

ENVIRONMENTAL COMPARISON BETWEEN TWO
SENIOR DAY TREATMENT FACILITIES

By

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CHAPTER I

INTRODUCTION

One of the most dramatic changes in our nation today is the rapid growth of the aging population. Life spans have been extended not only as a result of medical advances, but because of life style changes. According to the Census Bureau (1990), the number of American's 65 or over will be 34.9 million in 2000 and 65.6 million in the year 2030. By the year 2020, it is predicted that, one out of every four Americans will be at least 65 years or older (Weaver, 1994). By 2040, the United States could have more people aged 65 or older than we have persons under 20 years of age (Taeuber, 1992).

As medical technology continues to advance, people will live longer, and suffer from more chronic illnesses, physical difficulties, and/or mental impairments. In 1989, an examination of Americans 65 years and older, suggested that four out of five elderly adults suffer from at least one chronic or disabling condition (U.S. Senate Committee on Aging, 1991). Individuals who suffer from chronic conditions usually experience increased activity restrictions (Weaver, 1994). This may result in many elderly adults finding it more challenging to do daily activities.

According to one survey, 12.6 percent of the 65-74 age group required assistance with their daily activities, such as dressing, bathing, and walking (Gillespie, & Sloan, 1990). This illustrates that a portion of the aging population is dependent on someone to provide them care. Families have traditionally provided care for older relatives, yet in the past many family caregivers were able to provide care for older relatives while

maintaining other responsibilities (Weaver, 1994).

Changes in society have led to problems for caregiving responsibility. Many stressors, such as emotional and economic well-beings of families and resource allocation have led to a decrease in the ability to care for elderly relatives full time (Weaver, 1994). For our nation's caregivers the nature and duration of the care and services needed for the elderly will become more demanding with the growing population. This increase in demand will have a significant impact on the kinds of services and environments needed for this diverse group.

With the increase in longevity comes the increased probability for the elderly to experience health-related changes. The physiological changes which accompany aging generally affect mobility, strength, stamina, sensitivity to senses, and cognitive abilities. The degree to which an individual experiences a physiological change can vary widely. Even minor physiological changes can induce a downward spiral into a sense of disorientation and vulnerability (Green, 1985).

Many authors have suggested that the loss of mental and physical abilities, which may occur with the advancing of age, may affect the ability of that older person to continue functioning independently in community environments (Lawton, 1986; Faletti, 1984). The concern for the elderly population to maintain a sense of independence and autonomy in community settings is becoming a major issue for those in design and gerontology fields. Some literature in gerontology and environment-behavior supports the view that elderly functioning in daily living is a result of the

relationship between the person and the environment. These person-environment models emphasize congruence (Kahana, 1982), competence (Lawton and Nahemow, 1973), or adaptation (Timko and Moss, 1989). Person-environment research in gerontology has assisted in substantiating the importance of the relationship between the environment and the functional ability of older persons (Faletti, 1984).

The belief that the designed environment has a major impact on social behavior is deeply grounded in environment-behavior literature. The ultimate goal of environmental design is to create environments which are congruent with human activity and self expression. The success of this interrelationship between people and their environments is fundamental to sustaining quality of life. The understanding of the special needs for the elderly population is crucial for creating congruent environments. The increased interest in the growing elderly population has contributed to the expansion of research and development of supportive environments for this special population.

Statement of the Problem

Adult Day Care is fast becoming a care alternative which can help enhance the family's ability to care for its older relatives and provide respite for the caregivers. Adult Day Care centers have assumed a significant role in the United States spectrum of long-term care (Conrad, 1993) with nearly 3,000 centers currently located in the United States (National Institute on Adult Day Care, 1992). One reason for this, is that the predominate housing choice among older adults is to remain in their own homes for as

long as possible. Adult Day Care allows for a semi-independent arrangement, a viable service for many working families who have assumed a caregiver role for an elderly relative.

Adult Day Care centers are becoming a practical option for caregivers, who are trying to balance family commitments and jobs. Even though 70 percent of women in the United States work outside the home, women are predominately looked upon to take on the role of the primary caregiver (Cohen-Mansfield, Besansky, Watson, & Bernhard, 1994). Particularly the adult daughters are the ones who furnish care for elderly parents (Montgomery & Hirshorn, 1991). Studies have found that at least 80 percent of the women now in their twenties will be in the work force when their parents reach old age. Many women will not find it feasible to leave the work force to assume the role of an unpaid caregiver (Morrison, 1990). Because of the increased elderly population and the strain of full time caregiving, Adult Day Care centers may see an increase in utilization in the immediate future.

