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**A Comparison of the Communication Skills of Elderly
Adults Living in A Long-Term Nursing Care Facility
with those of Elderly Adults Living in
Independent-Living Apartments**

By

April L. Taylor

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

A COMPARISON OF THE COMMUNICATION SKILLS OF ELDERLY ADULTS LIVING IN A LONG-TERM CARE FACILITY WITH THOSE OF ELDERLY ADULTS LIVING IN INDEPENDENT LIVING APARTMENTS

By

April L. Taylor

A difference in the type and amount of communication occurring in long-term care settings has been well documented. The purpose of this study was to compare the amount of communication of elderly adults living in a long-term nursing care facility to those of elderly adults living in independent apartments. Subjects were screened for conditions which might interfere with communication. All subjects had prerequisite communication skills as determined on the Woodcock Language Proficiency Battery (WLPB). Subjects in the long-term care setting had significantly fewer communicative interactions than subjects in the independent-living apartments. Results also revealed a higher proportion of nonverbal communication in the long-term care setting. This group was also less inclined to self-initiation of communication and had a much higher percentage of communication instigated by the environment. Implications of these results and suggestions for further research are presented.

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CHAPTER I

Introduction

The term "nursing home," as reflected in the media and the voice of youth, elicits a discomfoting image for many individuals. It is an environment different in many ways from that which those outside the setting are accustomed. According to Lubinski (1981), one frequently notes a difference in the communication occurring within these long-term care facilities. Patients may sit silently, mumble to themselves, or talk incoherently.

Mueller and Peters (1981) found that communication disorders are prevalent in older adults who live in long-term care facilities. Bloomer (1980) described a "verbal atrophy of disuse" among some residents of these facilities.

Some might argue that this disordered communication is a normal part of the aging process. Yet, Bayles and Kaszniak (1987) reviewed studies of communication and normal aging and concluded that while some processes important in communication do diminish with age, the diminishment is small. Therefore, one might expect cognitively healthy long-term care facility residents to be communicating normally.

The number of persons 65 years or older numbered 29.2 million in 1986. This was an increase of 14% compared to 1980 statistics. The number of older adults is projected to be 34.9 million by the year 2000, an increase of 20% compared to 1986 (American Association of Retired Persons, 1987). With the growth in the elderly portion of the population there is also an increase in the number of individuals residing in long-term care facilities. As a result, there is a growing concern for adjustment of these individuals to such facilities.

It is proposed that successful communication is a necessary ingredient for adjustment to a long-term care institution and that communication is desired by the institutionalized elderly. (Lubinski, 1981, p. 351)

The special importance of communication for elderly adults has been well documented. Beasley and Davis (1981) identified communication as a vital ingredient to the life-long developmental process. Carmichael (1982, cited in Maurer, 1985) suggested that communication deprivation of older persons has the potential to affect life satisfaction, self esteem, or even the will to live. If elderly adults are not communicating, their social network is diminished and they become socially isolated. It has been suggested that loss of a social network may influence the rate of physical and mental decline (Maurer, 1985). Bennett (1973) also warned that if the effects of social isolation are not compensated for in time, serious and possibly irreversible cognitive and other impairments could result. As we examine the environment of elderly adults, it is communication that becomes the crucial difference between isolation and social connection, between dependence and independence, and between withdrawal and fulfillment (Lubinski, 1981). According to Maurer (1985, p.20), "There is a professional responsibility to see that communication problems among the elderly are revealed to others."

Purpose

The purpose of this study was to compare the amount of communication of elderly adults living in a long-term nursing care facility to those of elderly adults living in independent-living apartments. If differences are found, potential causes of those differences can be suggested.

Definitions

Communication: Communication in this study refers to communication skills as screened with the Woodcock Language Proficiency Battery - English (Woodcock, 1984) and as compared on an adaptation of the Environmental Communication Profile (Calvert and Murray, 1985).

Elderly: Individuals who are 75+ years of age.

Long-term nursing care facility: Subjects were selected from the resident population of a health center, where residents receive 24 hour, long-term nursing care, in a midwestern university community. These subjects are referred to throughout the study as the health center (HC) subjects.

Independent-living apartments: Control subjects were selected from independent living apartments under the same administration and physically attached to the above mentioned health center. These residents live in their own apartments with meal, laundry, housekeeping and other services provided. These subjects are referred to throughout the study as the independent apartment (IA) subjects.

Statement of the Hypothesis

It was hypothesized that the amount of communication of elderly adults in the long-term nursing care facility would not differ from those of elderly adults in the independent-living apartments.

Research Questions

- 1) What was the difference between the two settings in the amount of verbal versus nonverbal communication?
- 2) What were the primary environmental events which instigated communication in each setting?
- 3) What were the intents of the communication in each setting?



CHAPTER II

Review of the Literature

This review of the literature attempts to combine research from a variety of disciplines to form an overall view of the issue of communication in long-term care facilities. Accounts of a problem with communication in these types of facilities and the significance of this potential problem are examined in the first section. The second section briefly reviews communication in normal aging. This is followed by a discussion of the potential effect of the physical environment on communication among residents of long-term care facilities. The final section presents some attempts by care providers and other researchers to enhance communication in these settings.

The Problem and Its Significance

Kane and Kane (1991) pointed out that almost half the Americans who survive to age 65 will live in a nursing home, a prospect which most people regard with terror. At best, they offer, life in a nursing home is a drab affair. Boczko (1987) suggested that for some, admission to a nursing home might be considered an opportunity to make new friends; yet for others the impact of the adjustment might be great enough to cause them to withdraw.

Despite the fact that many residents of extended care facilities are eager to communicate and capable of doing so effectively, Lubinski (1981) noted there is little spoken communication actually occurring. Dreher (1987) suggested that the interpersonal communication previously experienced with family and friends cannot be compensated for within this new setting. This is partly because roommates are not chosen and each patient feels singular and different. Dreher added that confidantes are

not developed because the staff are perceived as givers of service rather than individuals and because the stay is hoped to be temporary.

Many have stressed the importance of communication to an individual's overall health and emotional well-being (Bloomer, 1960; Bennett, 1973; Lubinski, Morrison & Rigrodsky, 1981; Maurer, 1985). This is of special importance to elderly adults often in a state of delicate balance between health and emotional issues.

Apparently communication with self and with others and participation in small groups or larger bodies of people are imperative if the individual wishes to survive and remain healthy (Ruesch, 1957, cited in Lubinski, 1978, p. 238).

Based on this premise, a larger study with the goal of optimizing the physical and social independence of patients in a county hospital included a smaller sub-study of the receptive and expressive communication skills of these patients (Bloomer, 1960). Bloomer indicated that as aging individuals are coping with multiple handicaps in a variety of areas, it is of great importance that the lines of communication with others and with oneself be maintained. The results of the study found 45% (28 of 62) of the patients had some speech or language impairment. This included individuals with cerebral vascular accidents, mental confusion, neuromuscular dysfunction and dysphonia. In addition, Bloomer felt that 21 of the patients were in need of social stimulation to improve or maintain their interest in communicating with others. Bloomer suggested that successful rehabilitation of an elderly patient includes attending to the communicative status of the patient and that the communicative status can only be accurately evaluated in reference to the life situation.



Lubinski, Morrison and Rigrodsky (1981) studied the issue of limited communication in a long term care setting from the perspective of the residents via personal interviews. They examined the following seven variables of communication: 1) amount of communication, 2) communication partners, 3) reasons for and topics of communication, 4) where communication occurred, 5) value of communication, 6) factors affecting communication, and 7) suggestions for improving communication.

