, aspirin is apt to cause stomach irritation and ringing in the ears. Antacids or laxatives containing sodium salts may exacerbate conditions of hypertension that are controlled by other drugs. Laxatives also can cause dehydration, malabsorption of nutrients, and if overused, may lead to a dependence on them for what is perceived as normal bowel pattern.<sup>81</sup>

In addition, many nonprescribed drugs used by the elderly such as cough and cold preparations, contain alcohol and drugs with anticholinergic effects. These preparations pose particular hazards for patients with heart conditions, hypertensions and diabetes - conditions as noted earlier, most likely to afflict older persons.<sup>82</sup>

Nonprescription drug use creates the potential for polydrug problems that are difficult to diagnose in emergency situations. People often do not consider nonprescription drugs "medications," and as a result they fail to report them. Finally, nonprescription drugs can produce clinically significant adverse effects and drug interactions. These seem particularly enhanced in the elderly due to a combination of factors.<sup>83</sup>

First, with increasing age the ability of the body to cope with drugs is reduced. Physiological changes reduce the capacity to render drugs inactive and to eliminate them from the body. The body make up is changed--fat replaces muscle tissue so that the total volume weight within which the drug can be diluted becomes smaller. This increases the concentration of drug at receptors and consequently the effect of the drug.<sup>84</sup>

Second, although aging is not in itself a disease, many of its unpleasant symptoms can be treated to allow the person to live a fuller and more comfortable life. Results are that many elderly people take prescription and nonprescription drugs concurrently, and often substitute over-the-counter medications for visits to the doctor or for prescription drugs.<sup>85</sup>

Multiple drug use could cause confusion for almost anyone. But the elderly are particularly vulnerable to the misuse and/or abuse of drugs for several reasons: the chronic diseases that accompany advancing age, the associated complex drug regimens, concomitant use of nonprescription drugs, decreasing short-term memory and social isolation.<sup>86</sup>

In addition the aged often cannot see or hear well, further adding to the problem of improper use of medications. Almost one-third (29 percent) of persons 65 and older have hearing problems and 10 percent of the elderly population have vision impairment.<sup>87</sup> Failing eyesight makes it difficult to read labels on prescription containers or consumer package inserts; poor hearing inhibits understanding oral directions for safe and effective drug use.

Social isolation of the elderly compounds problems related to correct medication use. Several studies suggest that those living alone are more likely to make medication error than are those living with others. Yet social isolation is a more common living situation for the elderly than for any other age group. Many have not only loss of a spouse, but also loss of relatives, friends, and coworkers.<sup>88</sup>

Finally, the elderly's lack of knowledge about drugs contributes greatly to their misuse. Study after study documents that the elderly lack basic information about the drugs they take--both prescribed and nonprescribed.

A 1981 study by Kiernan and Isaacs investigated how independent elderly persons in England manage their medications. Home visits were made to 50 persons aged 65 and over, randomly selected from a practice in which the age and sex distribution were representative of an inner city elderly population.<sup>89</sup>

Results of the study showed the paucity of information persons recalled receiving on their prescription medication and the continuing strength of the lay referral system in self-medication practice.

Of the participants taking prescribed medications, 65 percent had not contacted their physician on the occasion of their last prescription refill. Forty-one percent had received their repeat prescription from a receptionist, and 13 percent had a family or friend pick it up for them. Only one-fourth of the respondents recalled receiving any professional advice on the prescribed medication they took regularly concerning what the drugs were for or details on any possible side effect.<sup>90</sup>

In the case of nonprescription drugs, participants were asked who, if anybody, recommended their use. Family and friends were mentioned as the primary source of advice followed by advertising and the pharmacist respectively. The placement of family, friends, and advertising ahead of the pharmacist is indicative of the reliance placed on lay over professional advice in the use of over-the-counter medications. Moreover, all respondents thought that their physician was unaware of their self-medication habits.<sup>91</sup>

Further demonstration of the elderly's misunderstanding of drug use is described in a study by Robinson and Steward conducted in 1981. A group of senior citizens ranging in age from 67 to 87 were surveyed to ascertain their knowledge of nonprescription drugs. Nearly 90 percent of these elderly thought nonprescribed drug products were completely safe because they did not require a doctor's prescription.<sup>92</sup>

While such products are safe when used under certain conditions as many drug package labels state, only one-third of elderly respondents in this survey said they would bother to read the label of a nonprescription drug product. Moreover, none in this group understood all of what they did read.<sup>93</sup>

Use of over-the-counter drugs has become a major part of the informal health care system. There are people who never doubt the value of a drug, subsequently increasing the amount recommended if their body fails to respond to the initial dose. And others who, in an attempt to treat an ailment, experiment and ultimately use whatever they perceive as successful. Many elderly consume large quantities of medications with little knowledge of the dangers inherent in combining prescription

and nonprescription drugs.<sup>94</sup>

Elderly persons are attracted to the use of nonprescription drugs for many reasons. Chronic illness creates a vulnerability to self-treatment in a person's search for better health. A wish to remain "independent" and "not bother the doctor" contributes to the urge to self-treat. Moreover, decreased income and mobility render the elderly more readily susceptible to nonprescription drug advertisements.<sup>95</sup> As Bush and Rabin state:

While the number of symptoms for which persons perceive it is appropriate to self-medicate appear to be limited, the patent distribution system of nonprescription medicines contains few incentives to assure rational use or decrease use. Both advertising and the retail marketing system encourage use.<sup>96</sup>

The review of literature presents the following points: Persons 65 and older watch more television than any other age group. Elderly persons are portrayed infrequently and most often negatively in both general programming and in television commercials. Coupling of these facts leads to speculation of what impact increased daily viewing of television might have on isolated and elderly people.

It has been hypothesized by Hess that old people who live isolated lives may be particularly vulnerable to television's influence in areas about which their social roles leave them less informed or because they are less capable of testing the validity of what they have seen in informal conversations.<sup>97</sup> Elderly women, more populous than men in this age group, might be especially vulnerable for they rarely see a woman of similar age on the screen and when they do, the image is often harshly negative. An initial study has related negative self-

concepts to television viewing among the elderly.

Commercials on television present older persons as having more health problems than other adult characters and most often use the elderly to advertise health products. Recently, health product and food commercials were named best-liked and most useful by elderly persons, particularly those who watch television more than three hours daily.

Correlate this information with statistics that persons over 65 are prescribed more drugs than any other age group, and have a higher user rate of over-the-counter medications as well. Concomitant use of prescribed and nonprescribed drugs represents a considerable risk for older people, yet 95 percent of the elderly live in noninstitutionalized settings, with minimal supervision concerning their overall exposure to drugs. Elderly persons have shown a basic lack of knowledge about drugs which, in addition to their living arrangements, and the effects of aging and illness, contributes greatly to improper drug use.

Integration of these conclusions gives rise to multiple questions concerning the current perception of television commercials by elderly persons, the influence of health product commercials on this age group, and the possibility of a relationship between increased television viewing and a corresponding rise in the use of over-the-counter medicines. It is to investigate these points that the present thesis is initiated.

## FOOTNOTES

<sup>1</sup>Alan M. Rubin "Directions in Television and Aging Research," Journal of Broadcasting 26 (Spring 1982): 537-51.

<sup>2</sup>Richard H. Davis et al., "Assessing Television Viewing Behavior of Older Adults," Journal of Broadcasting 20 (Winter 1976): 69-76.

<sup>3</sup>Rubin, p. 541.

<sup>4</sup>Ibid.

<sup>5</sup>Davis et al., p. 73; John C. Doolittle, "News Media Use by Older Adults," Journalism Quarterly 56 (Summer 1979): 311+; Schreiber and Boyd, p. 63; Felipe Korzenny and Kimberly Neuendorf, "Television Viewing and self-concept of the Elderly," Journal of Communication 30 (Winter 1980): 71-80; Alan M. Rubin and Rebecca B. Rubin, "Older Persons TV Viewing Patterns and Motivations," Communication Research 9 (April 1982): 287-313.

<sup>6</sup>Schreiber and Boyd, p. 61.

<sup>7</sup>Davis, p. 154.

<sup>8</sup>Davis et al., p. 73.

<sup>9</sup>Doolittle, p. 314.

<sup>10</sup>Schreiber and Boyd, p. 63

<sup>11</sup>Korzenny and Neuendorf, p. 72.

<sup>12</sup>Rubin, p. 542.

<sup>13</sup>Davis et al., p. 70.

<sup>14</sup>Michael R. Real, Hayes L. Anderson, and Marilyn H. Harrington, "Television Access for Older Adults," Journal of Communication 30 (Winter 1980): 81-88.

<sup>15</sup>Kubey, p. 18; Davis et al., p. 74; Korzenny and Neuendorf, p. 73; Rubin, p. 542; Lawrence Wenner, "Functional Analysis of TV Viewing for Older Adults," Journal of Broadcasting 20 (Winter 1976): 77-88; Doolittle, p. 312; Real, Anderson, and Harrington, p. 82.

<sup>16</sup>Rubin and Rubin, p. 288.

<sup>17</sup>Real, Anderson, and Harrington, p. 82.

<sup>18</sup>Wenner, p. 78.

<sup>19</sup>Doolittle, p. 312.

<sup>20</sup>Rubin, p. 544.

<sup>21</sup>Beth B. Hess, "Stereotypes of the Aged," Journal of Communication 24 (Autumn 1974): 76-85.

<sup>22</sup>Ibid., p. 79.

<sup>23</sup>Real, Anderson, and Harrington, p. 83.

<sup>24</sup>Rubin and Rubin, p. 288.

<sup>25</sup>Russell A. Ward, "Aging Group Consciousness: Implications in an Older Sample," Sociology and Social Research 61 (1977): 496-517.

<sup>26</sup>Korzenny and Neuendorf, p. 71.

<sup>27</sup>Ibid., p. 76.

<sup>28</sup>Craig Arnoff, "Old Age in Prime Time," Journal of Communication 24 (Autumn 1974): 86-87.



<sup>29</sup>Herbert C. Northcott, "Too Young, Too Old--Age in the World of TV," The Gerontologist 15 (April 1975): 184-86.

<sup>30</sup>Ibid., p. 186.

<sup>31</sup>Adella J. Harris and Jonathan F. Feinberg, "Television and Aging: Is What You See What You Get?" The Gerontologist 17 (1977): 464-68.

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<sup>33</sup>Ibid., p. 467.

<sup>34</sup>George Gerbner et al., "Aging with Television: Images on Television Drama and Conceptions of Social Reality," Journal of Communication 30 (Winter 1980): 37-47.

<sup>35</sup>Ibid., p. 40.

<sup>36</sup>Ibid., p. 45.

<sup>37</sup>Ibid., p. 46.

<sup>38</sup>Kubey, p. 29.

<sup>39</sup>J. Scott Francher, "'It's the Pepsi Generation....': Accelerated Aging and the Television Commercial," International Journal of Aging and Human Development 4 (1973): 245-55.

<sup>40</sup>Ibid., p. 251.

<sup>41</sup>Ibid., p. 252.

<sup>42</sup>Ibid., p. 248.

<sup>43</sup>Harris and Feinberg, p. 466.

<sup>44</sup>Ibid.

<sup>45</sup>Ibid.

<sup>46</sup>Ibid.

<sup>47</sup>Ibid.

<sup>48</sup>Ibid., p. 467.

<sup>49</sup>Kubey, p. 29.

<sup>50</sup>Davis, p. 155.

<sup>51</sup>Schreiber and Boyd, p. 63.

<sup>52</sup>Ibid.

<sup>53</sup>Ibid.

<sup>54</sup>Ibid., p. 64.

<sup>55</sup>Lamy, p. 513.

<sup>56</sup>Gerald B. Glazer and Rick T. Zawadski, "Use of Psychotropic Drugs Among the Aged Revisited," Journal of Psychoactive Drugs 13 (April/June 1981): 195-198.

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<sup>58</sup>Helene L. Lipton, "The Graying of America: Implications for the Pharmacist," American Journal of Hospital Pharmacy 39 (January 1982): 131-35.