Adult Day Care centers provide a therapeutic milieu for their clientele. All activities which occur in the center are for the purpose of improving the quality of life for each participant. The physical environment of the Adult Day Care center, therefore, needs to be utilized as a therapeutic tool. A well-planned built environment, which contains the appropriate affordances, enhances each participant's ability to function independently and to engage in the program's activities.

The National Institute on Adult Day Care(1990) emphasized four guidelines for

designing Adult Day Care centers. These included: 1) maximizing each participant's functional level and encouraging independence to the greatest degree; 2) building on each participant's strengths, while recognizing their limitations and impairments; 3) establishing a sense of control and self-determination for each participant, regardless of his/her level of functioning; and 4) assisting in maintaining the physical and emotional health of each of the participant's (The National Council on Aging, 1990, p. 85).

The Purpose of this Study

The purpose of this study was to examine clients' interaction and perceptions within Senior Day Treatment Center's environments. Interactions of clients in relationship to various activities within the environment were investigated. Clients' perceptions of the built environment were explored. The information gathered in this study, will provide significant insight and direction for gerontologists, designers and planners about how the built environment of Senior Day Treatment facilities can be used to maximize their clientele's performance level.

Objectives

The objectives of this study are:

1. To determine if a difference exists between two Senior Day Treatment Centers in terms of perceptions, behavior, and interactions within the built environment.

2. To observe various behavioral and interaction patterns among clients while they participate in various activities.
3. To assess how clients perceive the built environment of Senior Day Treatment Centers.
4. To make recommendations concerning the built environment which reflects the needs of the clients of Senior Day Treatment Centers based on this comparative study.

Definition of Terms

Adult day cares: community based programs which provide a variety of support services for functionally impaired adults during any part of the day, but less than 24 hours (National Institute of Adult Daycare 1987).

Built environment include systems of settings which include buildings, fixed, semifixed, and nonfixed feature elements (Rapoport, 1990).

Competence: biological health, sensory-perceptual capacity, motor skills, cognitive capacity, and ego strength (Lawton, 1982).

Elderly: any individual age 65 or older.

Environmental Press: in normative terms, an environmental stimulus or context is seen as having potential demand character for an individual (Lawton, 1982).

Interaction: for this study the interaction space or proxemics is broken down into three zones: intimate-personal, social-causal, and public-aggressive. The definitions of these three interaction zones are below.

Intimate-Personal: 0" - 18" of space which surrounds a person, also known as personal space. An individual will allow familiar persons that he/she trusts within this space. An invasion of this "personal space" is construed as an intursion on an individual's self-boundary, which may elicit stress reactions and adaptive responses (Moos, 1976).

Perception: a direct function of the organization of the environment or object of perception. The act of perceiving is passive and deterministic (Lawton, 1982).

Public- Aggressive: 30" - < " of space which surrounds a person. An individual has reduced control over what happens within this space.

Senior Day Treatment facility: a day program which specializes in treating elderly adults with acute psychiatric problems.

Social-Causal: 18" - 30" of space which surrounds a person. An individual will usually allow friends or acquaintances to enter this space.

Universal design: a design for people of all ages and levels of ability with the emphasis on ability rather than disability.

Assumptions

The following assumptions are included in this study:

1. Interviewees will answer the open-ended questions truthfully.
2. The PAF instrument will accurately measure the variables within the built environment to assess the environmental press at each facility.
3. Accurate information will be collected from the observations and interviews.

Limitations

The following limitations are included in this study:

1. Limited to small sample at the Senior Day Treatment centers.
2. Limited to two Senior Day Treatment facilities.

3. Qualitative research is difficult to quantify and cannot draw generalizations on overall elderly population.
4. Researcher bias at Stillwater facility.
5. Data collection is limited to small period of time.

Conceptual Framework

Competence and Environmental Press Theory

The arrangement of an environment is probably one of the most powerful tools for influencing behaviors (Moos, 1976). Environmental behavior research supports the theory that a change in either the person or the environment produces a change in behavior. The concept of environmental impact on human behavior has been studied by various disciplines. Psychologists, gerontologists, architects, and designers are among some of the disciplines and professions which have studied the dynamic relationship between environment and behavior.