Lubinski, Morrison and Rigrodsky found that while patients themselves felt they talked very little, they considered those around them to be talking more than themselves. Patients indicated they did not talk to any particular type of person, but they felt they should avoid talking to their roommates. Results also indicated patients did not consider others in the environment as similar to themselves. According to the patients' responses, the desired topics of communication differ from the actual topics being discussed. Patients perceived themselves as communicating in public, although they also considered public locations as places to avoid and monitored their conversations in such locations. Patients also indicated they liked to talk but felt what they had to say was of little value. Twenty of 24 interviewed considered the communication that occurred as meaningless. From the patients' perspectives, factors found to inhibit communication were the restrictiveness of the institution, lack of privacy, negative connotation of institutionalized living and lack of visitors. Yet proximity during mealtimes and the availability of activities were considered to facilitate communication. Fifteen of the 24 patients interviewed in the Lubinski et al. (1981) study offered suggestions they felt would improve communication, such as



improving their own health and improving staff attitudes. It also was felt that increasing satisfaction within daily life -- for example choosing one's own roommate or offering cocktail hours -- would increase communication.

In their conclusion Lubinski et al. (1981) presented the following paradox: if residents desire to communicate, why aren't they doing so? They suggested that the residents are partly responsible for the limited communication because of their tendency to not establish relationships with people in their environment and to communicate with caution. Institutionalization, they add, inhibits communication through restrictiveness, rules, lack of privacy and projection of the patient into a passive role. Lubinski et al. (1981) discussed the implications of these findings relative to the role of the speech-language pathologist in these types of settings.

Rather than concentrating solely on individuals with speech, language and hearing disorders, they may also want to investigate the communication attitudes existing in the environment and the possibility of the existence of a communication impaired environment (Lubinski, Morrison, Rigrodsky, 1981, p. 411).

Currently speech and language resources in extended care facilities appear to be directed only toward patients with diagnosed speech or language disorders. Upon admission to a facility, communication is not generally an issue for those individuals with intact communication skills. Haley (1989) proposed that maintenance goals be included in a resident's care plan. It is not unusual for these goals to be omitted by professionals during long-term care planning. Haley believes the strengths which the patient brings into the long-term care setting should be addressed along with the problems. "With-8

out stimulation and motivation from the staff, the resident's strengths soon decline as concentration is centered only on the list of identified problems" (Haley, 1989, p. 27).

Not only might communication be one of the strengths addressed, the Joint Commission on Accreditation of Hospitals (Haley, 1989) suggested that identification of strengths can also *increase* communication with the patient via increasing the patient's understanding of the problem and allowing his/her involvement in the decision making process. In conclusion, Haley suggested that ignoring strengths and viewing patients as a set of problems contributes to depression and decreases normal socialization. This suggests that even if a patient is not admitted with speech or language problems, communication should be addressed as a strength and maintained.

Communication in Normal Aging

In their review of communication research, Ulatowska and Chapman (1991) found studies of discourse abilities in elderly populations to be more consistent than word and sentence level studies. They attributed this to the natural form of discourse. The social and cognitive factors excluded from word and sentence level examinations are included in discourse analysis.

Discourse was used by Obler and Albert (1981, cited in Cooper, 1990) to compare oral and written performance across age groups. They found older subjects to be slower at generating concepts, to have more speech dysfluency interruptions, but to have a greater use of well-structured complex syntax. Older subjects tended to evaluate and modify their speech more frequently.

Ulatowska, Cannito, Hayashi and Fleming (1985) conducted two studies of the communication skills of the elderly. The first study found a relationship between the effectiveness of dealing with problems in an

individual's environment and the quality of discourse. The greater an individual's functional competence, the higher the quality of discourse. As a component of functional competence for coping with daily environmental demands, Ulatowska et al. (1985) proposed communicative ability is especially significant for independently living elderly adults.

In their second study, Ulatowska et al. (1985) identified an age-related difference in complex discourse performance which could not be attributed to either a difference in education or environmental demands. Yet there was no difference in the amount of language produced. They suggested that this age related difference in language might be the result of changes in societal functions. "Pressures to communicate precisely for efficient transfer of information give way to greater emphasis on friendly exchange and comradeship" (Ulatowska et al., 1985, p. 136). For example, the elderly speaker can pause without losing his/her turn. Therefore, they posed the question of whether the change in communication they found was a deficit or a normal stage in the language continuum.

Cooper (1990) used a directed oral discourse task to evaluate changes in language as a function of aging. Using a picture description paradigm, three areas were examined: production, elaboration and complexity. Results were analyzed using quantitative measurements and focused only on oral performance. No relationship was found between age and oral discourse performance.

Effect of the Environment on Communication

A comprehensive perspective of adult communication includes an understanding of the interaction of personal and situational factors, including adaptation and change (Knox, 1981, cited in Beasley and Davis, 1981).

Bloomer (1960) also pointed out that interpretation of a patient's linguistic skills needs to be considered in reference "to the overall status of the patient and the environment in which he functions" (p. 292).

A change in verbal or nonverbal communication might be the result of relocation to an extended care facility (Lubinski, 1978). A decrease in communication might indicate the relocation had a negative effect. Lubinski (1981) pointed out that communicators are influenced by their physical environment and by the rules governing the interaction.

Kane and Kane (1991) suggested the three R's of extended care facilities -- routine, regulations, and reimbursement -- inhibit the communication of residents. "They must live with strangers, and get up and go to bed on schedule. They are crowded into hospital-like double rooms where they can hardly seat two guests, let alone offer guests a cup of tea" (p. E15).

According to Lawton (1985), the ability to make one's own decisions is severely curtailed in an institution. He found that when they had less control over their own space, people in multiple rooms withdrew from each other when in the room together. The findings of Ittelson, Proshanky and Rivlin (1970, cited in Lawton, 1985) in their study of social behavior in mental hospital rooms indicated more social behavior occurred in single or two-person rooms. Those in smaller rooms felt free to invite guests into their rooms.

Lawton (1985) specifically addressed the issue of the environmental influences on communication. He described an institution as an environment with sensory and social overload and proposed that with so much of residents' time spent in the company of others, opportunities for



privacy are especially important. Privacy, he suggested, increases social behavior. Lawton also pointed out the effectiveness of nonverbal communication such as gesture, eye contact, gaze and body part orientation. "When people are limited in their ambulatory capacity or the environment is impoverished in opportunities for physical privacy and territorial behavior, such body language may become especially important" (p. 11). Lawton concluded by reminding the reader that people differ in their sensitivity to type and amount of sensory information in their environment. What may have a negative influence on one person might not on another. Yet an awareness of verbal and nonverbal communication opportunities in the environment is a step toward an improved quality of life for residents.

There appears to be a consensus in the literature that environment influences communication and that one variable of particular significance to the residents of extended care facilities is the availability of privacy.

Some conditions must be met for self-expression with language. They are privacy, quiet, and respect. ... when one is cosigned to a health facility, the favored choices may not be possible. But in the simplest of daily activities there are possibilities for choice, and such freedom must be protected (Dreher, 1987, p. 112).

Enhancing Communication in Extended Care Facilities

Dreher (1987) noted a tendency for some people to become more introverted as they age. This disengaging is not necessarily a negative occurrence as some may find inner peace in doing so, yet for others it could lead to loneliness and depression. Dreher suggested that "An obvious solution is to provide many opportunities for social contact and self-

expression and yet allow individuals to reject or adopt them by their own choice" (p. 108). He then described three types of therapy groups which provide social contact for elderly adults: reality orientation groups for confused and disoriented patients, reminiscing groups for exploring the past, and remotivation groups for reintegrating patients into the current social world.