<sup>59</sup>C. R. Smith, "Use of Drugs in the Aged," John Hopkins Medical Journal 145 (August 1979): 61-64.

<sup>60</sup>Lipton, p. 132.

<sup>61</sup>Dianna McDonald Shomaker, "Use and Abuse of OTC Medications by the Elderly," Journal of Gerontological Nursing 6 (January 1980): 21-24.

<sup>62</sup>Richard E. Johnson et al., "Reported Use of Nonprescribed Drugs in Health Maintenance," American Journal of Hospital Pharmacy 33 (December 1976): 1249-54.

<sup>63</sup>Ibid., p. 1249.

<sup>64</sup>Patricia J. Bush and David L. Rabin, "Medicines: Who's Using Them?" Journal of the American Pharmaceutical Association 17 (April 1977): 227-230.

<sup>65</sup>Ibid., p. 1015.

<sup>66</sup>Lawrence R. Krupka and Arthur M. Vener, "Hazards of Drug Use Among the Elderly," The Gerontologist 19 (1979): 90-94.

<sup>67</sup>Ibid., p. 91.

<sup>68</sup>Franklin E. May et al., "Prescribed and Nonprescribed Drug Use in an Ambulatory Elderly Population," Southern Medical Journal 75 (May 1982): 522-28.

<sup>69</sup>Ibid.

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<sup>71</sup>David M. Peterson and Charles W. Thomas, "Acute Drug Reactions Among the Elderly," Journal of Gerontology 30 (1975): 552-56.

<sup>72</sup>Lunden et al., p. 336.

<sup>73</sup>Krupka and Vener, p. 90.

<sup>74</sup>Goldberg, "How Risky is Self-care with OTC Medicines?" p. 279.

<sup>75</sup>Patricia J. Bush and David L. Rabin, "Who's Using Nonprescribed Medicines?" Medical Care 14 (December 1976): 1014-23.

<sup>76</sup>Ibid., p. 1023.

<sup>77</sup>Ibid., p. 1021.

<sup>78</sup>David, p. 372.

<sup>79</sup>Ibid., p. 371.

<sup>80</sup>Goldberg, "How Risky is Self-care," p. 279.

<sup>81</sup>Ibid.

<sup>82</sup>Lipton, p. 132.

<sup>83</sup>Ibid.

<sup>84</sup>Elaine M. Mullen and Michele Granholm, "Drugs and the Elderly Patient," Journal of Gerontological Nursing 7 (February 1981): 108-113.

<sup>85</sup>Elizabeth Donahue et al., "A Drug Education Program," Geriatric Nursing (March/April 1981): 140-42.

<sup>86</sup>Dorothy V. Lundin, "Medication Taking Behavior of the Elderly: a Pilot Study," Drug Intelligence and Clinical Pharmacy 12 (September 1978): 518-22.

<sup>87</sup>Lundin et al., p. 336.

<sup>88</sup>Lipton, p. 123.

<sup>89</sup>Kiernan and Isaacs, p. 196.

<sup>90</sup>Ibid., p. 199-200.

<sup>91</sup>Ibid., p. 199.

<sup>92</sup>Robinson and Stewart, p. 48.

<sup>93</sup>Ibid.

<sup>94</sup>Mullen and Granholm, p. 110.

<sup>95</sup>Shomaker, p. 22.

<sup>96</sup>Bush and Rabin, "Who's Using Nonprescribed Medicines," p.  
1022.

<sup>97</sup>Kubey, p. 25.

## CHAPTER III

## METHODOLOGY

This study was conducted to explore how older persons perceive television advertising and television's influence on medication-taking habits. Residents from Fargo Seniors Inc., one of three apartment buildings for the elderly or disabled in Fargo, North Dakota, were asked to participate in the study. Fargo Seniors Inc. was chosen because faculty members from North Dakota State University could provide the author with an introduction to this facility's housing administrator.

Fargo Seniors Inc. was federally financed and restrictions for occupancy were placed on age and income. Residents were limited to a maximum yearly income of \$12,000 for single and \$13,500 for double occupancy. The minimum age requirement was 62, or disabled persons were eligible regardless of age. All residents had to be independent, that is, needing no outside assistance for the activities of daily living. Rent was based on individual income, with further deductions allowed for health costs rising above 3 percent of yearly income.

The Fargo area was served by three VHF and one UHF commercial stations, and one VHF public television station. Cable television was not available to participants of the study.

This was a pilot study designed to probe the media habits and medication-taking patterns of persons over age 65. Results would provide initial data for studying correlations between the amount of television viewing and use of nonprescribed drugs and would lay the ground work for further studies. The study had a smaller sample

population because lengthy interviews with each participant were required to gather information on both perception of television commercials and self-medication practices. Fifty interviews were completed which was 20 percent of the facility's 250 residents. To begin random selection of the interview population, an alphabetized listing of all residents was obtained from the housing director. Residents of double occupancies (e.g. husband/wife or mother/daughter) were eliminated from participation in order to standardize the population and remove the effects cohabitation might introduce on attitude and behavior.

A random number table was used to initiate systematic sampling of this group. After determining the starting point, elderly residents were selected by taking every fourth name from the alphabetized list. The names of 58 potential participants were generated, representing 25 percent of the single occupancies.

A letter explaining the nature of the study was sent to the selected individuals (Appendix). Letters were delivered in groups of 10. As each group of interviews was completed, the next 10 letters were delivered. This pattern was developed to maximize the individual's memory of receiving the letter and facilitate completing an interview soon after telephone contact was made.

The letter acknowledged management's cooperation with the survey and provided introduction of the project's interviewer. Following receipt of the letter, telephone contact was made by the interviewer who further explained the type of questions and time commitment involved. If the individual agreed to be a part of the study, an interview was

arranged to take place within the next two days.

The study had a response rate of 86 percent. Forty-five interviews were completed. Of the 58 persons initially identified, five refused to be interviewed and four could not be contacted during the four-week interview period. Two others were hospitalized, one was transferred to a nursing home before contact was established, and one had so little command of the English language that the interview could not be satisfactorily completed.

Interviews were conducted using a structured questionnaire (Appendix). The questionnaire was in two parts. First, respondents were questioned about their daily television viewing habits and their perceptions of television commercials, particularly those for health care products. Second, participants were asked about their use of prescribed and nonprescribed medications, and socio-demographic data.

Questions concerning television viewing habits and perceptions of television commercials were adapted to an interview format from a self-administered questionnaire used in a study by Schreiber and Boyd.<sup>1</sup> Responses were close-ended and remained the same for the purpose of comparing research results.

Questions to determine medication-taking behaviors were developed from guidelines for taking a drug history<sup>2</sup>, and from review of the literature in order to correlate findings with previous investigations.

Socio-demographic characteristics were collected to identify the study population and included age, sex, previous occupation, length of residency in this facility, marital status, education, possession of an automobile, and present illness or health conditions.



A copy of the questionnaire was given to each participant allowing them to see, as well as hear, the questions and responses as they were read. Answers were recorded by the interviewer and the questionnaires returned upon completion of the interview.

The interview process took place between 9:30 a.m. and 4:00 p.m. weekdays during March and April, 1983. Interviews were conducted in private apartments or the facility's community lounge, depending on the preference of participants. The interview lasted, on the average, one and one-fourth hours.

## FOOTNOTES

<sup>1</sup>Schreiber and Boyd, p. 63.

<sup>2</sup>Mullen and Granholm, pp. 109-10.

## CHAPTER IV

## ANALYSIS AND DISCUSSION

The Study Population. Of the 45 elderly participants in this study, nine were male (20 percent) and 36 were female (80 percent). The sample is representative of the facility's (Fargo Seniors, Inc.) total distribution of residents by sex which fluctuates between 75 to 80 percent female. All participants were caucasian reflecting the racial population of both the residency and this community in general. Demographic characteristics of the study population are shown in Table I.

Both the mean and median age of respondents in the present study were 77 years. The majority were widowed with only 9 percent never married. Education varied widely within the study group, from completion of third grade to Bachelor's degrees (2 percent) and some graduate work (2 percent).

Over one-half (56 percent) of the study population considered themselves to be in excellent or good health, yet many respondents reported they had hypertension, heart disease, arthritis or diabetes.

Participants had lived an average of six years in the facility. However, nearly one-third (29 percent) of those interviewed had lived in the building since it opened 12 years ago, and approximately one-third (36 percent) had been residents three years or less.

Although only 24 percent reported they still owned cars, transportation providing mobility in the community was easily accessible to all elderly participants. Both the city and senior citizen buses

TABLE I

## Demographic Characteristics of Study Population

	Number	Percent
<u>Sex</u>		
Male	9	20
Female	36	80
<u>Age (Years)</u>		
0-64	2	4
65-69	7	16
70-74	5	11
75-79	15	33
80-84	9	20
85+	7	16
<u>Education (Years completed)</u>		
1-6	7	16
7-12	28	62
12+	10	22
<u>Marital Status</u>		
Married	2	4
Widowed	31	69
Divorced	8	18
Never Married	4	9
<u>Own Automobile</u>		
Yes	11	24
No	34	76
<u>Length of Residency (Years)</u>		
1	6	13
2	3	7
3	7	16
4	5	11
5	1	2
6	2	4
7	1	2
8	1	2
9	1	2
10	5	11
12	13	29
<u>Major Illness/Health Conditions</u>		
Hypertension	14	31
Heart Disease	8	18
Arthritis	11	25
Diabetes	4	9

conveniently stopped at the door of the facility and were widely used by its residents.

Viewing Habits. All the elderly questioned in the current study reported that they watched television and 98 percent owned their own sets. The vast majority (96 percent) usually watched television in their own apartments and 93 percent were alone at the time.

In regard to frequency of viewing, 96 percent of the sample said that they watched television every day; 11 percent watched one to two hours each day, 18 percent indicated between three and four hours of daily viewing, and 67 percent reported watching four or more hours every day.

Evening was the most preferred time for watching television with 36 percent of respondents reporting their favorite viewing hours between 6:00 p.m. and 8:00 p.m. and 40 percent indicating they watched television all evening.

One-third of the participants preferred to watch television in the morning most between 8:00 a.m. and 10:00 a.m.; however, nearly one-fourth (24 percent) said they never watched television in the morning.

Afternoon viewing was least preferred, with 36 percent of the study population stating that they never watched television in the afternoon. Hours most preferred for viewing during the afternoon were reported by one-third of respondents to be between noon and 2:00 p.m., correlating with soap operas aired at that time.

Perception of Television Commercial. Television commercials for food were chosen both most useful and best-liked by approximately 60

percent of participants in the current study, while health product commercials were chosen by about 20 percent of respondents. (Table II,III) Cited as least-liked were commercials for pet food and perfume and other beauty items. Advertisements for feminine hygiene products were frequently mentioned by female participants as especially offensive and these responses were recorded in the perfume and beauty aid group.

Commercials in general seemed to be viewed in a favorable light by most of the elderly sampled. Three-fourths of respondents said that commercials on television were "often" or "always" useful to them, while only one-fourth said television commercials were "never" useful.

Concerning credibility of the media, nearly one-half (47 percent) of participants reported they were most likely to believe advertising they saw on television, followed by 43 percent of respondents choosing advertising appearing in the newspaper.