Lewin (cited in Lawton, 1986) was the first psychologist to refer to the person-environment relationship. He stated that "behavior is a function of both the person and the environment." The Lewin philosophy was that a change in either the person (P) or the environment (E) would produce a change in behavior (B). This was illustrated in his ecological equation, $B = f(P, E)$.

This study utilized the person-environment theory of competence versus environmental press developed by Lawton and Nahemow (1973). Lawton and Nahemow examine the person's competence level on the basis of "biological health,

sensorimotor functioning, cognitive skills, and ego strength" (Lawton, 1986, p. 11). The environmental press is defined on the basis of behavioral demands within a specific environment. The model suggests that the balance of competence and press will result in a positive effect with adaptive behavior and satisfaction. When competence and press are not in balance, the result will be negative, with maladaptive behavior and dissatisfaction.

Lawton indicates the four traits that make up competence "are within the person and in the strictest sense cannot be measured" (Lawton, 1986, p. 14). To understand an individual's competence level, one needs to measure the behaviors that indicate the internal state of that particular individual (Lawton, 1986). Competence levels are clearly lower in older adults, because of overwhelming factors such as chronic disease and disabilities that occur more frequently due to the advancement of age (Schulz & Hanusa, 1979). Research has indicated that because of the decline in physical and psychological functioning, elderly adults will be more responsive to competence enhancing interventions (Schulz & Hanusa, 1979). For elderly adults to maintain the fundamental balance, they must either increase their level of competence, improve their environmental press, or pursue a more supportive environment.

Behavior is normally viewed as the outcome between the interaction between personal competence and environmental press (Lawton, 1986). Lawton (1986) contends that observing behaviors, for research purposes, is often used to interpret basic level of health and cognitive functioning and can be representative of competence levels.

Lawton's theory was utilized as the underlying frame-work for this study of two Senior Day Treatment facilities. Observing the clients interacting within the facilities' environments will provide insight into each client's personal competence levels in relationship to the environmental press.

CHAPTER II

REVIEW OF LITERATURE

Introduction

An individual's ability to function within various environments is affected extensively by the physical and psychological changes which occur due to the aging process. The literature on the aging population is flourishing as the elderly population increases and researchers recognize the necessity of maintaining the quality of life for this special population. Many research areas in gerontology and design are addressing the belief that the elderly's physical functioning has a direct effect on how this population perceives or interacts within various environments. This interdisciplinary problem has ignited new research areas concerned with providing an enhanced quality of life for the elderly population.

Residential, institutional, service, and community environments are among some areas where many designers, researchers, and planners are now focusing their attention. By the year 2020, the center of the "baby boom" cohort, estimated at 80 million, will reach the age of 65 (Koenig, George, & Schneider, 1994). This increase in the proportion of elderly adults will have an impressive impact on health care, services, and environments.

Health and Aging

Health is the "ability of an organism to function effectively within a given environment . . . since the environment keeps changing, good health is a process of continuous adaption" (Dubos, 1965). Hippocrates believed that there is a direct connection between the physical environment and man's health (Moos, 1976). The aging process encompasses a series of biological, psychological, and social changes which affect us all.

The types and rates of change may be influenced by various extrinsic factors including lifestyle factors, exposure to environmental influences, and disease (Williams, 1992). Understanding the physical and psychological changes which are associated with the elderly will help delineate the needs of this diverse group. Many of the physical changes which accompany the aging process can have an effect on how an individual perceives and behaves within an environment.

Visual and hearing impairments can hinder the mobility for some elderly. These impairments can contribute to how elderly adults navigate in their surroundings (Green, 1985). Vision impairments can include loss of visual field and sharpness, decreased light sensitivity, and increased sensitivity to glare (Ferrini, 1993). Older people require up to twice as much light as younger people to achieve visual acuity (Green, 1985). The yellowing of the eye's lens makes it difficult for the elderly to distinguish among colors which are similar (Ferrini, 1993). Reading fine print can also become more difficult for the majority of older adults (Null, 1988).