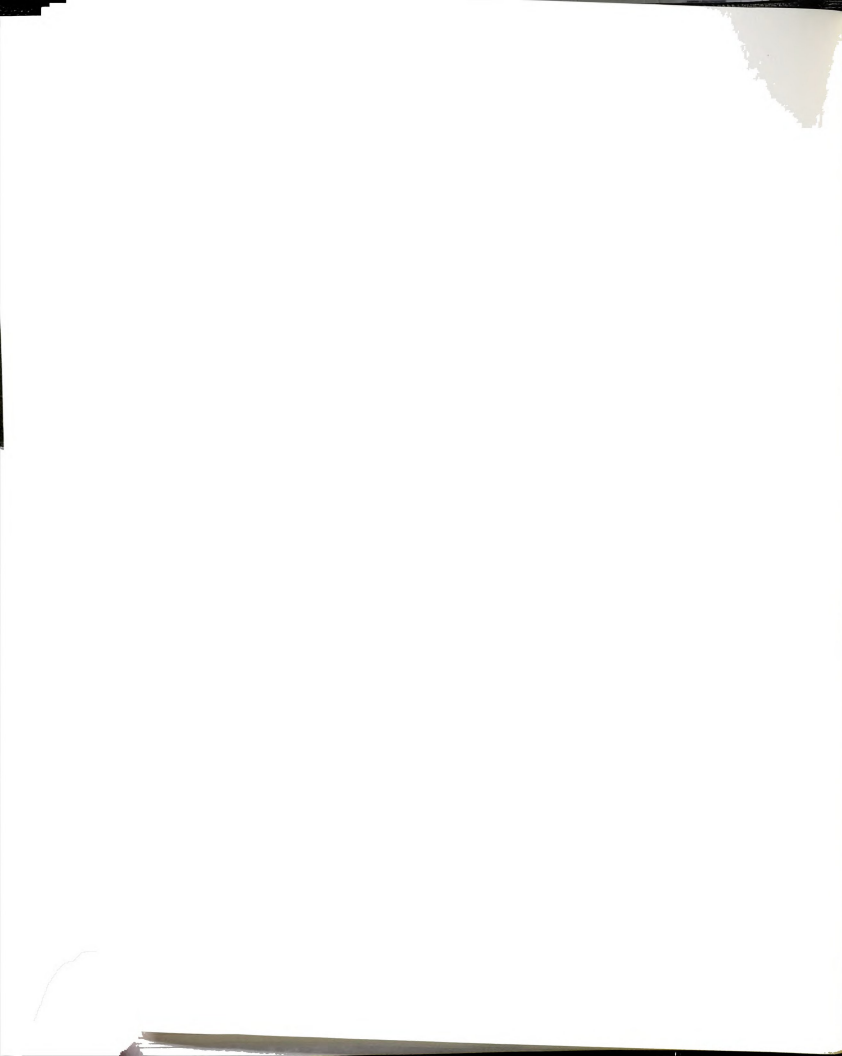
A reminiscing group was formulated by Gros and Truglio-Londrigan (1982) to meet the needs of minimally to moderately confused patients of an extended care facility. The goal of the group coordinators was to increase socialization, stimulation and self-esteem through shared memories. They indicated discussion of topics such as past holidays, the roaring twenties, and seasons led to an increase in socialization of members and an awareness of one another's needs. Patients began to display more independent behavior rather than passivity. The authors cited an example of a previously withdrawn woman unable to communicate verbally who participated eagerly in the group by gesturing or humming along.

Arnott (1983), a poet and senior citizen herself, used poetry to attempt to increase communication and a sense of value in individual lives in nursing home residents by encouraging communication from her audience. Arnott brought objects in for subjects to touch, feel, smell and discuss. Discussions were turned into group poetry; and as participants became more involved and less inhibited, acting was even introduced.

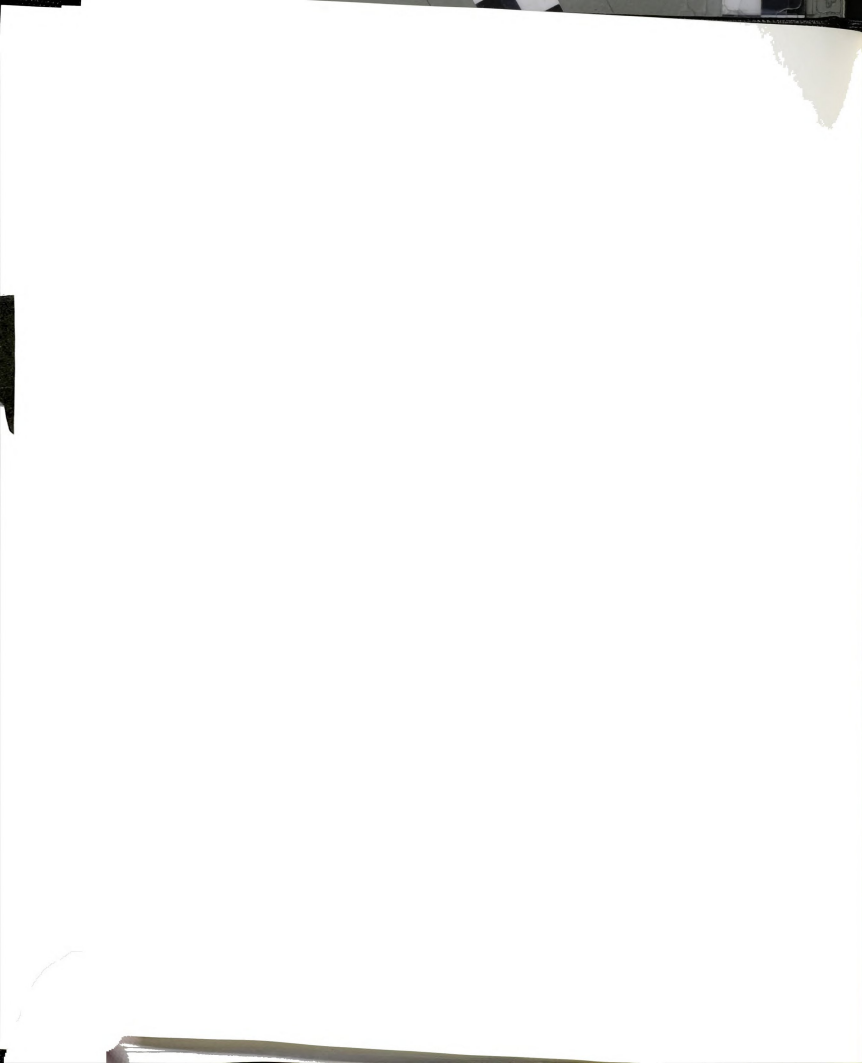
Weekly listening to poems and stories has increased ability to concentrate, encouraging expression of thought, exercises in using memory and imagination, above all, my interest in their lives - all help to move a person from apathy to participation (Arnott, 1983, p.25).

Boczko (1987) described an experimental forum which began with staff training administered by a speech-language pathologist and included topics such as listening closely, encouraging more than yes/no responses from residents, and reducing stereotypes about the elderly. It was a goal to change the perspective of the aides and orderlies. After the initial training, the aides and orderlies made rounds with the speech-language pathologist, who pointed out opportunities to stimulate communication. Topics were introduced to instigate conversation between residents. During the final stage aides selected eight residents in their care to participate in the forum. At first, discussions were led by the speech-language pathologist; but the aides eventually assumed this responsibility. According to Boczko, "Talking increased on the unit" (p. 27); and the opportunity to express their feelings and frustrations allowed residents to take a more active role in their care and allowed them to adjust more easily to life in the care facility. The staff benefited from the training in communicating with residents and gained a new perspective on the lives of the residents.