When specifically asked about buying a health care product, over one-half (58 percent) of those interviewed stated their decision was most influenced by advertising shown on television, and newspapers were chosen second as most influential in advertising health products. In addition, over two-thirds (69 percent) of this study population said television commercials for health products were "often" or "always" useful to them. (Table IV)

If a person their own age appeared in the advertising, 40 percent of these elderly said they would be more inclined to believe the television commercial or buy the product. The affirmative response substantiated to some degree advertising's premise that an individual of similar age, or an authority figure, is a more influential product

TABLE II

## Perception of the Usefulness of Television Commercials

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(N=45)	Pct. of Total
The television commercials which are most useful to you are those for:	
Food	60
Clothing	2
Health products	22
Housing	2
Transportation	5
Other	9

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TABLE III

## Most and Least Popular Television Commercials

(N=45)	Best-liked Percent	Least-liked Percent
Children's games and toys	7	11
Pet food	4	36
Health products	20	7
Food products	58	2
Perfume and other beauty items	2	31
Detergents and soaps	9	13

Commercials on television you like most and least are those for:



TABLE IV

Perception of Health Product Commercials  
Influence and Usefulness

(N=45)	Percent
When you go to buy a health product such as aspirin, cough syrup, or a laxative, is your decision most influenced by advertising appearing:	
In magazines	4
In the newspaper	16
On radio	4
on television	58
On buses	0
None	18
Would you say television commercials for health products are useful to you:	
Never	31
Often	62
Always	7

representative.

Sixty-two percent of those questioned said that they found the elderly in television commercials either "active and healthy" or "likeable." However, 31 percent noted that older people were not often shown in commercials. (Table V)

Concerning their perceptions of actors in television commercials 49 percent of respondents said that the actors were just like people they meet every day or like themselves, and 22 percent said that commercials show people the way they wished people would be.

Even though one-third of participants found commercials on television "often" or "always" confusing, the majority (75 percent) believed that commercials provided useful sources of information. Only 13 percent said that the information in commercials was useless to them. Moreover, 62 percent of respondents in the current study believed advertisers paid for the programs seen on television, as opposed to the government, taxpayers or the television stations, suggesting an informed study population.

Comparison with Schreiber and Boyd Study. Elderly participants completing self-administered questionnaires in the Schreiber and Boyd survey were compared with the elderly respondents interviewed in this study.

The Schreiber and Boyd survey resulted in a sample of 23 percent (101) males and 77 percent (341) females, ranging in age from 61 to 81 with a mean of 75 years.<sup>1</sup> The mean age and sex distribution are similar in both studies, however, there was a greater diversity of ages in the current investigation with the youngest respondent 63 years and the

TABLE V

Perception of Elderly Portrayals  
on Television Commercials

---

(N=45)	Percent of Total
Would you say that television commercials show older people as:	
Active and healthy	9
Likable	53
Not very nice	7
Bad and nasty	0
Do not show old people very often	31

---

eldest 99 years old.

Participants of the Schreiber and Boyd study had attained slightly more formal education. Six percent had completed college and 24 percent high school in the Schreiber and Boyd sample compared to 2 percent completing college and 20 percent high school in the current study. More elderly in this study had finished one to six years of school, 16 percent compared to 10 percent, and had between seven and 12 years of education, 62 percent compared to 37 percent in the Schreiber and Boyd survey.

Elderly respondents in the present study watched more television daily than the Schreiber and Boyd sample. Eighty-five percent stated they viewed three or more hours of television each day compared to 64 percent reporting the same amount of daily viewing in the Schreiber and Boyd survey. (Table VI)

The preferred time for watching television differed in the two studies. Elderly in the current study least preferred afternoon viewing, with over one-third (36 percent) stating they never watched television in the afternoon. Afternoon viewing, especially between the hours of 2:00 p.m. and 6:00 p.m., was reported by 53 percent of the Schreiber and Boyd sample.

Nearly one-fourth (24 percent) of participants in this study said they never watched television in the morning compared to 50 percent in the Schreiber and Boyd survey. Evening was the most preferred viewing time in both groups.<sup>3</sup>

The hours preferred for watching television in the current study (8:00 a.m. to 10:00 a.m. and 6:00 p.m. to 8:00 p.m.) suggests a

TABLE VI

## Number of Hours Television Viewed Daily

Hours of Television Viewed Daily	Investigations	
	Schreiber/Boyd Study Percent	Present Study Percent
1 -2 Hours	36	11
3 -4 Hours	42	18
4+ Hours	22	67
Never watch daily	-	4
	(N=442)	(N=45)

preference for news programs as noted in previous literature.<sup>4</sup>

The elderly in both studies had a generally high regard for television advertising. Seventy-five percent of participants in the present study and 69 percent of the Schreiber and Boyd sample stated commercials on television were "often" or "always" useful, while 25 percent and 30 percent, respectively, said commercials on television were never useful to them.<sup>5</sup>

Both the Schreiber and Boyd sample and the current study population chose food and health product commercials as most useful and best-liked. Similarly chosen as least-liked by the two studies were commercials for pet food, perfume and detergents.<sup>6</sup>

Respondents in the current study were more likely to believe advertising seen on television (47 percent) followed by newspapers (43 percent). Participants of the Schreiber and Boyd survey reported newspaper advertising more believable (43 percent) with television chosen by 37 percent of that sample.<sup>7</sup>

Persons seen in television commercials were described as "just like people you meet every day" by nearly one-half (49 percent) in each study. Twenty-two percent of this study population and nearly one-third (32 percent) of the Schreiber and Boyd sample said actors in television commercials were "the way I wish people would be."<sup>8</sup>

Similarly, 62 percent of this study's respondents and 57 percent of the Schreiber and Boyd survey believed television commercials showed older people as active, healthy, or likable. Previous content analyses had documented infrequent and negative images of aging in television commercials.<sup>9</sup> These results indicate the elderly themselves may not

feel that way, although nearly one-third (31 percent) in both studies did note that older people were not often shown in television commercials.

Fewer elderly in the present study reported television commercials "often" or "always" confusing, 33 percent compared to 63 percent in the Schreiber and Boyd survey. However, the majority in each study population said that commercials provided them with useful sources of information.<sup>10</sup>

Generally, the results of the two studies are quite similar except for the amount of television watched daily. Elderly in the current study were heavier daily viewers of television, that is, 67 percent stated they watched four or more hours each day compared to 22 percent daily viewing this amount in the Schreiber and Boyd survey.

Nonprescribed Medication Use. A majority (93 percent) of elderly respondents in the present study reported they used at least one nonprescription medication on a regular basis. Of those who used over-the-counter medications, the range was between one and seven, with the average 3.7.

Compared to previous studies, a smaller percentage of the current study population used over-the-counter medications every day and fewer nonprescribed medications were used on a daily basis. (Table VII) Approximately one-half (55 percent) of the elderly in this study used nonprescribed medications each day. Of those daily using over-the-counter medicines, an average of 1.6 different medications per person were used.

Krupka and Vener documented 65 percent using an

TABLE VII

## Average Daily Medication Use

	Investigations		
	Krupka & Vener	May et al.	Present Study
Average Nonprescribed Medications Used Daily	1.8	1.6	1.6
Average Prescribed Medications Used Daily	2.0	1.6	2.8
Average Total Medications Used Daily	3.8	3.2	4.4
Average Total Used by Women	2.9	3.5	4.1
Average Total Used by Men	5.7	2.8	4.0



over-the-counter medication every day and an average of 1.8 used daily in their 1979 study. Results of nonprescribed medication use in the current study are comparable to the 1982 survey by May et al. in which elderly people were reported to use an average of 1.6 nonprescription medications.<sup>11</sup>

Over-the-counter medications used most by respondents in the present study were aspirin (80 percent), antacids (66 percent) and laxatives (47 percent), confirming the findings of previous investigations.<sup>12</sup> Almost one-half (42 percent) were using a nonprescribed medication for stiff muscles or joints.

Few of these elderly participants were using cold remedies (40 percent), skin ointments (33 percent), or anything to treat hemorrhoids or piles (6 percent). Only 11 percent took something to calm their nerves or help them sleep at night, and no one took anything to wake them or pep them up.

Prescribed Medication Use. Eighty-four percent of participants in the current study said they were taking at least one prescription medication on a regular basis. This is substantially greater than the 67 percent reported using one or more prescription medicine in an earlier study by Krupka and Vener.<sup>13</sup>

Of those currently taking a prescribed medication, the range was one to eight prescriptions, with an average of 2.8. This usage is also higher than the average 2.0 and 1.6 prescription medications cited as taken by elderly persons in previous studies.<sup>14</sup>

Total Drug Use. In the present study, the average total medication used daily, 4.4 medications per person, was higher than the

findings of previous investigations because of participants' greater use of prescription medications. No clear pattern emerges for a difference in total medications use by sex. (Table VII)

An English study has documented a greater reliance placed on lay advice over professional advice concerning the use of over-the-counter medications. Family, friends, and advertising were reported ahead of the pharmacist as sources of advice regarding nonprescribed medications.<sup>15</sup>

More reliance was placed on professional advice in the current study, with 67 percent of respondents stating their personal physician was "very" or "somewhat" important in providing information about over-the-counter medications. (Table VIII) Media advertising (67 percent) and relatives (44 percent) were rated before the pharmacist (40 percent) as very or somewhat important sources of advice about nonprescribed medications. However, only one-third reported friends as important in regard to self-medication practice.

Asked who, if anybody, recommended the use of the nonprescribed medications they were taking, again the personal physician was mentioned by nearly two-thirds (62 percent) of respondents in the current study. (Table IX) Family members were mentioned more often than media advertising, the pharmacist, or friends as having recommended their over-the-counter medicines.

Influence of the personal physician in the present study population may be partially due to the fact that nearly one-half (49 percent) of respondents reported having hypertension or heart disease. These health conditions would keep individuals in regular contact with a

TABLE XIII

Where Information Was Received  
About Over-the-counter Medications

(N=45)	Very Important Percent	Somewhat Important Percent	Not Important Percent
How important are each of the following in providing you with information about over-the-counter medications?			
Personal physician	56	11	33
Pharmacist	24	16	60
Label or directions on the medication	76	11	13
Media advertising	11	56	33
Relatives	18	26	56
Friends in the high rise	7	24	69
Friends not in the high rise	4	29	67

TABLE IX

## Who Recommended Nonprescription Medications

(N=45)	<u>Yes</u> Percent	<u>No</u> Percent
In the case of medications you can buy over-the-counter, who if anybody, recommended their use?		
Personal physician	62	38
Pharmacist	29	71
Media advertising	29	71
Relatives	36	64
Friends in the high rise	24	76
Friends not in the high rise	13	87

physician and likely result in caution about over-the-counter medications. In addition, nonprescribed medications are frequently labeled with warnings for use by persons with health conditions such as hypertension, diabetes, and glaucoma.

Nearly one-fourth (24 percent) of participants in the current study purchased their over-the-counter medications in a grocery or discount store where these items are self serve. They would have little contact with a pharmacist in such cases which may explain the small percentage reporting influence by this health professional. Because of the advanced age of many respondents, friends and relatives were no longer living and therefore were reported as having little influence on their medication-taking habits.

Forty-two percent of the elderly in the present study did not pick up their prescription medications themselves. Of that number, 50 percent had the prescriptions mailed, 33 percent were delivered by the pharmacy, and 16 percent were brought to them by a friend or relative.

Correspondingly, the pharmacist was reported by 33 percent of respondents in the current study as "not important" in influencing their use of prescribed medications. Nearly two-thirds (62 percent) and over 90 percent of the study population said that relatives and friends, respectively, had no influence on their use of prescribed medications.

Their personal physician and the labeled directions on the medication were cited as "very important" regarding prescription medication use by over 90 percent of study participants.