Sometimes hearing declines even earlier than visual acuity. This decline usually occurs in the higher frequency range. Presbycusis is the term used for hearing loss due to the aging process (Ferrini, 1993). This decline in hearing makes it harder for elderly adults to hear sounds like door bells, telephones, sirens, and smoke detectors (Green, 1985). The elderly also find it more difficult to discern some sounds or voices over background noises or voices.

Sensory impairments, such as touch, naturally decline with age because skin becomes drier and less elastic (Green, 1985). The most important tactile issue that develops with the advancing of age is the declining ability to perceive heat, cold, and pain. This is due to the fact that the elderly tend to lose muscle mass which causes their blood vessels at the skin to be less able to constrict (Ferrini, 1993). This changing in muscle mass makes the elderly less able to respond to cold temperatures, which causes them to be more susceptible to hypothermia (Ferrini, 1993; Green, 1985). Other physical changes in elderly adults may include difficulties with strength, mobility, dexterity, agility, and balance (O' Connor, 1986). Research indicates that the elderly will have a decline in muscular mass which affects their strength. Reduced levels of activity can lead to muscular atrophy (Ferrini, 1993).

There is a substantial number of older persons suffering from one or more chronic conditions. Conditions such as arthritis, hypertension, heart disease, hearing impairments, and cataracts may cause functional limitations among this age group. Although "there is no direct correspondence between the presence of chronic illnesses

and a person's ability to function "(Leon and Lair, Golant, 1992, p. 33), there is a decrease in autonomy and an increase in their reliance on others. Those older adults suffering from chronic illnesses may have a higher risk for some psychiatric disorders (George, 1990).

Due to medical illnesses, multiple life losses, and increased risk of poverty, many elderly adults may develop psychiatric illnesses (Moreno, & Wile, 1989; Phifer & Murrell, 1986). Psychiatric illnesses such as depressive disorders, anxiety disorders and/or dementias may be experienced by older adults. Research has indicated that perceived control over factors such as health, social issues, and environment may contribute to these illnesses (George, 1990; Grant, Patterson, & Yager, 1988; Phifer & Murrell, 1986).

Depression appears to be the most predominant psychiatric disorder for older adults (Phifer & Murrell, 1986; Coni, Davison, & Webster, 1992). Mild depression affects 12 to 15 percent of those 65 years or older and is difficult to distinguish from the melancholia which usually is attributed to change and losses due to the advancing of age (Gollant, 1992; Coni, Davison, & Webster, 1992). Some symptoms of depression include hopelessness, dread, fear, guilt, and lack of self worth.

Anxiety disorders are also becoming increasingly evident in the elderly population. Anxiety is usually a common feature of other psychiatric illness such as depression, dementia, and other physical illnesses (Coni, Davison, & Webster, 1992). Anxiety usually produces physical symptoms such as palpitations, breathlessness, abdominal

discomfort, and physical agitation (Coni, Davison, & Webster, 1992).

Even though mental health care awareness is increasing for the elderly population, diagnosing these illnesses is difficult. Many symptoms of physical illnesses are similar to those indicating depression or anxiety (Gatz & Smyer, 1992). This makes it more difficult for older adults to seek and get treatment for their psychiatric problems.

For most of the aging population, decline in physical capabilities, chronic conditions, and psychological problems can prove to be overwhelming. Recognizing the physical and psychological capabilities associated with the advancement of age are important considerations when they begin to influence the person's ability to live and function independently. Providing independence and the ability for one to control their environment can be instrumental to one's quality of life.

Environment and Behavior

In recent years there has been an increased interest directed toward the congruence of individuals and their environment (Kaplan, 1983). Mumford viewed an ideal environment as "seeking continuity, variety, orderly and purposeful growth" (Mumford, 1968, p. 221). There are no clearly defined criteria for an ideal environment that can meet the needs of everyone, but it can be possible to create an optimum environment by designing facilities which will maximize certain intended behaviors. With the growth of environmental psychology as a discipline, there have been significant findings which

have broadened the understanding of the built environment and human behavior (Lang, 1987).

The environment consists of a set of opportunities for behavior upon which an action may or may not take place. Previous studies of environmental congruence have emphasized either the action required by situational demands or the purposeful action an individual attempts to achieve in a given situation (Kaplan, 1983; Kahana, 1982). Human behavior has been repeatedly found to be consistent with the norms established for particular situations.