The positive results of previous studies in the area of socialization in extended care facilities may need to be interpreted with some qualifying factors. Jones (1972, cited in Lubinski, 1978) observed the effect of recreational therapy in two nursing homes. He found that while socialization increased during the recreational periods, it did not carry over to other contexts. Froio, activities director of an extended care facility, meets with patients upon admission to discuss what activities they might enjoy ("Off the Beaten Path Approach," 1986). She pointed out that not all people enjoy group activities; and rather than encouraging them to do so, they should be offered alternatives such as books, magazines, games or personal visitors.



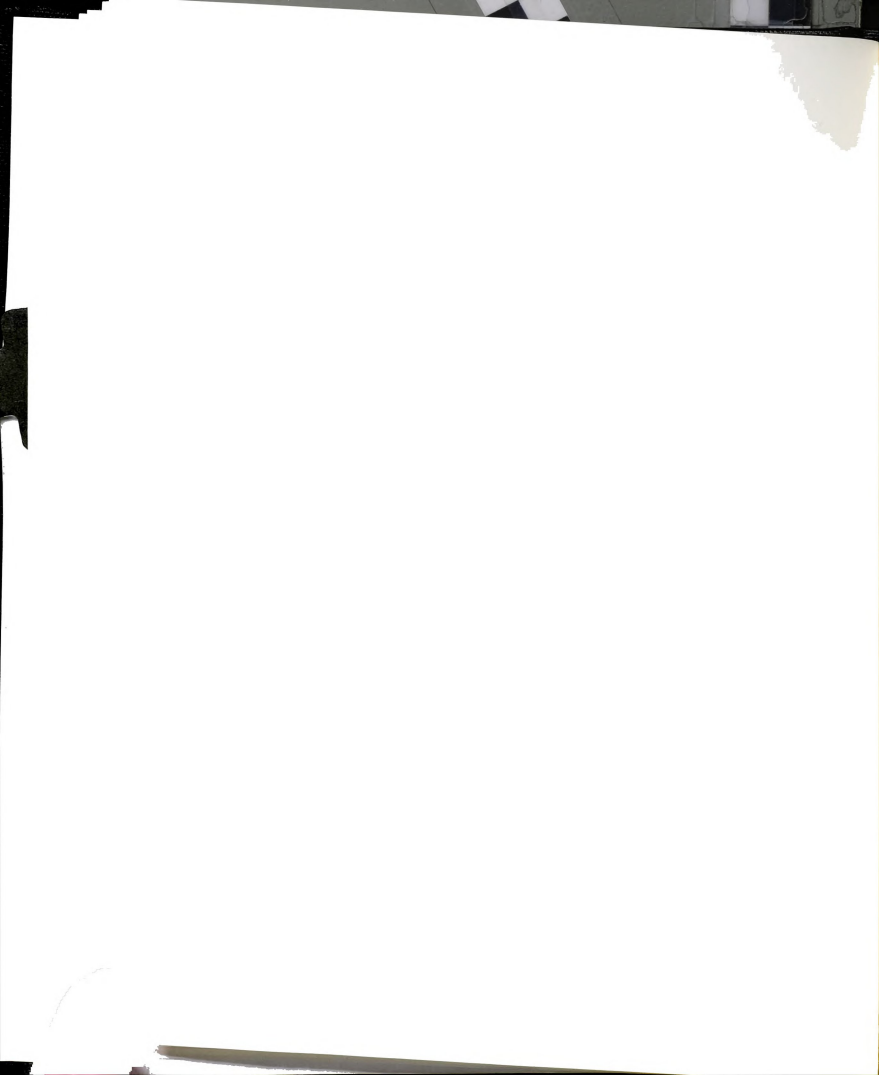
The members of a group influence its success. While groups in the community are self-selected, Dreher (1987) recommends that groups in extended care facilities be selected by the staff. This selection process should include interviews with potential members to determine their attitudes and compatibility with other potential members. Dreher added that alert, talkative patients should be interspersed with the apathetic, negative patients. Strategies to enhance the hearing of residents also influences communication. Thibodeau (1989) found 82% of residents in nursing homes had some hearing loss. Yet only 4% of this population was receiving audiological services. "The benefits of securing amplification for the elderly include a more positive self concept as well as reduced social isolation" (Thibodeau, 1989, p. 25). He offered the use of assistive listening devices as an alternative solution to personal hearing aids. Common equipment would benefit a greater number of residents and simplify staff training. Many have offered suggestions for enhancing the communication and quality of life of residents of extended care environments. Paul (1988) reviewed the benefits of children's visits to these settings and suggested that one-on-one is preferable to group-to-group interactions. For example, rather than having a group of children sing songs to the residents, each child might plan his/her own activity and be matched with one resident to carry out that activity (e.g., making a bookmark). Kane and Kane (1991) suggested that nursing home residents be allowed to establish more "home-like" personal space and that there should be less emphasis on artificial activities and entertainment. Tobin (1986) described the approach of Paul Mangan and Steve Goodwin, whose innovative techniques included the installation of fireplaces for residents to gather around instead of walls. Mangan and



Goodwin focused on abilities of individuals and, consequently, have found an improvement in the health of patients and the attitude of the staff. The article "Off the Beaten Path Approach to Long-Term Care" (1986) described an extended care facility in Sunyvale, California, which offers a Friday night happy hour with beer or cocktails and musical entertainment; provides group therapy with the family of residents; includes a live-in dog, a barber and beauty salon on the premises, initial and routine visits between the residents and staff, and a resident council made up of six residents. All of the strategies described above were part of a goal to enhance communication and quality of life of the residents.

Perhaps the communication needs within long term care settings might best be identified by turning to the resident population. Armstrong (1984), an 81-year-old resident of such a facility, described her expectations of this environment. She requested to be treated like a person, not "the broken hip in 340." According to Armstrong, when one is old and ill, cross looks or sharp words hit like a blow, whereas a smile or a friendly pat in passing would brighten her day.

Perhaps it is almost too much to hope that nurses could have a little time to listen once in awhile, when they have so much to do. But if they could, it would be so wonderful. To sit in a wheelchair hour after hour, watching crisp white uniforms hurrying by, leaves rather a vacuum of loneliness. However, we old people are prone to talk too much; so maybe nurses would be afraid to let us start, fearing we would never stop (Armstrong, 1984, p.38).



CHAPTER III

Method

Subjects

The samples for this study were selected from the resident population of a retirement community of a midwestern university community. This facility offers a range in the independence level of living environments for elderly adults, ranging from the health center for long-term care to independent-living apartments. At the time of the study there were 150 individuals in the independent-living apartments, licensed for 293, and 126 individuals living in the health center, licensed for 133.

The independent-living apartments are contained within one building with three floors of one or two bedroom apartments varying in size. The resident dining room of the independent-living apartments -- where breakfast, lunch and dinner are served -- is large enough to allow a significant amount of space between tables and has high ceilings. The entire dining room is carpeted and there are draperies on all of the windows. The health center is comprised of double rooms.

There are three floors of double rooms in the health center. Each floor has a small dining room. The tables are arranged close together as compared to those in the dining room of the independent apartments. The dining rooms of the health center are not carpeted and the windows are covered with blinds which are raised during the day.

Subjects were screened for conditions which might interfere with communication such as chronic illness, severe hearing loss, history of cerebral vascular accidents (CVA), and/or severe dementia. It was also the intent to eliminate from the study subjects with depression. Bayles and Kaszniak (1987, chap. 5) pointed out that depression is more common among

older adults than other age segments and that the depression can affect cognitive and communicative skills. Depression, according to Maurer (1985), is one of the major causes of lack of communication in elderly adults.

Subjects from the independent-living apartments were randomly selected from a list provided by the administration and each was contacted by phone. Subjects from the health center were referred by the social worker and nursing staff based on the criteria specified. Of eighteen referred, only nine met the criteria. Two of the nine presented with a probability of depression but were included in the study because no other eligible subjects were available. All subjects had hearing (aided or unaided) sufficient for conversation as determined by performance during pre-testing interviewing.