The fact that an overwhelming majority (96 percent) of these elderly stated their personal physician was very important in

influencing their use of prescription medications is in contrast to only one-fourth in the previously cited English study recalling any advice from their doctor about the prescription medications they were taking.<sup>16</sup>

More participants in the present study reported trouble with their eyesight compared to national statistics of 10 percent elderly being visually impaired. Over one-third (36 percent) of respondents said they had trouble reading or understanding directions on the labels of the nonprescribed medicines they were taking. Some reported using a magnifying glass or asking a friend to read directions to them, but all stated they did read the directions when using an over-the-counter medication. These results are in contrast to those of another survey in which only one-third of elderly respondents reported bothering to read the labels on nonprescribed medicines.<sup>17</sup>

Corresponding to the 87 percent of this sample reporting labels important in providing information about over-the-counter medications, approximately the same number (89 percent) said they always took the recommended dosage for non-prescribed drug products. Moreover, nearly two-thirds (62 percent) of participants in the current study said they had told their doctor what nonprescribed medications they were taking as opposed to 100 percent of the elderly in an English study believing personal physicians were unaware of their self-medication practice.<sup>18</sup>

Concerning knowledge about over-the-counter medications, over one-half (56 percent) of respondents in the present study believed nonprescribed medicines were safe because they could be purchased over-the-counter without a doctor's prescription. This number is much smaller than the near 90 percent elderly believing nonprescription

medications were completely safe cited in an earlier study, and is comparable to a 1972 Food and Drug Administration investigation which reported 53 percent in a nationwide survey rating nonprescribed medicines as safe.<sup>19</sup>

When asked, "Do you take over-the-counter medications even when you are not feeling ill," 22 percent responded "yes." These results are comparable, though slightly lower, than the 25 percent of healthy persons and 29 percent of well elderly reported using self-prescribed medication in previous investigations.<sup>20</sup>

The greater understanding of nonprescribed medication use demonstrated by the current study population may again be reflective of the high percentage having health problems associated with hypertension, heart disease and diabetes. These conditions all require continuous medical supervision and close monitoring of all, both prescribed and nonprescribed, medications used.

In addition, a number of programs relating to elderly health concerns had been given at Fargo Seniors, Inc. in the past three years. Health care professionals such as pharmacists from North Dakota State University had lectured on correct use of medications; registered dieticians on proper nutritional intake; student nurses made regular visits to residents; and various community project (e.g. the Fargo-Moorhead Heart Health Program) had spoken on patterns for maintaining good health. These programs had positively influenced participants in this study group as demonstrated in their responses to medication-taking habits.<sup>21</sup>

In attempting to unearth unsafe practices, participants in the

present study were asked if they ever used medications intended for another person. Only 7 percent admitted to this practice and 4 percent had shared their own prescription medication with a friend or relative.

In an effort to determine whether there was potential for hazardous drug interactions, the investigator asked subjects if they had ever become sick from a prescribed or over-the-counter medication. The answer was "yes" from 42 percent of respondents, with 4 percent resulting in hospitalization.

To further analyze the relationship between television viewing, perception of health product commercials, and use of medications, responses to questions were evaluated on the basis of amount of daily television viewing, major health conditions, age, and sex of survey participants.

Influence of Television Viewing Habits. Respondents in the present study were divided into categories based on the amount of television viewed daily: one to two hours each day, defined as "light viewers;" between three to four hours daily; and four or more hours every day, defined as "heavy viewers."

Heavy viewers of television were more likely to believe advertising appearing on television, while light television viewers most believed newspaper advertising. (Table X) Over one-half (57 percent) of participants viewing more than four hours daily chose television advertising and 33 percent chose newspaper advertising most believable. Of those respondents watching one to two hours of television every day, 80 percent chose advertising in newspapers more believable and none in this category chose television advertising most credible.



TABLE X

Perception of Television Commercials  
by Amount of Television Viewed Daily

	Amount of Daily Television		
	1-2 Hours Percent	3-4 Hours Percent	4+ Hours Percent
You are most likely to believe the advertising you see:			
On television	0	50	57
On radio	20	12	0
In newspapers	80	38	33
In magazines	0	0	10
When you go to buy a health care product, is your decision most in- fluenced by advertising appearing:			
In magazines	0	0	7
In newspapers	20	25	10
On radio	0	0	7
On television	40	50	66
None	40	25	10
Would you say television commercials for health products are useful to you:			
Never	60	25	26
Often	40	75	67
Always	0	0	7
	(N=5)	(N=8)	(N=30)

credible.

When specifically questioned about advertising for health products, heavy viewers again chose commercials on television most influential and more useful than light television viewers. (Table X) Two-thirds of respondents viewing more than four hours daily chose television commercials as most influencing their decision when buying an over-the-counter medication compared to 40 percent of elderly viewing one to two hours daily. Also health product commercials on television were reported as "often" or "always" useful by 74 percent of heavy viewers as opposed to 40 percent of light television viewers.

The amount of daily television viewing did not seem to affect perceptions of the elderly shown in television commercials. (Table XI) Approximately 60 percent in all viewing categories said that commercials on television show older people as active, healthy, or likable.

The Schreiber and Boyd survey reported that heavy viewers were more likely to perceive people in commercials as "realistic" while light viewers felt commercials portrayed people as they wished they would be.<sup>22</sup> However, in the current study heavy viewers said television portrayals were the way they wished people would be and light viewers stated people in television commercials were "helpful to their problems" or "just like people you meet every day." (Table XI)

Results of this study therefore do not substantiate previous findings by Schreiber and Boyd but do correlate with an investigation by Korzenny and Neuendorf citing increased television viewing results in a more negative self-concept and a view of the world depicted on television as more desirable.<sup>23</sup>

TABLE XI

Perception of People Shown  
on Television Commercials

	Amount of Daily Television		
	1-2 Hours Percent	3-4 Hours Percent	4+ Hours Percent
Would you say that television commercials show older people as:			
Active and healthy	20	0	10
Likable	40	62	50
Not very nice	0	38	0
Bad and nasty	0	0	0
Do not show old people very often	40	0	40
Thinking of the people you see on television commercials, are they often:			
Just like people you met everyday	40	37	50
Like yourself	0	0	13
Helpful to your problems	60	26	13
The way I wish people would be	0	37	24
	(N=5)	(N=8)	(N=30)

Heavy viewers of television used more over-the-counter medications on a routine basis than did light viewers. (Table XII) Of those participants using nonprescribed medicines, light viewers used from two to four different medicines, while the range used by heavy viewers was one to seven.

The use of over-the-counter medications on a daily basis was also greater for heavy viewers than for light viewers of television in this study. (Table XIII) No respondents watching between one and four hours of television daily were using two or three nonprescribed medications every day as opposed to 36 percent of the elderly viewing four or more hours of television using that number each day.

The importance of media advertising in providing information about over-the-counter medications rose as a function of increased television viewing. (Table XIV) Only 20 percent of light viewers reported media advertising "very" or "somewhat" important as a source of information regarding nonprescribed medicines, compared to 50 percent for respondents viewing between three and four hours of television daily, and 76 percent watching more than four hours of television each day.

Heavy viewers were much more likely to believe that over-the-counter medications were safe than were light viewers of television. (Table XIV) Over 60 percent in both categories, those daily watching between three and four hours and four or more hours of television, believed over-the-counter medications were safe because they could be purchased without a doctor's prescription. In contrast, 100 percent of light viewers stated that nonprescribed medicines were not

TABLE XII

Range of Over-the-counter Medications Used  
by Daily Television Viewing

Total Number of Over-the-counter Medications Used	Amount of Television Viewing		
	1-2 Hours Percent	3-4 Hours Percent	4+ Hours Percent
0	0	12	7
1	0	0	7
2	40	12	10
3	40	26	10
4	20	38	37
5	0	12	10
6	0	0	10
7	0	0	10
	(N=5)	(N=8)	(N=30)

TABLE XIII

Daily Use of Over-the-counter Medications  
by Daily Television Viewing

	Amount of Television Viewing		
	1-2 Hours Percent	3-4 Hours Percent	4+ Hours Percent
Average Nonprescribed Medications Used Daily			
0	60	86	32
1	40	14	32
2	0	0	22
3	0	0	14
	(N=5)	(N=8)	(N=30)

TABLE XIV

Knowledge and Use of Nonprescribed Medications  
by Daily Television Viewed

	Amount of Television Viewed Daily		
	1-2 Hours Percent	3-4 Hours Percent	4+ Hours Percent
How important is media advertising in providing you with information about over-the-counter medications?			
Very important	20	0	13
Somewhat important	0	50	64
Not important	80	50	23
Do you believe that because over- the-counter medicines can be purchased without a prescription, they are safe?			
Yes	0	62	63
No	100	38	37
Do you take over-the-counter medications even when you are not feeling ill?			
Yes	0	13	30
No	100	87	70
	(N=5)	(N=8)	(N=30)

safe.

As cited earlier in the current study, 22 percent of participants reported they took over-the-counter medications even when feeling well. It is interesting to note that among those answering affirmatively, a greater number were heavy rather than light viewers of television.

(Table XIV)

These results suggest that increased television viewing does influence to some degree preference, knowledge and use of over-the-counter medications. When buying a nonprescribed medicine, heavy viewers of television reported their decision was most influenced by advertising on television and the majority said television commercials for health products were often or always useful to them.

Heavy viewers of television reported media advertising an important source of information regarding nonprescription medications. They were also more likely to believe over-the-counter medications were safe. Heavy viewers of television used more nonprescribed medications both in terms of range and on a daily basis. In addition, more heavy viewers used over-the-counter medicines even when they were not feeling ill.

The Influence of Age. Participants of this study were divided into seven age groups: 0-64; 65-69; 70-74; 75-79; 80-84; and 85+ years. Male and female respondents were present in all age categories. The following observations were made.

The amount of television viewed daily appeared to increase until age 80, after which it declined slightly. (Table XV) These results correlate with a national survey by Louis Harris citing similar patterns



TABLE XV

## Amount of Television Viewed Daily by Age

Amount of Television Viewed Daily	Age in Years					
	0-64	65-69	70-74	75-79	80-84	85+
	Pct.	Pct.	Pct.	Pct.	Pct.	Pct.
1-2 Hours	50	0	0	7	22	14
3-4 Hours	0	0	20	13	33	14
4+ Hours	50	100	60	73	45	57
Never View Television Daily	0	0	20	7	0	0
	(N=2)	(N=7)	(N=5)	(N=15)	(N=9)	(N=7)

of television viewing increasing with age.<sup>24</sup>

As the age of respondents increased, their interest in food commercials on television declined and interest in health product commercials rose. Table XVI shows that 70 percent of those choosing health product commercials on television as most useful to them were aged 75 or older.

However, increasing age did not seem to influence the perceived usefulness of television commercials in general, or health product commercials in particular. Generally, two-thirds of respondents reported television commercials useful and one-third said they were never useful, regardless of age.

Concerning self-perceived health status, about one-half in each age group reported their health to be excellent or good, as opposed to fair or poor, until the age of 70. At this point, respondents in the 70 to 74 age group seemed to experience a health crisis as only 20 percent reported their health was excellent/good and 80 percent said they were in fair/poor health. In succeeding age groups, however, the percentage reporting excellent/good health generally rose, and the number perceiving their health as fair/poor declined. (Table XVII)

No pattern was observed to indicate that the average use of nonprescribed medications increased as age increased. A trend of increased prescription medication use with a corresponding rise in age was exhibited if both the youngest and oldest age groups were omitted. (Table XVII)

In summary, a preference for health product commercials appears to accompany increasing age, but age was not demonstrated as influencing

TABLE XVI

Type of Commercial Found Most Useful  
by Age of Respondent

	Age in Years					
	0-64	65-69	70-74	75-79	80-84	85+
* Row Pct.						
** Col. Pct.						
Food (N=27)	* 4 **50	18 71	18 100	38 66	18 56	4 14
Clothing (N=1)	* 0 ** 0	0 0	0 0	100 7	0 0	0 0
Health products (N=10)	*10 **50	20 29	0 0	10 7	20 22	40 57
Housing (N=1)	* 0 ** 0	0 0	0 0	0 0	100 11	0 0
Transportation (N=2)	* 0 ** 0	0 0	0 0	50 7	50 11	0 0
Other (N=4)	* 0 ** 0	0 0	0 0	50 13	0 0	50 29
	(N=2)	(N=7)	(N=5)	(N=15)	(N=9)	(N=7)

TABLE XVII

Perceived Health and Medication Use  
by Age

	Age in Years					
	0-64 Pct.	65-69 Pct.	70-74 Pct.	75-79 Pct.	80-84 Pct.	85+ Pct.
How is your health?						
Excellent/good	50	57	20	60	56	71
Fair/poor	50	43	80	40	44	29
Average Total Number of Over-the-counter Medications Used						
	3.0	3.5	2.8	4.5	3.0	3.6
Average Over-the-counter Medications Used Daily						
	1.0	1.6	1.0	1.4	3.0	1.5
Average Number of Prescribed Medications Used Regularly						
	5.0	1.9	2.6	2.6	3.1	1.8
	(N=2)	(N=7)	(N=5)	(N=15)	(N=9)	(N=7)

knowledge or increased use of over-the-counter medications.