The modern history of research on environment and behavior have evolved out of those fields by focusing primarily on the psychological and social processes of the mainstream population. There has been less concern with special populations, such as the elderly, and how certain environments affect this special segment. Due to this rationale there is relatively little direct knowledge pertaining to gerontological design-oriented environmental research (Altman & Chemers, 1980). There is, however, an abundance of research concepts and processes applicable for understanding the elderly population and their relationship with their physical environment.

Many models which exist have derived from Lewin's (1935) person-environment interaction theory. One of these, as mentioned earlier, is the congruence model of person-environment fit, developed by Kahana (1982). According to Kahana (1982), individuals with certain needs are most likely to seek and be found in environments that are congruent to their needs. Kahana's application to the elderly population, emphasizes

that with the advancing of age comes the reduction of options and choices to seek or maintain supportive environments. Kahana hypothesized that a close fit between environmental characteristics and individual preferences should foster a sense of satisfaction and adequate functioning of the elderly individual (Kahana, 1982).

Timko and Moos (1989) examined how adaptation was affected by levels of choice and control among elderly residents in sheltered care settings. They suggest that enhanced personal control has positive effects on emotional state, activity level, and health status (Timko and Moos, 1989). They examined how variation in the threshold value of an environment can affect a person's control and how that can affect adaptation. Their findings are related to Lawton's person-environment congruence model. When policy choice and independence was low, high functioning residents used more of the facility's services, whereas the residents who had increased choices and independence levels used the services less (Timko and Moos, 1989). Higher levels of choice and independence enhanced the adaptation of highly functioning residents, and did not appear to be harmful to the lower functioning residents (Timko and Moos, 1989).

One environment and behavior trend, which has gained attention, is the trend that the physical and social environment can influence an individual's health (Moos, 1976). This trend states that health is "defined in terms of the adaptive capacity of man in relation to environmental circumstances" (Moos, 1976, p. 15). This trend, examines the relationship between people's ability to adapt to an environment and their health levels. Moos states that if individuals can adapt to their environmental surroundings they will

be healthy. If the adaptation fails the individual will suffer from health problems.

Moos' theory is very helpful for those designers and planners of therapeutic environments, such as hospitals and nursing homes. Providing a more humanistic and nurturing environment will affect the patients' behaviors, as well as their well being. This theory predicts that the built environment has the capability to provide a curative atmosphere for the inhabitants. The ultimate goal of environmental design is to create environments that are congruent with human activity.

Adult Day Care /Treatment facilities

With the increase in the 65 plus population, a need has been launched to provide more support services for the aging population. There is an increasing development of serious conviction among some gerontologists, service providers, family caregivers, and those in need of health, and/or health-related services that health services should be provided within the community rather than in an institutional setting (Gillespie & Sloan, 1990).

Adult Day Care has originated from this philosophy to help alleviate isolation, prevent or delay unnecessary institutionalization, and provide respite for family caregivers (Gillespie & Sloan, 1990). Adult Day Care provides individual plan care through a variety of health, social, and related support services in a protective setting during any part of the day, but less than 24 hours. Adult Day Care centers offer social interaction with others, daily meals, health assessments, and case management services.

Prior research indicates a great variation exists among Adult Day Care centers

across the United States (Conrad, 1993). Research has indicated that there is a great deal of diversity within the programs and services of Adult Day Care centers. For the purpose of this research the Adult Day Care centers which are being evaluated have restorative programs, offering intensive, supportive services prescribed in individual plans for the participants (Conrad, 1993). These Adult Day Care centers have been classified as an Senior Day Treatment centers. A Senior Day Treatment center specializes in prescribing therapeutic services provided by a multi-disciplinary program team (Conrad, 1993). Constant health monitoring and provision of therapeutic activities along with psychological services are integral components of the total program.

Senior Day Treatment centers are increasing as preferred alternatives to inpatient treatment, and are being considered as "modalities in their own right within a comprehensive system of care" (Kiser, Wagner, & Knight, 1994, p. 31). Many programs have two basic principles: elderly adults should remain within the community as long as they wish and/or as long as medically possible, and geriatric treatment program participants should be encouraged to help themselves (Smyer & Gatz, 1983).