Subjects were informed of the purpose and topic of the study and signed an informed consent form (see Appendix A).

Instruments

To screen for depression, the Geriatric Depression Scale-short form (GDS) (Sheikh and Yesavage, cited in Sadasivan, 1989) was administered to all subjects. The GDS is a 15-item yes/no questionnaire (see Appendix B). Item numbers 1, 5, 7, 11, and 13 receive 1 point if answered with a negative response, whereas the remaining items receive 1 point if answered with a positive response. A total of 5 or more points is considered an indication of probable depression. Yesavage et al. (1983) compared the GDS to other depression scales and found the GDS to be a reliable and valid screening scale for elderly populations.

The oral language portion of the Woodcock Language Proficiency Battery (WLPB) (Woodcock, 1984) was presented to subjects as a screening test to confirm prerequisite communication skills. The oral language cluster consists of three subtests: picture vocabulary, antonyms-synonyms, and

analogies. "This measure of oral language is based upon the rationale that the abilities required to derive meaning and produce meaningful responses in the execution of certain cognitive tasks are prerequisites to understanding and producing oral language" (Woodcock, 1984, p.17). The WLPB is a standardized test normed up to 80+ years of age.

An adaptation of the Environmental Communication Profile (ECP) (Calvert & Murray, 1985) was used to examine the functional communication of the subjects and the influence of the environment on that communication. The ECP is the result of Calvert and Murray's research in the area of child language in the classroom setting. The profile looks at three levels of communicative interaction: 1) the environmental event which precedes the communicative interaction, 2) the function of the interaction, and 3) the communicative act itself (verbal or nonverbal). This information is obtained by observation and recorded on to a prepared chart (See Appendix C). The ECP is a method of examining communicative interactions in a variety of settings. The content validity of this instrument was confirmed by three independent judges. In practice rating sessions, the interjudge reliability for the amount of communicative interactions was 97%.

Procedures

The GDS and the WLPB were administered one-on-one in a quiet environment, free from auditory and visual distractions. The 15-items for the GDS were presented verbally by the examiner. The subjects provided yes/no responses. The WLPB-Eng was administered with the standing test book between the examiner and subject. The picture vocabulary subtest required the subject to name the picture presented. In the second subtest, the subject was required to state a word whose meaning is opposite of the word provided and to state a word whose meaning is almost the same as the word provided.

The final subtest, analogies, required the subjects to complete phrases to produce an appropriate analogy (e.g., cat is to walk, as fish is to ____). Although the subject was presented with written text on the test book in the last two subtests, reading skills were not a prerequisite, as stimulus items were presented verbally by the examiner.

Data for the ECP were obtained during group meal times. Each subject was observed during a meal on three separate occasions for 10 minutes on each observation. The examiner sat in the dining area, observed the interactions, and charted the behaviors during the observation. The examiner's seating and movements were structured so as to create as little disturbance as possible during data collection.

Each subject's communicative acts were charted as either verbal or nonverbal. Verbal acts included declarative/command, question, echolalia, perseveration, and other (jargon, vocal behavior). Nonverbal acts included tactile, action/gesture, facial expression, eye contact and no response. The environmental event which triggered the communicative act also was coded as either verbal or nonverbal and according to who (care provider, peer, self) or what (environment) triggered the event. To evaluate communicative intent of the act, Calvert and Murray used a system developed by Yoder and Reichle (1977, cited in Calvert & Murray, 1985). The same system was used for this study (See Appendix D). The number which corresponds to the intent of the act was written next to the X representing the act on the chart.

CHAPTER IV

Results

The purpose of this study was to compare the amount of communication of elderly adults living in a long-term care facility to those of elderly adults living in independent-living apartments. This chapter presents a descriptive analysis of the subjects and results. Inferential statistics were used to examine the difference between the amount of communication that occurred in the two settings. The Environmental Communication Profile (ECP) yielded many types of information. In addition to addressing the question of whether there was a difference between the two settings in the amount of communicative interactions, the information also answers the following questions: 1) was there a difference in the amount of nonverbal versus verbal communication? 2) what were the environmental events which instigated communication? and 3) what were the primary intents of the communication?

Demographic information is presented in Table 4-1. Because of the nature of the facility and the resident population, few residents of the health center met the criteria of being free of either chronic illness, a history of cerebral vascular accidents (CVAs), or severe dementia. Nine residents of the health center (HC), 2 males and 7 females, met the criteria and agreed to participate. Ten comparison subjects, 1 male and 9 females, were randomly selected from the independent-living apartments (IA). The HC subjects ranged in age from 75 to 90 years ($\bar{x}=84.4$ years) with a mean of 14.8 years of education. The IA subjects ranged in age from 81 to 90 years ($\bar{x}=85.9$ years) with a mean of 16.4 years of education.

Table 1
Demographic Characteristics of Subjects

	<u>Number of subjects by sex</u>		<u>Chronological age in years</u>		<u>Mean number of years of education</u>
	<u>Male</u>	<u>Female</u>	<u>X</u>	<u>Range</u>	
Health Center	2	7	84.4	75-90	14.8
Individ. Apartments	1	9	85.9	81-90	16.4

All subjects passed the Woodcock Language Proficiency Battery-English(WLPB-Eng) screening test. While the overall performance, as reflected in the standard scores, of the IA subjects was approximately one standard deviation (SD) above the performance of the HC subjects, all subjects received a standard score greater than -1 SD. This indicates that all subjects had prerequisite language skills.

The Geriatric Depression Scale (GDS) was administered with the intention of screening out subjects who presented with the probability of depression. A score of 5 or more points on the GDS indicates probable depression. The highest number of points received by an IA subject was 2. HC subjects received higher scores overall on the GDS, but only two received a score of 5 or more (HC8=5 and HC9=6). These two subjects met the other criteria and were included in the study because other subjects meeting the criteria were not available. The potential of depression in these two subjects will be considered in the discussion of the results.

Amount of Communicative Interactions

Data for the ECP were collected over three ten-minute observations during meal times. The average number of communicative interactions of these three observations was calculated for each subject (See Appendix E). The number of communicative interactions for the HC subjects ranged from 8 to 35, with a mean of 20 and a standard deviation of 9.24. The number of communicative interactions for the IA subjects ranged from 13 to 49, with a mean of 33 and a standard deviation of 9.97. The difference between the two means was 13. The effect size (ES) (Fraenkel & Wallen, 1990) is a technique for analyzing the magnitude of a difference between means regardless of whether it is statistically significant. It is calculated using the following formula:

$$ES = \frac{\text{mean of exp. group} - \text{mean of comparison group}}{\text{standard deviation of comparison group}}$$

An ES of .50 or greater, more than one standard deviation of the comparison group's scores, is considered an important finding by most researchers. An ES of 1.30 was calculated for the difference of 13 between the HC and IA groups.

A Mann-Whitney U Test, a nonparametric inferential statistical test, was calculated to determine whether the difference between the two settings in the amount of communicative interactions was statistically significant. The scores of each group were combined and ranked from lowest to highest, with the lowest score receiving a one, the second lowest receiving a two and so on. A "U" is then calculated using the following formula:

$$U = \frac{(n1)(n2) + \frac{n1(n1+1)}{2} - R1}{2}$$

where n1 = number of subjects in the experimental group
n2 = number of subjects in the comparison group
R1 = the sum of the ranks assigned to this group.

This is calculated for each group. The smaller of the U values is the basis for comparison to the table of critical values (Siegel, 1957). A U value of 12 was found for the ranked communicative interactions. This was statistically significant for a one-tailed test at the $\alpha = .01$ significance level, leading to the rejection of the null hypothesis that there is no difference in the amount of communication between the two settings. Subjects in the health center had fewer communicative interactions than subjects in the independent apartments.