Some elderly interviewed in this study said that as children, they had grown up in isolated farm communities where the doctor was not easily accessible and nonprescribed medications were "home remedies." So when health fails now, these respondents just "make do" as they did when they were young.

Finally, by this age many elderly had already survived an initial crisis of health and were presently maintaining their own, or in regular contact with a physician to insure their state of good health.

The Influence of Health. Participants of the study were divided into categories based on major health conditions: heart disease; diabetes, arthritis, hypertension, and all other reported conditions. The following comparisons could be made.

Elderly participants in the current study with heart disease, arthritis, and hypertension watched more hours of television daily than did respondents with other conditions. (Table XVIII) Persons with arthritis were the heaviest viewers with 91 percent of this group watching four or more hours daily, followed by hypertension, heart disease and diabetes. Seventy-percent of respondents with other health conditions were heavy viewers of television.

Respondents with any of the four major health conditions viewed their state of health as poorer than participants with other health conditions. A greater number of the elderly with hypertension said their health was excellent/good, while the poorest health was reported by persons with heart disease. (Table XIX)

Television was chosen the most influential medium when buying

TABLE XVIII

Influence of Major Health Conditions  
on Daily Television Viewing

Amount of Television Viewed Daily	Major Health Conditions				
	Heart Disease Pct.	Diabetes Pct.	Arthritis Pct.	Hyper- tension Pct.	Other Pct.
1-2 Hours	12	50	9	0	9
3-4 Hours	0	0	0	14	18
4+ Hours	76	50	91	78	72
Never View Daily	12	0	0	7	0
	(N=8)	(N=4)	(N=11)	(N=14)	(N=22)

NOTE: There were multiple responses to this question.

TABLE XIX

Influence of Major Health Conditions  
on Perception of Television Commercials

	Major Health Conditions				
	Heart Disease	Diabetes	Arthritis	Hyper- tension	Other
	Pct.	Pct.	Pct.	Pct.	Pct.
How is your health?					
Excellent/good	38	50	45	57	64
Fair/poor	62	50	55	43	36
When you go to buy a health care product, is your decision most influenced by advertising appearing:					
In magazines	0	0	9	7	5
In newspapers	12	25	9	15	18
On radio	0	0	0	7	5
On television	50	75	73	64	50
None	38	0	9	7	22
Would you say commercials for health products are useful to you:					
Never	50	25	45	21	27
Often	25	50	55	72	73
Always	25	25	0	7	0
Do you take nonprescribed medications even when you are not feeling ill?					
Yes	12	0	34	21	23
No	78	100	64	79	77
	(N=8)	(N=4)	(N=11)	(N=14)	(N=22)

an over-the-counter medication. More respondents with arthritis and diabetes reported being influenced by health product commercials on television than persons with other health conditions. Newspapers were named second as most influencing their buying decisions by all participants. (Table XIX)

Approximately three-fourths of the elderly with diabetes (75 percent), hypertension (79 percent) , and other (73 percent) health conditions said television commercials for health products were "often" or "always" useful to them; about one-half of participants with heart disease (50 percent) and arthritis (45 percent) said health product commercials were "never" useful. (Table XIX)

It was noted that a majority of elderly with arthritis reported television commercials important in influencing decisions for buying over-the-counter medications, but less than one-half with the same condition reported health product commercials useful. This may be due in part to a disappointment in nonprescribed products not meeting personal expectations for relieving arthritic symptoms.

In regard to the total number of over-the-counter medications, participants with arthritis and hypertension were taking slightly more nonprescribed medications on a routine basis than elderly with other health conditions. (Table XX) Respondents in this study with heart disease and diabetes took the fewest total number of nonprescribed medications.

Concerning the average number of nonprescribed medicines used on a daily basis, participants with the major health conditions were taking fewer over-the-counter medications daily (1.0) than the average



TABLE XX

Influence of Major Health Conditions  
on Use of Medications

	Major Health Conditions					Total Study Pct. (N=45)
	Heart Disease Pct.	Diabetes Pct.	Arthritis Pct.	Hyper- tension Pct.	Other Pct.	
Total Number of Non- prescribed Medica- tions Used Routinely	2.8	3.8	4.2	4.0	3.9	3.7
Average Total Number Nonprescribed Medi- cations Used Daily	1.0	1.0	1.4	1.0	1.0	1.6
Average Total Number of Prescribed Medications Used	3.6	3.3	2.6	2.8	2.1	2.8
Total Average Daily Medication Use	4.6	4.3	3.9	3.8	3.1	4.4
	(N=8)	(N=4)	(N=11)	(N=14)	(N=22)	

NOTE: There were multiple responses to this question.

daily nonprescribed medicines used (1.6) cited earlier for all participants in this study. (Table XX)

Elderly with arthritis used slightly more daily nonprescribed medications than respondents with other health conditions. Also, more arthritic participants stated they took over-the-counter medicines even when feeling well than did elderly with other health conditions. (Table XX) Probably the reason is, as they stated during interview, because they were taking aspirin frequently to either prevent or ease the pain accompanying this conditions.

Participants reporting heart disease, diabetes and hypertension used the same or higher average number of prescription medications (2.8) cited previously for this population as a whole. Elderly respondents with arthritis were using less prescribed medications and more over-the-counter medicines than other participants. (Table XX)

Table XXI shows that the personal physician was reported as the primary source of recommendation for nonprescribed medication use, especially by respondents with heart disease and arthritis. Fewer persons with hypertension and diabetes stated media advertising as the source recommending the nonprescribed medications they were using, as might be expected. These two health conditions require careful supervision and limited use of medicines that can be purchased over-the-counter.

Illness or health status does demonstrate some influence on medication use. The elderly in this study with heart disease perceived their health as poorest, and took the most prescribed and the fewest nonprescribed medications. Their doctor had recommended the

TABLE XXI

Source Recommending Nonprescribed Medications  
by Major Health Conditions

		Major Health Conditions				
		Heart Disease Pct.	Diabetes Pct.	Arthritis Pct.	Hyper- tension Pct.	Other Pct.
In the case of medications you can buy over-the-counter, who if anybody recommended their use?						
Personal physician						
Yes	88	50	73	57	64	
No	12	50	27	42	36	
Pharmacist						
Yes	50	0	38	29	23	
No	50	100	62	71	77	
Media advertising						
Yes	50	0	45	29	27	
No	50	100	55	71	73	
Relatives						
Yes	25	25	45	50	32	
No	75	75	55	50	68	
Friends in the high rise						
Yes	38	0	55	21	27	
No	62	100	45	79	73	
Friends not in the high rise						
Yes	25	0	18	7	14	
No	75	100	82	93	86	
	(N=8)	(N=4)	(N=11)	(N=14)	(N=22)	

NOTE: There were multiple responses to this question.

over-the-counter medications they were taking and correspondingly, health product commercials were not seen as useful to them. Respondents with arthritis used more nonprescribed medications daily and reported their greater use even when not feeling ill.

Generally, participants with major illness/health conditions in the current study took more prescribed medications and fewer over-the-counter medicines than the average number used daily by the total study population.

Influence of Sex. The responses of participants were analyzed according to sex and the following observations made.

Elderly women watched more television daily than did elderly men in the present study. Over three-fourths (78 percent) of the women were heavy viewers compared to 22 percent of men viewing four or more hours of television each day. (Table XXII)

Concerning the perceived usefulness and influence of television commercials, both men and women reported food and health product commercials as most useful to them. However, women more often chose health product commercials as most useful than did men. (Table XXIII) When buying an over-the-counter medication, women reported their decision most influenced by television advertising, while men chose advertising in newspapers as most influential. (Table XXIV)

The majority of both men and women believed television commercials showed older people as active, healthy, or likable. But more women (36 percent) than men (11 percent) said the elderly did not often appear in television commercials. (Table XXIV) Elderly women in the current study appear aware of the infrequent portrayals of older

TABLE XXII

Daily Television Viewing  
Compared by Sex

---

Amount of Daily Television Viewing	Male Pct.	Female Pct.
1-2 Hours	22	8
3-4 Hours	44	11
4+ Hours	22	78
Never Watch Daily	11	3
	(N=9)	(N=36)

---

TABLE XXIII

Most Useful Television Commercial  
Compared by Sex

	Male Pct.	Female Pct.
Television commercials most useful to you are those for:		
Food	44	64
Clothing	11	0
Health products	11	25
Housing	0	3
Transportation	22	0
Other	11	8
	(N=9)	(N=36)

TABLE XXIV

Influence of Sex  
on Perception of Television Commercials  
and Medication-taking Habits

	Male Pct.	Female Pct.
When you go to buy a health care product, is your decision most influenced by advertising appearing:		
In magazines	0	6
In newspapers	44	8
On radio	0	6
On television	22	67
None	33	14
Would you say that television commercials show older people as:		
Active and healthy	11	8
Likable	56	53
Not very nice	22	3
Bad and nasty	0	0
Do not show old people very often	11	36
How is your health?		
Excellent/good	33	61
Fair/poor	67	39
Have you ever saved part of a prescribed medication just in case you may need it at a later time?		
Yes	22	47
No	78	53
Do you take over-the-counter medications even when you are not feeling ill?		
Yes	11	25
No	89	75
	(N=9)	(N=36)

people in television commercials documented previously in the literature.<sup>24</sup>

Women reported themselves to be in better health than did men interviewed in this study. (Table XXIV) Only one-third of the elderly men perceived their health as excellent or good in contrast to nearly two-thirds (61 percent) of the elderly women reporting excellent or good health.

Interestingly, total medication use was approximately the same for both sexes: 4.0 for men and 4.1 for women. (Table XXV) However, elderly men in the current study were using more prescription medications and less nonprescribed medicines, while elderly women were using more nonprescribed medicines and fewer prescribed medications.

Women reported more major health conditions than did the men. About one-third of the women said they had hypertension (36 percent) or arthritis (30 percent), and men most often reported heart disease (22 percent) and diabetes (50 percent).

All of the participants reporting arthritis in the present study were women as were 93 percent of those reporting hypertension. (Table XXVI) The majority (75 percent) stating they had heart disease were also women, with diabetes reported equally by men and women.

More elderly women had saved part of a prescribed medication for use at a later time than had men. And more women used over-the-counter medications even when well than did men. (Table XXVI) The fact that 100 percent of the elderly reporting arthritis in the current study were women might have some influence on these results.

Sex was not significantly related to the other variables tested



TABLE XXV

Average Daily Medication Use  
Compared by Sex

	Male	Female
Average Nonprescribed Medications Used Routinely	2.3	4.0
Average Nonprescribed Medications Used Daily	1.0	1.6
Average Prescribed Medications Used Daily	3.0	2.5
Average Total Medications Used Daily	4.0	4.1
	(N=9)	(N=36)

TABLE XXVI

Major Illness/Health Conditions  
Compared by Sex

	Heart Disease Pct.	Diabetes Pct.	Arthritis Pct.	Hyper- tension Pct.	Other Pct.
Male (N=9)	25	50	0	7	18
Female (N=36)	75	50	100	93	82
	(N=8)	(N=4)	(N=11)	(N=14)	(N=22)

NOTE: There were multiple responses to this question.

TABLE XXVII

Educational Attainment  
Compared by Sex

---

* Row Pct. ** Col.Pct.	1-6 Years	7-12 Years	12+ Years
Male (N=9)	* 45 ** 57	45 14	10 10
Female (N=36)	* 8 ** 42	67 86	25 90
	(N=7)	(N=28)	(N=10)

---

as most interrelationships involving sex were confounded by education.