Many Senior Day Treatment centers specialize in treating elderly adults with acute psychiatric problems. Clients are often referred to the program for treatment of depression, isolation and withdrawal, anxiety with agitation, bizarre or disruptive behavior, and cognitive deficits (Simon & Carner, 1987). Those individuals who suffer from Senile Dementia of the Alzheimer's Type are not considered suitable for the Senior Day Treatment program (Simon & Carner, 1987). Clients must be continent and able to

assume minimal self-care and be able to participate within a group setting. Senior Day Treatment programs utilize a wide range of techniques. These include: group therapy, health lifestyles and exercise groups, stress management, reminiscence and remotivational activity groups, and therapeutic communication sessions.

Summary

The proportion of the elderly population is growing rapidly. Recognizing the increased need for more services for this special population is inevitable. Age related changes may have negative influence on the way the elderly can function within specific environments. Designing service environments which can optimize the balance between competence levels and environmental press is essential to the quality of life for the elderly population.

The environment can have profound affects on our health, comfort, and emotional moods. Successful service/health facility design will be grounded in the understanding in the physiological and psychological change of the users. As America continues to age, professionals in the design field need to focus on improving the quality of life for this special population.

CHAPTER III

METHODOLOGY

Ziesel(1987) proposes that the most effective way to study environment- behavior problems is to employ several methods in parallel. By seeing physical traces as reflections of people, interpreting forms of places in terms of their behavioral implications, recording people's interactions, and asking questions, researchers arrive at tentative hypothesis extracted from a setting.

This study was designed to determine if elderly adults are affected by the built environment of Senior Day Treatment facilities. The findings of this study will give gerontologists, designers, and planners a clearer understanding of how the built environment of Senior Day Treatment facilities can be used to maximize their clientele's performance level.

Research Design

This research was designed to yield descriptive quantifiable data on the relationship between the individual and the built environment. Descriptive research is a common method used in social science. Descriptive research seeks to acquire evidence concerning a situation or population. It identifies norms or basic information which can be used for comparative purposes (Adams & Schvaneveldt, 1991). This form of research does not manipulate variables, but only records the existing relationships that

are present among the variables. Observations and interviews recorded the clients' relationships and perceptions of the built environment.

Observations

One form of data collection in descriptive research is observation. The use of observations in descriptive research entails using systematic descriptions of events, behaviors, and artifacts in the social setting or context chosen for study (Marshall & Rossman, 1989). The use of observation allows the researcher to learn about the behavior and the meanings attached to those behaviors.

The researcher's role can either be specific or diffuse, depending on the focus of the study. For this study, specific research questions were utilized to develop structured observations techniques. When employing structured observation, the investigator defines the variables and develops a systematic plan to collect and record data before entering the setting (Touliatos & Compton, 1988). Structured investigations have the checks and controls necessary to establish the reliability and validity of observational data (Touliatos & Compton, 1988). Within structured observations the investigator must provide operational definitions of the behavior units being observed or measured.

Observational investigations should be systematic. Planning of such factors as the number of observations, the length of the observational periods, and the interval between the periods need to be clarified (Touliatos & Compton, 1988). Observational aids also provide a systematic approach to observing behaviors. Checklists, can be used to look

at observations objectively, by providing a uniform way to record data (Touliatos & Compton, 1988). An observation checklist is limited to an all-or-none judgement by the investigator.

Clarifying what role the investigator will take in the data collection process is also a necessity. Complete observers do not engage in the social interaction and avoid involvement within the setting (Marshall & Rossman, 1989). Whereas a partial observer may participate to some degree (Marshall & Rossman, 1989), especially if observing a small group. During this study, the investigator took on the role of a partial observer. The role of the investigator was neither one of full disclosure about the research, or one of complete secrecy. Taylor and Bogdan (1989) advise the investigator to be "truthful but vague" in the portrayal of the research purpose to participants. Full explanations of the purpose of research was disclosed to all staff members. Partial explanations were given to the clients concerning the purpose of the observations and questions. Partial explanations were given to the clients to help reduce the contaminating influence that the observer could have had on the subjects behavior.

Observations of the environment provide valuable information regarding the external forces which influence an individual's behavior. Using a standardized description of the environment allows the investigator to be more objective of the environment by using structured tools. The Physical & Architectural Feature Checklist (PAF) was utilized to describe the built environment of the two Senior Day Treatment centers (Moos and Lemke, 1992). The PAF, is a component of Moos and Lemke's Multiphasic

Environmental Assessment Procedure manual (MEAP). This instrument assesses physical features, covering location, features inside and outside the facility, and space allowances.