Amount of Verbal Verses Nonverbal Communication

The amount of verbal communication in relation to the amount of nonverbal communication also was examined in each setting (See Figure 1). All three ten minute observations of each subject were used in the calculation of the average verbal and nonverbal communicative interactions for the two groups. IA subjects averaged 74 verbal (or 74%) and 26 nonverbal (or 26%) of 100 average total communicative interactions. HC subjects averaged 37 verbal (or 61%) and 24 nonverbal (or 39%) of 61 average total communicative interactions.

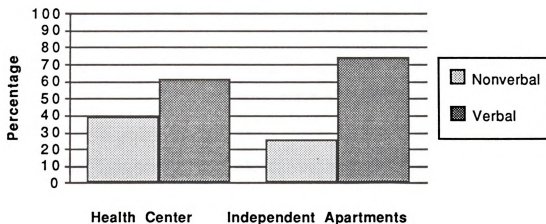


Figure 1: Nonverbal vs. Verbal Communication

Environmental Events Triggering Communication

The ECP was structured to allow not only for the recording of the communicative act itself but also for the environmental event which triggered the act. The percentage of communicative acts which were self, peer, staff or environment instigated was calculated for each subject. The HC group was then graphically compared to the IA group. Both groups had a similar percentage of communicative acts instigated by peers (See Figure 2) and staff (See Figure 3). The HC group was somewhat less inclined to self initiation of communication (See Figure 4). The HC group had a much higher percentage of communicative acts instigated by the environment (See Figure 5).