Women in the present study were better educated than were men. (Table XXVII) Forty-five percent of the men had finished one to six years of schooling compared to 8 percent of women, and 25 percent of the women had completed 12 or more years of education as opposed to 10 percent of the men. Stated another way, 90 percent of those completing 12 or more years of education were women, while 57 percent of those completing one to six years of schooling were men.

Sex does seem to be a factor in the preference and use of nonprescribed medications in the current study. Elderly women viewed more television daily than elderly men. Correspondingly they were more likely to choose health product commercials on television as most useful to them and to name television advertising as most influential when purchasing a nonprescribed medicine.

Although women in this study reported having more major health problems, they perceived themselves to be in better health than did the men. They were taking fewer prescribed medications but practiced more self-medication with over-the-counter drug products.

This study found senior citizens interviewed in Fargo, North Dakota, perceived television favorably and believed that the elderly characters in television commercials were positively portrayed. The majority said television commercials were useful to them. Food and health product commercials were chosen both as most useful and best-liked. Similar results were reported by Schreiber and Boyd who used a self-administered questionnaire to survey a larger number of elderly persons in Wilmington, Delaware.

Concerning perceptions of health product commercials, the majority of respondents in this study said that television commercials for nonprescribed medications were useful to them. Advertising on television was chosen most influential when buying a health care product.

Heavy television viewing was found to affect preference, knowledge and use of nonprescribed medications. Personal health, income, age and sex were also factors in the nonprescribed drug use reported by this study population.

## FOOTNOTES

<sup>1</sup>Schreiber and Boyd, p. 63.

<sup>2</sup>Ibid.

<sup>3</sup>Ibid.

<sup>4</sup>Kubey, p. 18.

<sup>5</sup>Schreiber and Boyd, p. 63.

<sup>6</sup>Ibid.

<sup>7</sup>Ibid., p. 64.

<sup>8</sup>Ibid.

<sup>9</sup>Kubey, p. 29.

<sup>10</sup>Schreiber and Boyd, p. 64.

<sup>11</sup>Krupka and Vener, p. 91; May et al., p. 526

<sup>12</sup>Goldberg, "How Risky is Self-care with OTC Medicines?" p. 279.

<sup>13</sup>Krupka and Vener, p. 91.

<sup>14</sup>Ibid; May et al., p. 526.

<sup>15</sup>Kiernan and Isaacs, p. 199.

<sup>16</sup>Ibid, p. 200.

<sup>17</sup>Robinson and Stewart, p. 48.

<sup>18</sup>Kiernan and Isaacs, p. 200.

<sup>19</sup>Robinson and Stewart, p. 48; David A. Knapp and Dee A. Knapp, "The Elderly and Nonprescribed Medications," Contemporary Pharmacy Practice 3 (Spring 1980): 85-89.

<sup>20</sup>Bush and Rabin, "Who's Using Nonprescribed Medicines?" p. 1021; David, p. 372.

<sup>21</sup>Interview with Bernice LaDoux, Activities Director, Fargo Seniors, Inc., 20 May 1983.

<sup>22</sup>Schreiber and Boyd, p. 69.

<sup>23</sup>Korzenny and Neuendorf, p. 78.

<sup>24</sup>Real, Anderson, and Hayes, p. 82.

<sup>25</sup>Harris and Feinberg, p. 466.

## CHAPTER V

## SUMMARY, CONCLUSIONS, AND SUGGESTIONS FOR FURTHER STUDY

The following profile can be drawn of the average elderly respondent in this study. The participant was most likely female, 77 years old, and widowed. This person considered her health to be good, even though she may have heart disease, hypertension or arthritis. The typical respondent was a heavy viewer of television, that is, watched television more than four hours daily.

The three objectives of this pilot study were to determine 1) how television commercials generally are perceived by persons over the age of 65; 2) to what extent television commercials influence preference, knowledge, and use of over-the-counter medications; and 3) if the amount of daily television viewing by elderly persons correlates with the amount of nonprescribed medications he or she uses.

Elderly respondents in this study primarily held a high regard for television advertising and believed that older characters in television commercials were positively portrayed. The majority of participants said that television commercials were useful to them. Food and health product commercials were chosen both as most useful and best-liked, particularly by heavy viewers of television. Nearly two-thirds of this sample said the elderly shown in television commercials were either active, healthy, or likable. Similar findings were reported in a 1980 study by Schreiber and Boyd investigating how the elderly perceive television commercials.<sup>1</sup>

The persons sampled said that their preference was influenced



and that they knew more about over-the-counter medications because of television commercials. The majority of elderly said television commercials for health products were often or always useful to them. In addition, respondents said that when buying a nonprescribed medication, their decision was most influenced by advertising on television.

Concerning knowledge about nonprescribed drug products, two-thirds of this study population reported media advertising as very or somewhat important in providing information about over-the-counter medicines. However, participants named their personal physician as the primary source of advice regarding nonprescribed medications. The greater reliance placed on professional advice in this study is in contrast to the reliance on recommendations from advertising and friends and relatives reported in other studies.<sup>2</sup>

Amount of daily television viewing was observed to influence preference, knowledge, and use of over-the-counter medications in this study. Not only did heavy viewers more often choose health product commercials as best-liked, but heavy viewers of television reported media advertising a more important source of information than did lighter viewers of television. They were also more likely to believe nonprescribed medications were safe. In addition, heavy television viewers were found to use more over-the-counter medications daily and were more likely to use them even when feeling well.

The present investigation could not be certain of a further cause and effect relationship between heavy television viewing and increased use of over-the-counter medications. Socio-demographic factors such as health, income, age and sex seemed to influence study

results.

Respondents of this study were using more prescribed medications and fewer nonprescribed drugs than reported in other investigations of elderly medication use.<sup>3</sup> Personal health seemed to affect the use of over-the-counter medications.

Participants reporting illnesses or health conditions (those requiring long term care with prescribed medications such as heart disease or diabetes) used fewer over-the-counter medications, suggesting close contact with a physician discourages the use of unnecessary nonprescribed medications. Information programs by other health care professionals had been available to residents of the current study population and possibly improved this group's knowledge of correct medication-taking patterns.

Another factor contributing to the lower use of nonprescribed medicines in this study population might have been income. Knapp and Knapp reported significant differences in medication use among social classes, with upper socioeconomic households having more prescribed and nonprescribed medications than lower socioeconomic households. Upper and middle socioeconomic households also tried new and different nonprescribed products more often than lower socioeconomic households. Therefore the influence of limited income could be a factor in the diminished use of over-the-counter medications by participants in the current study.<sup>4</sup>

Age did not seem to cause increased use of over-the-counter medications. A Food and Drug Administration survey in 1969 also reported that use of nonprescription drugs for several ailments

was negatively related to age.<sup>5</sup> Since persons over 65 are prescribed more drugs per person than those under 65, perhaps the elderly treat their larger number of afflictions with more potent prescribed drugs or tend to underreport their use of nonprescribed drugs.

Whether a person is male or female was associated with increased use of over-the-counter medications. Elderly women in this study were practicing more self-medication with nonprescribed medicines than were elderly men. Women said more often that health product commercials were useful to them and more often named television advertising as influencing their purchase of nonprescribed medicines. A national survey by the Food and Drug Administration reported the wife as prime drug purchaser in almost three-fourths of all households which may partly explain why women pay more attention to nonprescribed drug products.<sup>6</sup>

In summary, this study found that television commercials were accepted favorably by most elderly persons. A preference for food and health product commercials was reported. Health product commercials seemed to influence preference and knowledge of nonprescribed medications, but television commercials did not seem to increase use of over-the-counter drug products. Viewing television more than four hours daily influenced preference, knowledge, and use of nonprescribed medications. Personal health, income, age and sex were also factors in the use of nonprescribed medications by elderly participants in this study.

Results of this pilot study are important because they suggest an influence of television commercials on the practice of self medication. Although increased use of over-the-counter drugs was not

an effect of heavy television viewing in this study, these respondents varied widely in age, had limited financial resources and were taking more prescribed medications than reported used by elderly persons in previous studies. There is reason to believe that possibly in a different socio-economic or future elderly population, the amount of television viewing may correlate with the amount of nonprescribed drugs used.

In the future, the television medium will almost surely adapt to the increasing number of elderly Americans. The food, drug and leisure industries, for example, are expected to be directed more toward the aged who represent a growing segment of the market for their products.<sup>7</sup>

The television industry and advertisers may not have recognized that Americans above the age of 65 represent a 60 billion dollar market in terms of buying power, nearly twice that of the more competitively sought-after youth market.<sup>8</sup>

Misgivings have been voiced about encouraging advertisers to view the elderly as a new market. Margaret Mead said:

If television is mainly thinking of people under 41 as a target for the kind of advertising they are doing, I think the elderly are very lucky . . . I think we have to consider very seriously whether we want the elderly turned into an exploitable market as children have and as teenagers have been; so that to base any of our appeals on how much the elderly might be fooled into spending . . . I think is very questionable.<sup>9</sup>

Concern such as that stated by Mead deserves attention, as it is certain the television industry will cater more to the elderly's preferences if they represent a market as attractive as that of younger adults.

Television has been, and will likely continue to be, a significant phenomenon in the lives of elderly people. It can be assumed that the future aged, regardless of lifestyle or type of community, will continue to watch television. Results of the present study substantiate this in that 98 percent of elderly respondents owned their own television sets in spite of being defined economically "low income."

Rapidly advancing technology has also enabled the pharmaceutical companies to supply the country with an overwhelming selection of drugs. New medications involve not only those prescribed by physicians but the vast array of medicines available across the counter to those who self-medicate. The strong indication is that younger and middle-aged people of today are more tolerant of drugs and as they grow older they will use even greater amounts than the current elderly population.<sup>10</sup>

In view of the continued dominance of television viewing as a leisure time activity and the anticipated use of both prescribed and nonprescribed medications by tomorrow's elderly, the following suggestions for future research are made.

A different socio-demographic group of elderly persons could be sampled to study the influences of accessible medical care, congregate living arrangements and the educational programs associated with these facilities, on perceptions of health care commercials and medication-taking habits. Most respondents in this survey were in regular contact with a physician and were using few nonprescribed medications. Would older persons with less access to professional medical advice be treating themselves with greater numbers of

over-the-counter medications? A number of health programs had been presented at the facility surveyed and may have increased the respondents understanding of safe medication practice. Would a study population over age 65 in a smaller, rural community report the same knowledge of correct medication use?

Another study could survey a younger age group, perhaps persons 45 to 60, to see whether income and the amount of television viewing affects their nonprescribed drug use. The limited income of participants in this study may have contributed to less frequent use or experimentation with new and different over-the-counter medications. Would respondents not yet retired, with greater incomes, be trying and using more nonprescribed drugs products? Results of the current study suggest that the amount of daily television viewing influenced preference, knowledge and use of nonprescribed medications. Would a more mobile and active segment of the population watch less television and be less influenced by television advertising?

Would middle-aged adults, relatively free from chronic health conditions, expect good health as normal and attainable and be using greater numbers of over-the-counter medications? Or is the pattern of self-medication established on an individual basis and not observed to change as a function of age? How would occupation and education affect perceptions of television commercials and use of nonprescribed drugs in this middle-aged group?

A third study could sample young people living independently, 18 to 25 years old. Would this younger generation, more knowledgeable and experienced in the use of drugs of all types, be practicing more or less

self-medication with nonprescribed drugs? The greater number of commercials use young, attractive persons to advertise products. How do persons under 30 perceive and use television advertising? Also in the younger population there is a greater balance of the sexes. Do males and females age 30 and under report different perceptions of television commercials and use of over-the-counter medications?

Finally, Hess has suggested that elderly persons who are isolated, without ongoing webs of primary relationships, may be particularly vulnerable to television's influence because they are less capable of testing the validity of what they have seen in informal conversations.<sup>11</sup> Additional studies could investigate the impact of psychosocial factors on consumer behavior. What effect might social and peer contact have on preference, knowledge and use of over-the-counter medications? Is there a difference in perception of television commercials among those who watch television alone and those watching in groups.