Although the PAF was designed to measure the physical and architectural resources of group residential settings for older people, it has been successfully adapted to other programs. Lewy, Dolan, and Karan (1986) adapted the PAF to help assess a retirement center for older developmentally disabled persons. Weissert (1989) also modified the PAF to develop a conceptual model of adult day care and also to develop three ownership/ case mix models.

The Physical and Architectural Features Checklist (PAF) measures the physical and architectural resources of group residential settings for older people. For the purpose of this study only the questions within the PAF checklists which were applicable to Adult Day Care settings were utilized. The PAF has eight subscales, for this study the researcher focused on three: Physical Amenities, Social-Recreational Aids, and Prosthetic Aids (Moos and Lemke, 1992). After data collection, the researcher transferred the data from the PAF checklists to the three subscales scoring worksheets, which were adapted eliminating parts relevant to residential settings (Instrument 3).

Physical Amenities focus on the physical features that add convenience, attractiveness, and comfort. The second subscale, Social-Recreational Aids measures the physical features which foster social behavior and recreational activities. The last subscale, Prosthetic Aids assesses the extent to which the facility provides a barrier-free

environment and aids to physical independence and mobility (Moos and Lemke, 1992).

Interviews

An interview is a method of data collection that is described as an interaction entailing the interviewer and the interviewee (Marshall & Rossman, 1989; Touliatos & Compton, 1988). The purpose of the interview is to obtain valid and reliable information and to uncover the interviewee's perspectives and meaning (Marshall & Rossman, 1989; Adams & Schvaneveldt, 1991).

In this investigation, interviewing was utilized to gain insight in the perceptions and satisfaction of the clients in relationship to their treatment environment. Open-ended questions can be used to elicit subjective and varying responses from each interviewee (Kaufman, 1994). By using the open-ended question format the investigator will learn what is pertinent to the individual about the topic (Kaufman, 1994). Pre-worded questions were utilized to help elicit empirical discussion on the research topic. The clients were interviewed privately, away from other clients or staff members.

Sample and Population

Purposive sampling involves careful selection of the cases to be included because they are representative of the population for the research topic (Touliatos & Compton, 1988). The data for this research was obtained from clients of two Senior Day Treatment facilities in the state of Oklahoma. The two facilities were chosen based on the diversity of their built environment.

Facility A is located in a single-story, brick home which was renovated to serve as a living laboratory for individuals with disabilities. Facility A has approximately 915 square feet. The environmental setting is a barrier-free home-like environment combined with office space for staff members. It is located in a non-urban neighborhood/business area. Facility B is located in an urban business area, in a single-story building which houses variety of business and healthcare agencies. Facility B utilizes two different spaces within the building. One space is utilized for staff offices, while the other is utilized for sessions with the clients. Facility B has approximately 930 square feet. Facility B shares its restroom facility with other tenants within the building. Both Senior Day Treatment programs are operated by the same mental health organization.

The population consisted of clients from each selected Senior Day Treatment facility. The clients from each facility were homogeneous in terms of age. The population were all 55 years or older and were clients of the Senior Day treatment center because of an acute psychiatric illness. Facility A total population size was four, three women and one man. Facility B yielded a population size of six, four women and two men. The total population of both facilities was ten. The mean age of the clients at Facility A was 81.3 and the mean age for the clients at Facility B was 71.5. The participants at each facility volunteered to participate in the study.

Data Collection

The researcher met with the director of each Senior Day Treatment facility at which

time the research proposal was presented. During this initial meeting, days were scheduled for observations and interviews. The researcher then met with the rest of the staff of each facility and informed them of the days in which observations and interviews were to take place. The researcher interacted with the clients prior to data collection to promote an increase in rapport and familiarity.

An informed consent form was issued to each client. This form consisted of research objectives, rights to confidentiality, and an option to terminate involvement at will. This was to insure each client's right to privacy. All clients were given a number which was utilized in reference to observations and interviews. These numbers were used to ensure the clients confidentiality. All data files were labeled with identification numbers only.

The clients were observed doing five specific activities: group therapy, exercises, activity therapy, lunch, and free time. Observations were taken systematically, by utilizing a checklist for four days at each location. The checklist was developed from the literature review and by previous observations. The observations were utilized to determine each client's competence level and his/her interaction patterns. Interviews were conducted privately. The clients were each asked four questions and their responses were recorded by the interviewer on a sheet of paper marked with the clients identification number.