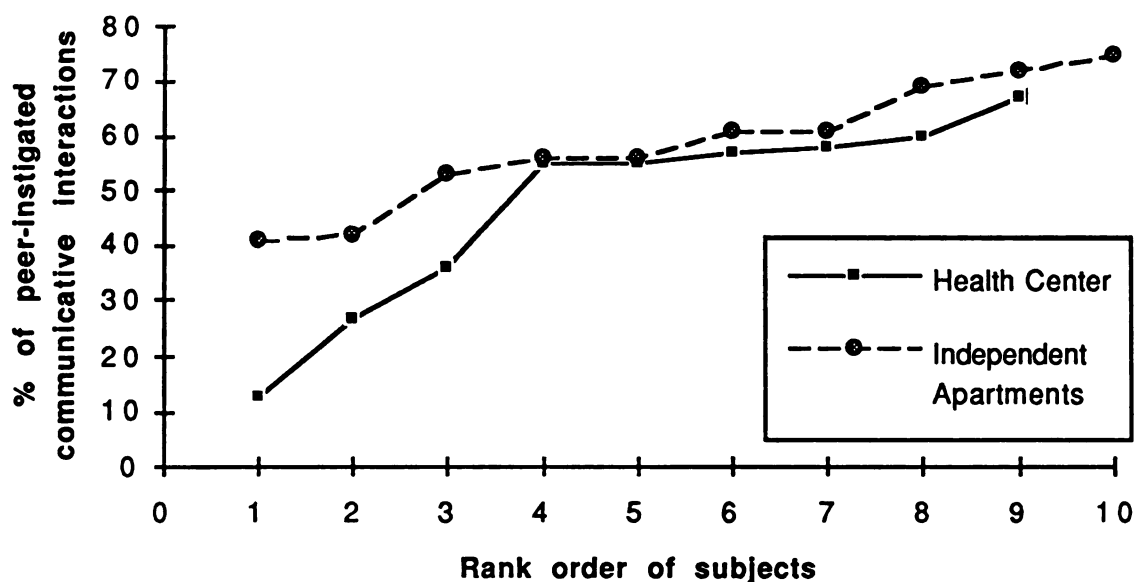


Figure 2: Peer-Instigated Communicative Interactions

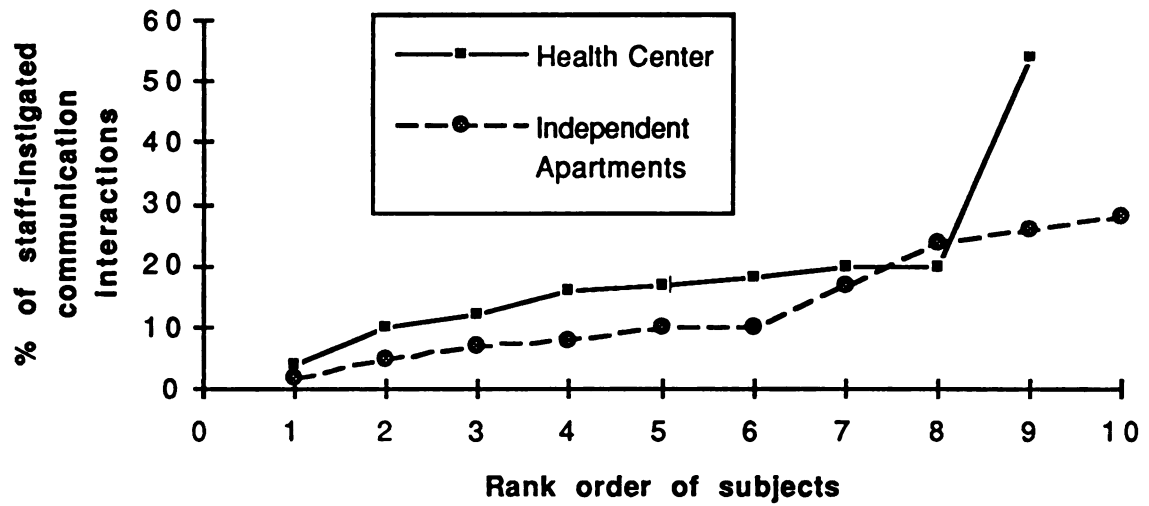


Figure 3: Staff-Instigated Communicative Interactions

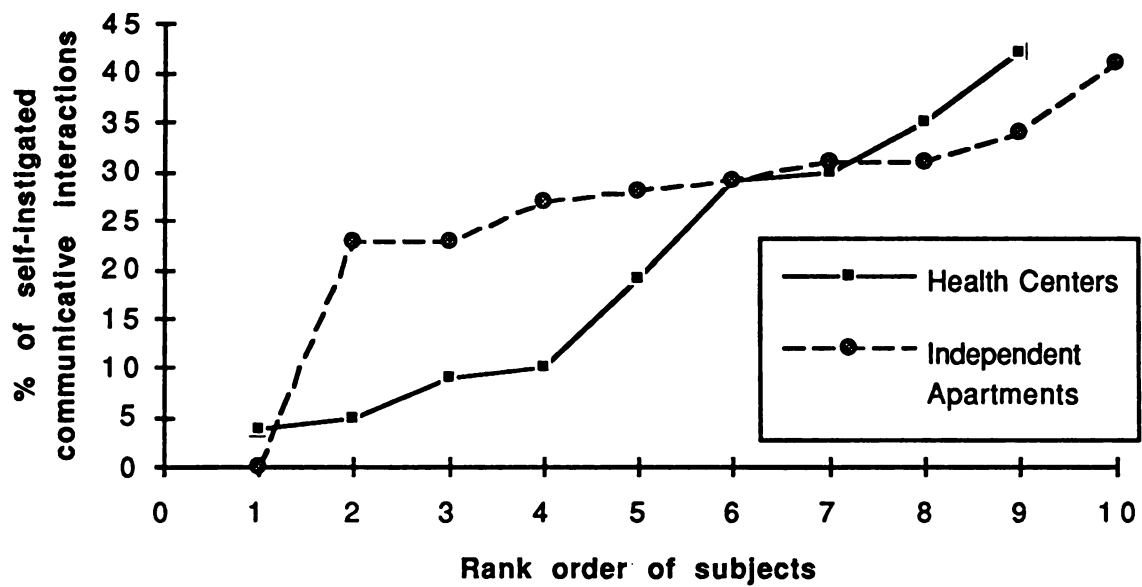


Figure 4: Self-Instigated Communicative Interactions

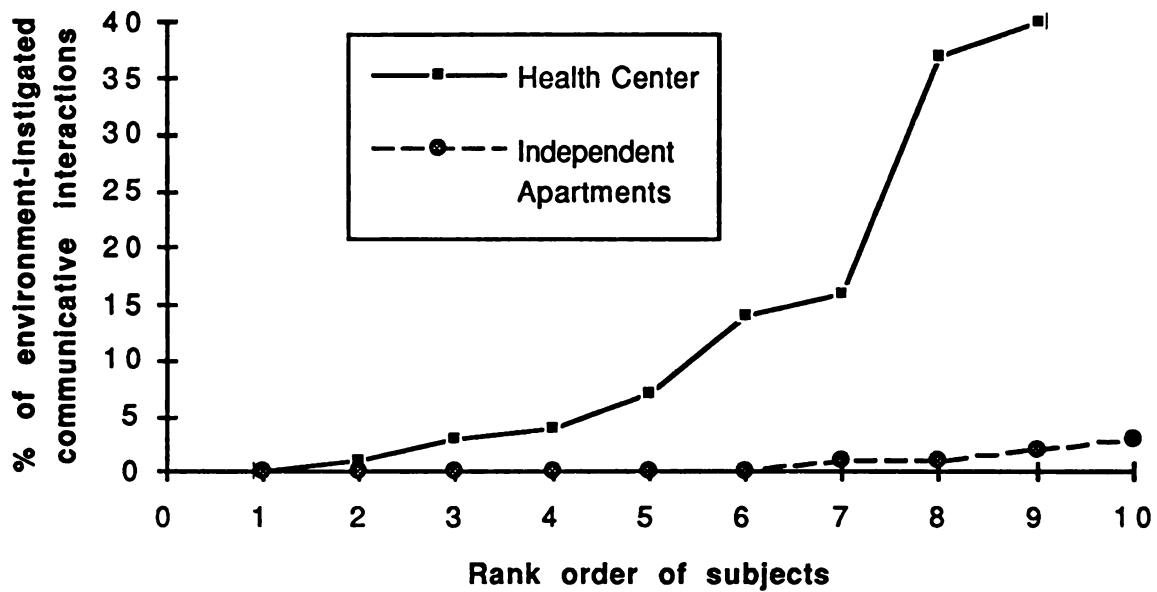


Figure 5: Environment-Instigated Communicative Interactions

Primary intents of the communication

The final aspect of the ECP examined was that of the communicative intent. For each communicative interaction, a number code was assigned representing intent. The three most common intents were the same in each setting: getting information, giving information, and expressing one's own intentions, beliefs, or feelings (See Appendix F). The most frequently occurring intent among the HC subjects was getting information, whereas the most frequently occurring intent among the IA subjects was giving information.

CHAPTER V

Discussion and Recommendations

During data collection for this study several subjects -- both in the health center and in the independent-living apartments -- upon being informed of the purpose of the research, commented that there would not be as much communication in the health center. The observations of the people involved in the study were confirmed.

Amount of Communicative Interactions

A significant difference was found between the amount of communicative interactions that occurred in the two settings. The null hypothesis was rejected, and it was found that the subjects in the health center had less communication than subjects in the independent-living apartments. These findings are consistent with Lubinski (1981), who noted little communication occurred in long-term care settings.

While the mean years of education and overall performance on the WLPB of the IA subjects was higher than that of the HC subjects, the HC subjects had a mean of greater than 12 years of education and performance on the WLPB was within the norm. Therefore, it is suggested that the HC subjects had the prerequisite skills for communication comparable to their IA peers.

Depression has been cited as an inhibitor of communication (Maurer, 1985). Two subjects included in the HC group presented with probable depression. The average communicative interactions for these subjects was 8 and 26. Since the basis of comparison to the IA group was the mean of all subjects, a low score potentially influenced by depression could bring down the overall average. The score of 26 was above the mean and therefore not a

concern. When the score of 8 was withheld from the mean calculations the mean for the group was 2 communicative acts higher. Whether this might influence the conclusion we draw as to the cause of the difference, it remains that there is a difference in communication between the two settings. If depression is a potential factor for a limited amount of communication occurring in long-term care settings, it should be examined as well.

Other potential explanations for a difference in the amount of communication between the two settings include the availability of communication partners, overall health and personality. Because of the nature of long-term care settings, many residents of these settings do exhibit difficulties with speech, language or hearing. It might be proposed that perhaps individuals with adequate communication skills in long-term care settings might communicate less than peers not in long-term care settings because of the lack of communication partners within their environment. Data for the ECP were collected during meal times. In the health center, residents have preassigned seating that is the same for each meal. During observations, it was noted that the subjects involved in the study were seated at a table with at least one other subject also involved in the study. Since each subject was determined to have the prerequisite skills for communication, a communication partner was available to each subject.

The overall health of the HC subjects might have influenced the amount of communication. While subjects were screened for chronic illness, each subject had some physical health reason for being admitted to the long-term care setting. This condition might have led to a limited amount of communication on occasion. An attempt was made to avoid data which reflected "a bad day" by collecting the data on three separate occasions.

Another variable which is an integral part of communication is personality. During the collection of the background information, some subjects -- both of the health center and the independent-living apartments -- indicated they perceived themselves as more introverted, less out-going than their peers. It was assumed that the means reflected a variety of personalities for each setting.

Verbal/Nonverbal, Environmental Events and Intent

The higher percentage of nonverbal communication, greater number of environment instigated acts, and the most frequently occurring intent of getting information noted in the HC group might be attributed to the coding system of the researcher. Subject observation of an event or noise in the environment was coded as eye contact (nonverbal) which was instigated by the environment and assigned the intent of getting information (about environment). The occurrence of this combination was more frequently noted in the health center, indicating that individuals capable of communicating, while they may not be doing so, remain aware of their environment.

The environment has been documented to influence communication. The difference in the amount and type of communication between the two groups studied may have been influenced by the difference between the physical environment of the two settings. For example, the carpeting, draperies and size of the dining room in the independent apartments create an acoustically appealing environment for communicating. The higher amount of attending to the environment noted in the health center might be attributed in part to reverberation from the tile floor, non-draped windows and small size. When an event occurred in the dining area of the health

center, noise and movement were easily detected. On occasion, music (taped or played on the piano) was played during meals in the health center dining area. The level of the music, while it might be argued needed to be loud enough for those with hearing impairments, made it difficult for the researcher to hear the subjects for data collection and, consequently, may have interfered with the amount of communication that would have occurred. Also in reference to the environment, one subject of the health center commented in reference to the lighting and temperature: "It just isn't a comfortable place to communicate."

It should be noted here that during data collection, the researcher observed a high level of staff concern and awareness of resident status. Positive attitudes also were noted, and staff members frequently interacted with residents. Social activities were offered regularly.

Implications

Developing an environment conducive to communication would include attending to the physical characteristics of the setting. Carpeting, draperies and space between tables would decrease environmental distractions. If music is played it should be kept at a minimum volume as background music, not at a volume which interferes with speaking or hearing.

Stimulation to enhance communication might be introduced. This may take the form of communication groups. Yet due to the variability of personalities it should not be a mandatory group. Individual options, rather, should be available, such as small groups for card games, availability of reading material or private areas for receiving guests.