The medical profession is encouraging individuals to take more and more responsibility for their own health care and maintenance. Research of this type could help build a stronger profile of the elderly's perception and use of television advertising and may suggest the need to provide more sound information on which to base decisions concerning drug use behavior.

## FOOTNOTES

- <sup>1</sup>Schreiber and Boyd, pp. 61-69.
- <sup>2</sup>Kiernan and Isaccs, p. 199; Knapp and Knapp, p. 89.
- <sup>3</sup>Krupka and Vener, p. 91; May et al., p. 526.
- <sup>4</sup>Knapp and Knapp, pp. 87-88.
- <sup>5</sup>Ibid., p. 86.
- <sup>6</sup>Ibid., p. 87.
- <sup>7</sup>Kubey, p. 29.
- <sup>8</sup>Phillips and Sternthal, p. 444.
- <sup>9</sup>Kubey, p. 29.
- <sup>10</sup>Mullen and Granholm, p. 113.
- <sup>11</sup>Hess, p. 82.



APPENDIX

*The Housing Authority*  
*of Fargo*

MAIN OFFICE  
101 SECOND STREET SOUTH  
FARGO, NORTH DAKOTA 58103  
PHONE (701) 293-6262

NEW HORIZONS  
2525 BROADWAY  
FARGO, NORTH DAKOTA 58102  
PHONE (701) 293-7870

March 1, 1983

Dear Resident:

The Housing Authority is working with North Dakota State University on a health care survey. Approximately sixty of the High Rise residents have been chosen at random to be contacted regarding the survey. Your name was one of those chosen. We feel this is an important survey and hope you will participate.

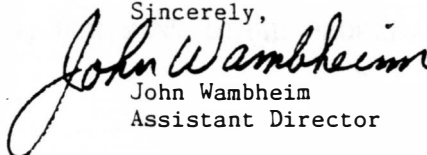
Mrs. Judy Wilkinson will be holding the interviews and will call you soon to see if you will allow the interview and be a part of the survey. Both Bernice and I have visited with her on two occasions and we are sure you will enjoy working with her, she is very pleasant and personable.

Mrs. Wilkinson will call, and if you are agreeable, make an appointment for an interview. The interview will be held in your apartment unless you would prefer the lounge.

If you have any questions regarding the interviews please call or stop in and visit with Bernice or with me. If you do not care to take part in the survey another resident will be substituted.

Thank you.

Sincerely,

  
John Wambheim  
Assistant Director

## QUESTIONNAIRE

FIRST, I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT YOUR TELEVISION VIEWING HABITS.

1. DO YOU WATCH TELEVISION?

YES \_\_\_\_\_ NO \_\_\_\_\_

2. HOW OFTEN DO YOU WATCH?

\_\_\_\_\_ EVERY DAY

\_\_\_\_\_ ONCE OR TWICE A WEEK

\_\_\_\_\_ SEVERAL TIMES A MONTH

\_\_\_\_\_ NEVER WATCH

3. DO YOU OWN A TELEVISION SET?

YES \_\_\_\_\_ NO \_\_\_\_\_

4. WHERE DO YOU USUALLY WATCH TELEVISION?

\_\_\_\_\_ MY APARTMENT

\_\_\_\_\_ MY FRIEND'S APARTMENT

\_\_\_\_\_ SENIOR CENTER

\_\_\_\_\_ OTHER (PLEASE SPECIFY)

5. WHEN YOU ARE WATCHING TELEVISION, HOW MANY OTHER PEOPLE ARE IN THE ROOM WITH YOU?

\_\_\_\_\_ NONE

\_\_\_\_\_ 1

\_\_\_\_\_ 2

\_\_\_\_\_ 3

\_\_\_\_\_ 4

\_\_\_\_\_ 5 OR MORE

6. ABOUT HOW MANY HOURS EACH DAY DO YOU WATCH TELEVISION?

\_\_\_\_\_ 1 TO 2 HOURS

\_\_\_\_\_ 3 TO 4 HOURS

\_\_\_\_\_ 4 OR MORE HOURS

\_\_\_\_\_ NEVER

7. WHAT ARE YOUR FAVORITE HOURS FOR WATCHING TELEVISION IN THE MORNING?

\_\_\_\_\_ 8 TO 10 A.M.

\_\_\_\_\_ 10 A.M. TO NOON

\_\_\_\_\_ NEVER WATCH IN THE MORNING

\_\_\_\_\_ WATCH ALL MORNING

8. WHAT ARE YOUR FAVORITE HOURS FOR WATCHING TELEVISION IN THE AFTERNOON?

\_\_\_\_\_ 12 NOON TO 2 P.M.

\_\_\_\_\_ 2 TO 4 P.M.

\_\_\_\_\_ 4 TO 6 P.M.

\_\_\_\_\_ NEVER WATCH IN THE AFTERNOON

\_\_\_\_\_ WATCH ALL AFTERNOON

9. WHAT ARE YOUR FAVORITE HOURS FOR WATCHING TELEVISION AT NIGHT?

\_\_\_\_\_ 6 TO 8 P.M.

\_\_\_\_\_ 8 TO 10 P.M.

\_\_\_\_\_ 10 P.M. TO MIDNIGHT

\_\_\_\_\_ NEVER WATCH TELEVISION AT NIGHT

\_\_\_\_\_ WATCH TELEVISION ALL NIGHT

10. WHEN DO YOU SEE TELEVISION COMMERCIALS WHICH ARE MOST USEFUL TO YOU?

- \_\_\_\_\_ DURING EVENING NEWS  
 \_\_\_\_\_ AFTENOON SOAP OPERAS  
 \_\_\_\_\_ MORNING PROGRAMS  
 \_\_\_\_\_ NIGHT PROGRAMS

11. THE TELEVISION COMMERCIALS WHICH ARE MOST USEFUL TO YOU ARE THOSE FOR:

- \_\_\_\_\_ FOOD  
 \_\_\_\_\_ CLOTHING  
 \_\_\_\_\_ HEALTH PRODUCTS  
 \_\_\_\_\_ HOUSING  
 \_\_\_\_\_ TRANSPORTATION  
 \_\_\_\_\_ OTHER (PLEASE SPECIFY)

12. COMMERCIALS ON TELEVISION YOU LIKE MOST ARE THOSE FOR:

- \_\_\_\_\_ CHILDREN'S GAMES AND TOYS  
 \_\_\_\_\_ PET FOOD  
 \_\_\_\_\_ HEALTH PRODUCTS (EFFERDENT, GERITOL, AND OTHERS)  
 \_\_\_\_\_ FOOD PRODUCTS (JELLO, MARGARINE, FRUIT, AND OTHERS)  
 \_\_\_\_\_ PERFUME AND OTHER BEAUTY ITEMS  
 \_\_\_\_\_ DETERGENT AND SOAPS

13. COMMERCIALS ON TELEVISION YOU LIKE LEAST ARE THOSE FOR:

- \_\_\_\_\_ CHILDREN'S GAMES AND TOYS
- \_\_\_\_\_ PET FOOD
- \_\_\_\_\_ HEALTH PRODUCTS (EFFERDENT, GERITOL, AND OTHERS)
- \_\_\_\_\_ FOOD PRODUCTS (JELLO, MARGARINE, FRUIT, AND OTHERS)
- \_\_\_\_\_ PERFUME AND OTHER BEAUTY ITEMS
- \_\_\_\_\_ DETERGENT AND SOAPS

14. WOULD YOU SAY THAT COMMERCIALS ON TELEVISION ARE USEFUL TO YOU?

- \_\_\_\_\_ NEVER
- \_\_\_\_\_ OFTEN
- \_\_\_\_\_ ALWAYS

15. HOW OFTEN DO YOU FIND COMMERCIALS CONFUSING?

- \_\_\_\_\_ NEVER
- \_\_\_\_\_ OFTEN
- \_\_\_\_\_ ALWAYS

16 IS IT CLEAR TO YOU WHEN TELEVISION COMMERCIALS START AND STOP?

YES \_\_\_\_\_ NO \_\_\_\_\_

17. WHO DO YOU THINK PAYS FOR THE PROGRAMS WHICH YOU SEE ON TELEVISION:

- \_\_\_\_\_ GOVERNMENT
- \_\_\_\_\_ TAXPAYERS
- \_\_\_\_\_ ADVERTISERS
- \_\_\_\_\_ TELEVISION STATION
- \_\_\_\_\_ DO NOT KNOW

18. YOU ARE MOST LIKELY TO BELIEVE THE ADVERTISING YOU SEE:

- ON BUSES
- ON TELEVISION
- ON RADIO
- IN THE NEWSPAPER
- IN MAGAZINES

19. WHEN YOU GO TO BUY SOMETHING, YOUR DECISION IS MOST INFLUENCED BY ADVERTISING:

- IN MAGAZINES
- IN THE NEWSPAPER
- ON RADIO
- ON TELEVISION
- ON BUSES

20. HOW IS YOUR HEALTH?

- EXCELLENT
- GOOD
- FAIR
- POOR

21. WHEN YOU GO TO BUY A HEALTH CARE PRODUCT SUCH AS ASPIRIN, COUGH SYRUP, OR A LAXATIVE, IS YOUR DECISION MOST INFLUENCED BY ADVERTISING APPEARING:

- IN MAGAZINES
- IN THE NEWSPAPER
- ON RADIO
- ON TELEVISION
- ON BUSES

22. WOULD YOU SAY TELEVISION COMMERCIALS FOR HEALTH PRODUCTS ARE USEFUL TO YOU:

- NEVER  
 OFTEN  
 ALWAYS

23. DO YOU BELIEVE TELEVISION COMMERCIALS MAKE TRUTHFUL CLAIMS?

- NEVER  
 OFTEN  
 ALWAYS

24. IF A PERSON YOUR OWN AGE APPEARS IN THE ADVERTISING, ARE YOU MORE INCLINED TO BELIEVE THE TELEVISION COMMERCIAL OR BUY THE PRODUCT?

YES  NO

25. THINKING ABOUT THE PEOPLE YOU SEE ON TELEVISION COMMERCIALS, ARE THEY OFTEN:

- JUST LIKE PEOPLE YOU MEET EVERYDAY  
 LIKE YOURSELF  
 HELPFUL TO YOUR PROBLEMS  
 THE WAY I WISH PEOPLE WOULD BE

26. PERSONALLY, WOULD YOU SAY THAT TELEVISION COMMERCIALS ARE:

- USELESS  
 USEFUL SOURCES OF INFORMATION  
 DEPRESSING BECAUSE YOU CAN'T BE LIKE THE PEOPLE IN COMMERCIALS?  
 HARD TO UNDERSTAND



27. WOULD YOU SAY THAT TELEVISION COMMERCIALS SHOW OLDER PEOPLE AS:

\_\_\_\_\_ ACTIVE AND HEALTHY

\_\_\_\_\_ LIKABLE

\_\_\_\_\_ NOT VERY NICE

\_\_\_\_\_ BAD AND NASTY

\_\_\_\_\_ TELEVISION COMMERCIALS DO NOT SHOW OLD PEOPLE VERY OFTEN

28. THINKING ABOUT OTHER PEOPLE OF YOUR AGE YOU KNOW, WOULD YOU SAY THAT TELEVISION COMMERCIALS TO THEM ARE:

\_\_\_\_\_ USELESS

\_\_\_\_\_ USEFUL SOURCES OF INFORMATION

\_\_\_\_\_ DEPRESSING BECAUSE THEY CAN'T BE LIKE THE PEOPLE IN COMMERCIALS

\_\_\_\_\_ EXCITING BECAUSE THEY MAKE THEM FEEL LIKE THEY CAN BE SOMEONE THEY

ARE NOT

\_\_\_\_\_ HARD TO UNDERSTAND

NOW I WOULD LIKE TO ASK YOU A FEW QUESTIONS ABOUT YOUR MEDICATIONS. FIRST, I AM INTERESTED IN NON-PRESCRIBED MEDICATIONS, THOSE YOU CAN PURCHASE OVER-THE-COUNTER WITHOUT A DOCTOR'S ORDER.

1. DO YOU TAKE ANY NON-PRESCRIPTION MEDICATIONS?

YES \_\_\_\_\_ NO \_\_\_\_\_

IF NO, THEN DO YOU TAKE:

ASPIRIN YES \_\_\_\_\_ NO \_\_\_\_\_

LAXATIVES YES \_\_\_\_\_ NO \_\_\_\_\_

ANTACIDS YES \_\_\_\_\_ NO \_\_\_\_\_

SKIN MEDICATIONS YES \_\_\_\_\_ NO \_\_\_\_\_

IF YES, THEN I WOULD LIKE SOME INFORMATION ABOUT THE OVER-THE-COUNTER MEDICATIONS YOU TAKE:

2. DO YOU TAKE ANYTHING FOR UPSET STOMACH, INDIGESTION, OR HEARTBURN?

YES \_\_\_\_\_ NO \_\_\_\_\_

3. DO YOU TAKE ANY COLD REMEDIES OR COUGH SYRUPS?

YES \_\_\_\_\_ NO \_\_\_\_\_

4. DO YOU TAKE ANYTHING FOR SINUS CONDITIONS OR ALLERGIES?

YES \_\_\_\_\_ NO \_\_\_\_\_

5. DO YOU TAKE ANY ASPIRIN PRODUCTS OR SUBSTITUTES FOR HEADACHES, MUSCLE PAIN OR RHEUMATIC PAIN?

YES \_\_\_\_\_ NO \_\_\_\_\_

6. DO YOU TAKE ANYTHING TO CALM YOUR NERVES OR HELP YOU SLEEP AT NIGHT?

YES \_\_\_\_\_ NO \_\_\_\_\_

7. DO YOU USE ANYTHING FOR YOUR BOWELS, EITHER LAXATIVES OR SOMETHING FOR DIARRHEA?

YES \_\_\_\_\_ NO \_\_\_\_\_

8. DO YOU TAKE ANYTHING TO WAKE YOU UP OR PEP YOU UP?

YES \_\_\_\_\_ NO \_\_\_\_\_

9. DO YOU USE ANY OINTMENTS, SALVES, CREAMS, LOTIONS OR POWDER TO TREAT SKIN PROBLEMS (SUCH AS WARTS, CORNS, CALLUSES, ATHLETE'S FOOT, ITCH, BLACKHEADS, PIMPLES, PSORIASIS OR ECZEMA)?

YES \_\_\_\_\_ NO \_\_\_\_\_

10. DO YOU USE ANYTHING TO TREAT HEMORRHOIDS OR PILES

YES \_\_\_\_\_ NO \_\_\_\_\_

11. DO YOU USE ANY OINTMENTS, SALVES, CREAMS, LOTIONS OR LINIMENTS FOR SORE OR STIFF MUSCLES OR JOINTS?

YES \_\_\_\_\_ NO \_\_\_\_\_

12. HAVE YOU EVER TAKEN ANYTHING, INCLUDING PRESCRIPTION MEDICINE FROM YOUR DOCTOR, THAT HAS MADE YOU SICK, OR GIVEN YOU A RASH OR ITCH?

YES \_\_\_\_\_ NO \_\_\_\_\_

13. HOW MANY OF THESE OVER-THE-COUNTER MEDICATIONS DO YOU USE:

\_\_\_\_\_ ON A ROUTINE BASIS

\_\_\_\_\_ ON A DAILY BASIS

NOW I WOULD LIKE TO ASK HOW YOU DECIDE WHICH OVER-THE-COUNTER MEDICINE TO BUY. FIRST I AM INTERESTED IN WHERE YOU RECEIVE INFORMATION ABOUT A PRODUCT, AND SECOND, WHO RECOMMENDED ITS USE.

14. HOW IMPORTANT ARE EACH OF THE FOLLOWING IN PROVIDING YOU WITH INFORMATION ABOUT OVER-THE-COUNTER MEDICATIONS?

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
PERSONAL PHYSICIAN	_____	_____	_____
PHARMACIST	_____	_____	_____
LABEL OR DIRECTIONS ON THE MEDICATION	_____	_____	_____
MEDIA ADVERTISING	_____	_____	_____
RELATIVES (WHO WOULD THAT BE? _____)	_____	_____	_____
FRIENDS IN THE HIGH RISE	_____	_____	_____
FRIENDS NOT IN THE HIGH RISE	_____	_____	_____
ANYONE ELSE YOU CAN THINK OF	_____	_____	_____

15. IN THE CASE OF MEDICATIONS YOU CAN BUY OVER-THE-COUNTER, WHO IF ANYBODY RECOMMENDED THEIR USE?

	YES	NO
PERSONAL PHYSICIAN	_____	_____
PHARMACIST	_____	_____
MEDIA ADVERTISING	_____	_____
A FAMILY MEMBER	_____	_____
FRIENDS IN THE HIGH RISE	_____	_____
FRIENDS NOT IN HIGH RISE	_____	_____
ANYONE ELSE YOU CAN THINK OF _____		

16. WHERE DO YOU BUY YOUR OVER-THE-COUNTER MEDICATIONS?

\_\_\_\_\_

17. DO YOU BELIEVE THAT TV COMMERCIALS PROMISE IMMEDIATE IMPROVEMENT?

YES \_\_\_\_\_ NO \_\_\_\_\_

18. DO YOU BELIEVE THAT BECAUSE OVER-THE-COUNTER MEDICINES CAN BE PURCHASED WITHOUT A PRESCRIPTION, THEY ARE SAFE?

YES \_\_\_\_\_ NO \_\_\_\_\_

19. DO YOU HAVE TROUBLE READING OR UNDERSTANDING DIRECTIONS ON THE LABELS OF OVER-THE-COUNTER MEDICATIONS YOU ARE TAKING?

\_\_\_\_\_ NEVER

\_\_\_\_\_ OFTEN

\_\_\_\_\_ ALWAYS

\_\_\_\_\_ NEVER READ THE DIRECTIONS

20. WHEN TAKING AN OVER-THE-COUNTER MEDICATION, DO YOU TAKE:

\_\_\_\_\_ MORE THAN THE AMOUNT RECOMMENDED

\_\_\_\_\_ THE RECOMMENDED DOSAGE

\_\_\_\_\_ LESS THAN THE AMOUNT RECOMMENDED

21. DO YOU TAKE OVER-THE-COUNTER MEDICATIONS EVEN WHEN YOU ARE NOT FEELING ILL? (SUCH AS LAXATIVES, ASPIRIN, ANTACIDS, SKIN MEDICATIONS)

YES \_\_\_\_\_ NO \_\_\_\_\_

22. HAVE YOU EVER SUGGESTED AN OVER-THE-COUNTER MEDICATION FOR A FRIEND OR RELATIVE?

YES \_\_\_\_\_ NO \_\_\_\_\_

23. HAVE YOU TOLD YOUR DOCTOR WHAT OVER-THE-COUNTER MEDICATIONS YOU ARE TAKING?

YES \_\_\_\_\_ NO \_\_\_\_\_

24. HAVE YOU EVER BEEN PUT IN THE HOSPITAL BECAUSE A MEDICATION MADE YOU SICK?

YES \_\_\_\_\_ NO \_\_\_\_\_

DO YOU RECALL WHAT THE MEDICINE WAS? \_\_\_\_\_

I WOULD LIKE NOW TO ASK SOME QUESTIONS ABOUT PRESCRIPTION MEDICATIONS. THESE ARE THE ONES YOU NEED A DOCTOR'S ORDER TO TAKE.

25. DO YOU TAKE ANY PRESCRIPTION MEDICATIONS ON A REGULAR BASIS?

YES \_\_\_\_\_ NO \_\_\_\_\_

26. IF YES, HOW MANY PRESCRIPTIONS ARE YOU CURRENTLY TAKING?

- \_\_\_\_\_ NONE
- \_\_\_\_\_ ONE
- \_\_\_\_\_ TWO
- \_\_\_\_\_ THREE
- \_\_\_\_\_ FOUR
- \_\_\_\_\_ FIVE OR MORE

27. WHERE DO YOU HAVE YOUR PRESCRIPTIONS FILLED?

\_\_\_\_\_

28. DO YOU USUALLY PICK UP YOUR PRESCRIPTION YOURSELF?

YES \_\_\_\_\_ NO \_\_\_\_\_

IF NO, WHO DOES \_\_\_\_\_

29. HOW IMPORTANT ARE EACH OF THE FOLLOWING IN INFLUENCING YOUR USE OF PRESCRIPTION MEDICATIONS?

	VERY IMPORTANT	SOMEWHAT IMPORTANT	NOT IMPORTANT
PERSONAL PHYSICIAN	_____	_____	_____
PHARMACIST	_____	_____	_____
LABEL OR DIRECTIONS ON THE MEDICATION	_____	_____	_____
A FAMILY MEMBER (WHO WOULD THAT BE _____?)	_____	_____	_____
FRIENDS IN THE HIGH RISE	_____	_____	_____
FRIENDS NOT IN HIGH RISE	_____	_____	_____
ANYONE ELSE YOU CAN THINK OF _____			

30. HAVE YOU EVER SAVED A PART OF A PRESCRIBED MEDICATION JUST IN CASE YOU MAY NEED IT AT A LATER TIME?

YES \_\_\_\_\_ NO \_\_\_\_\_

31. HOW OFTEN WOULD YOU SAY PRESCRIPTION MEDICATIONS ARE A TOPIC OF CONVERSATION IN THE HIGH RISE?

\_\_\_\_\_ NEVER

\_\_\_\_\_ ONCE A WEEK

\_\_\_\_\_ ONCE A WEEK

\_\_\_\_\_ SEVERAL TIMES A WEEK

\_\_\_\_\_ NEARLY EVERY DAY

32. HOW OFTEN WOULD YOU SAY PERSONAL HEALTH IS A TOPIC OF CONVERSATION IN THE HIGH RISE?

\_\_\_\_\_ NEVER

\_\_\_\_\_ ONCE A WEEK

\_\_\_\_\_ ONCE A WEEK

\_\_\_\_\_ SEVERAL TIMES A WEEK

\_\_\_\_\_ NEARLY EVERY DAY

33. ARE YOU AWARE OF HEALTH PROBLEMS THAT FRIENDS OR RELATIVE HAVE AND THE MEDICATIONS THEY ARE TAKING?

YES \_\_\_\_\_ NO \_\_\_\_\_

34. SOME PEOPLE GET THEIR MEDICINES FROM A FRIEND OR FAMILY MEMBER WHEN THEY HAVE A SIMILAR PROBLEM. HAVE YOU EVER TAKEN ANOTHER PERSON'S PRESCRIPTION MEDICINE?

YES \_\_\_\_\_ NO \_\_\_\_\_

35. HAVE YOU EVER SHARED YOUR PRESCRIPTION DRUG WITH A FRIEND OR RELATIVE?

YES \_\_\_\_\_ NO \_\_\_\_\_

FINALLY, I WOULD LIKE TO ASK YOU SOME QUESTIONS ABOUT YOURSELF.

HOW OLD WERE YOU ON YOUR LAST BIRTHDAY? \_\_\_\_\_

SEX: M \_\_\_\_\_ F \_\_\_\_\_

WHAT IS THE HIGHEST GRADE YOU COMPLETED IN SCHOOL?

GRADE SCHOOL	HIGH SCHOOL	COLLEGE OR TECHNICAL SCHOOL
5 6 7 8	9 10 11 12	13 14 15 16 17+

WHAT WAS YOUR OCCUPATION BEFORE RETIRING \_\_\_\_\_

HOW LONG HAVE YOU LIVED IN THIS HIGH RISE? \_\_\_\_\_

DO YOU DRIVE A CAR? YES \_\_\_\_\_ NO \_\_\_\_\_

MARITAL STATUS: MARRIED \_\_\_\_\_ WIDOWED \_\_\_\_\_ DIVORCED OR NEVER MARRIED \_\_\_\_\_

MAJOR ILLNESS/HEALTH CONDITIONS:

OTHER:



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