Communication can also be stimulated through the staff which has



daily contact with the residents. The results of this study indicate that subjects in the health center had a high degree of interaction with the staff. Since the interaction time already exists between staff and residents, enhancing communication would simply be a matter of maximizing that time. For example, a staff member might talk to the resident while cutting their meat, rather than to a staff member cutting meat at the neighboring table. Staff could ask questions of the resident, questions requiring more than just a yes or no response. Staff might offer the resident choices in service or care, allowing the resident to make decisions and participate in care. Offering information about his/her personal life that might be of interest to the resident or discussing current news events would be other potential opportunities for staff to stimulate communication. All of the above suggestions might be better implicated after some staff training in communication. For example, with the high degree of nonverbal communication occurring in the health center, staff may benefit from knowledge of nonverbal communication -- what it means and how it can be used.

Suggestions for Further Research

The results of this study provide implications for further investigations.

1) Similar studies should be repeated in other long-term care settings, as the results found in the current study may be simply a reflection of the facility used in this study.

2) A larger number of potential subjects in long-term care settings, meeting the criteria, would allow random sampling of subjects.

3) Given that there is a limited amount of communication occurring

among residents of long-term care settings, a study should be conducted to examine whether a stimulation program would increase communication. Res

4) Research in the area of the influence of the environment on communication might yield information as to which physical characteristics enhance or inhibit communication. This information could be used as a guideline for the development of an environment conducive to communication.

5) Research in the area of the effect of staff education in communication would lend some knowledge as to whether this would be an effective method of increasing communication among residents.



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APPENDIX A
Informed Consent Form

Michigan State University

Department of Audiology and Speech Sciences

A STUDY OF THE LANGUAGE SKILLS OF ELDERLY ADULTS

Informed Consent Form

I have freely consented to take part in a research study being run by April L. Taylor, under the supervision of Leo V. Deal, Ph.D.

The purpose and topic of the research have been explained to me; I understand what my participation will involve.

I understand that I am free to stop or discontinue my participation at any time during the experiment without penalty.

I understand that the results of the study will be treated in the best confidence. Within this condition, the overall results of the study will be made available at my request.

I understand that my participation in the study does not guarantee any direct benefits to me.

I understand that, at my request, I can receive additional explanation of the study after my participation is completed.

Signature

Date

APPENDIX B
GERIATRIC DEPRESSION SCALE - SHORT FORM
(Sheikh & Yesavage, cited in Sadasivan, 1989)

Subject Code: _____
Date: _____
Score: _____

- | | |
|--|--------|
| 1. Are you basically satisfied with your life? | yes/no |
| 2. Have you dropped many of your activities and interests? | yes/no |
| 3. Do you feel that your life is empty? | yes/no |
| 4. Do you often get bored? | yes/no |
| 5. Are you in good spirits most of the time? | yes/no |
| 6. Are you afraid that something bad is going to happen to you? | yes/no |
| 7. Do you feel happy most of the time? | yes/no |
| 8. Do you often feel helpless? | yes/no |
| 9. Do you prefer to stay in your room, rather than going out and doing new things? | yes/no |
| 10. Do you feel you have more problems with memory than most? | yes/no |
| 11. Do you think it is wonderful to be alive now? | yes/no |
| 12. Do you feel pretty worthless the way you are now? | yes/no |
| 13. Do you feel full of energy? | yes/no |
| 14. Do you feel that your situation is hopeless? | yes/no |
| 15. Do you think that most people are better off than you are? | yes/no |

APPENDIX C
Environmental Communication Profile
(Calvert & Murray, 1985)

															NAME: DATE: CA: ACTIVITY: RECORDER: TIME:						
															DECLARATIVE/COMMAND					VERBAL	SUBJECT'S COMMUNICATIVE INTERACTIONS
															QUESTION						
															ECHOLALIA						
															PERSEVERATIVE						
															OTHER (jargon, loud vocal behavior)						
															TACTILE					NONVERBAL	
															ACTION/GESTURE						
															FACIAL EXPRESSION						
															EYE CONTACT						
															NO RESPONSE						
															QUESTION					STAFF	ENVIRONMENTAL EVENTS
															DECLARATIVE/COMMAND						
															DECLARATIVE/COMMAND TO OTHER RESIDENT						
															QUESTION					PEER	
															DECLARATIVE/COMMMAND						
															DECLARATIVE/COMMAND TO OTHER RESIDENT						
															SELF-DIRECTED					SELF	
															SUBJECT INITIATED TO STAFF						
															SUBJECT INITIATED TO PEER						
															EYE CONTACT					STAFF	
															ACTION/GESTURE						
															FACIAL EXPRESSION						
															NO RESPONSE						
															EYE CONTACT					PEER	
															ACTION/GESTURE						
															FACIAL EXPRESSION						
															NO RESPONSE						
															NOISE/ENVIRONMENT						

APPENDIX D
Communicative Intent Coding System
(Calvert & Murray, 1985)

- 0 = Other Communicative act that does not seem to fit any other category, including inappropriate acts that seem to have no communicative function (e.g. echolalia, perseveration).
- 1 = Giving Information
A self-initiated verbal or nonverbal communicative act or one in response to a question or statement that provides information (e.g., "That's a Bingo game").
- 2 = Getting Information
Requesting information verbally (question form or declarative with appropriate intonation) or nonverbally (facial expressions or gestures)(e.g., "What's that?").
- 3 = Describing Events
Providing more information about an event (e.g., "The score was 5 to 7. We won!").
- 4 = Getting Another Person(s) To:
 Do Something
 Initiating a verbal or nonverbal command with the intent that the person will perform (e.g., "Tie my shoelace").
 Believe Something
 Attempts to convince a person of a personal belief (e.g., "I didn't take the cookies!").
 Feel Something
 Attempts to convince a person to feel a certain way (e.g., "You have been a bad boy!").
- 5 = Expressing One's Own:
 Intentions Relating one's own intentions to a person through verbal or nonverbal communicative acts (e.g., "I'm gonna hit you!").
 Belief Expressing one's own belief or opinion (e.g., "I think you're mean!").
 Feelings Reflecting one's own feelings or emotions (e.g., "I don't like spinach!").

APPENDIX D CONT'D
Communicative Intent Coding System

6 = Indicating Desire for Further Communication

A verbal or nonverbal cue that signals another to continue to communicate (e.g., "Oh, really?")

7 = Entertainment

Intended for another person's enjoyment (e.g., making a funny face).

8 = Learning New Behavior

Rehearsal

Repetition of an instructional task.

Reinforcement

Strengthening the new schema.

Feedback

Auditory or visual feedback (e.g., Adult: "It's on the table behind the pencil sharpener." Child: "... table ... behind sharpener.").

9 = Social Rituals

Socially accepted ways of exchanging greetings (e.g., "Bye, nice talking with you").

10 = Personal Gratification

Intended for one's own satisfaction (e.g., singing the alphabet).

11 = Compliance

APPENDIX E
Average Number of Communicative Interactions

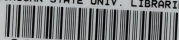
<u>Subject #</u>	<u>HC</u>	<u>IA</u>	
	1	18	28
	2	35	36
	3	15	35
	4	17	49
	5	10	37
	6	35	38
	7	19	20
	8	8	36
	9	26	42
	10	—	13

APPENDIX F
Primary Intents of Communication

<u>Health Center</u>	<u>Independent Apartments</u>
Getting Information (175)	Giving Information (283)
Giving Information (144)	Expressing One's Own: Intentions
Expressing One's Own: Intentions	Beliefs
Beliefs	Feelings (232)
Feelings (129)	Getting Information (185)
Desire for Further Comm (18)	Social (50)
Describing Events (15)	Describing Events (46)
Getting Another Person To: Do Something	Desire for Further Comm (25)
Believe Something	Getting Another Person To: Do Something
Feel Something (15)	Believe Something
Social (11)	Feel Something (13)
Entertainment (11)	Compliance (7)
Compliance (5)	Entertainment (5)



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