The environmental press of each facility was determined by using portions of the Physical and Architectural Features Checklist (PAF). Completion of this instrument was done after work hours, when the clients had left for the day. Only the sections which

the researcher deemed as significant and applicable were assessed.

Data Analysis

The data analysis is mostly qualitative, although some components are quantitative. The observation checklists were hand tabulated and then averaged to get a percentage score for each variable. This allowed for a comparison to be done on each variable between the two facilities, based on the activity session.

The analysis of the environment was done by using the PAF checklist. After data collection, the researcher transferred the data from the PAF checklists to the three subscales scoring worksheets, Physical Amenities, Social-Recreational Aids, and Prosthetic Aids. A comparison of the two facilities in relation to these three subscales were completed.

To evaluate the interview answers, the answers from each facility were compiled together. This allowed the researcher to be able to assess certain variables within the answers. A comparison between the two facilities on the basis of the complied answers was done to help produce an overall assessment of each environment.

CHAPTER IV

ENVIRONMENTAL COMPARISON BETWEEN TWO SENIOR DAY TREATMENT FACILITIES

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Abstract

Adult Day Care (Senior Day Treatment) will see an increase in utilization because of increasing elderly population and the strain of full time caregiving. Adult Day Care centers provide a therapeutic milieu for their clientele. All activities that occur in the center are to improve the quality of life for the participant. The physical environment of the Adult Day Care center needs to be utilized as a therapeutic tool. This study assesses the difference between two Senior Day Treatment environments. Findings suggest that a balance of aesthetic and accessibility should be incorporated for an ideal treatment environment. Designing facilities which accommodate the general changes that are associated with age, as well as, providing a therapeutic atmosphere which fosters a sense of caring, security, and trust is imperative for participants.

Environmental Comparison Between Two Senior Day Treatment Facilities

Introduction

Adult Day Care is fast becoming a care alternative which can help enhance the family's ability to care for its older relatives and provide respite for the caregivers. Adult Day Care centers have assumed a significant role in the United States spectrum of long-term care (Conrad, 1993) with nearly 3,000 centers currently located in the United States (National Institute on Adult Day Care, 1992). One reason for this is that the predominate housing choice among older adults is to remain in their own homes for as long as possible. Adult Day Care allows for a semi-independent arrangement, a viable service for many working families who have assumed a caregiver role for an elderly relative.

Adult Day Care centers provide a therapeutic milieu for their clientele. All activities which occur in the center are for the purpose of improving the quality of life for each participant. The physical environment of the Adult Day Care center, therefore, needs to be used as a therapeutic tool. A well-planned, built environment, which contains the appropriate affordances, enhances each participant's ability to function independently and to engage in the program's activities.

This study examines clients' interaction and perceptions within Senior Day Treatment Center's environments. Interactions of clients in relationship to various activities within the environment were investigated. Clients' perceptions of the built environment are also

explored. The information gathered in this study, will provide significant insight and direction for gerontologists, designers and planners about how the built environment of Senior Day Treatment facilities can be used to maximize their clientele's performance level.

Review of Related Literature

An individual's ability to function within various environments is affected extensively by the physical and psychological changes which occur due to the aging process. The literature on the aging population is flourishing as the elderly population increases and researchers recognize the necessity of maintaining the quality of life for this special population. Many research areas in gerontology and design are addressing the belief that the elderly's physical functioning has a direct effect on how this population perceives or interacts within various environments. This interdisciplinary problem has ignited new research areas in providing an enhanced quality of life for the elderly population. Residential, institutional, service, and community environments are among some areas where many designers, researchers, and planners are now focusing their attention.

Health and Aging

Health is the "ability of an organism to function effectively within a given environment . . . since the environment keeps changing, good health is a process of continuous adaption" (Dubos, 1965). The types and rates of change within the human body may be influenced by various extrinsic factors including lifestyle factors, exposure

to environmental influences, and disease (Williams, 1992). Understanding the physical and psychological changes which are associated with the elderly will help delineate the needs of this diverse group. Many of the physical changes which accompany the aging process can have an effect on how an individual perceives and behaves within an environment.

Visual and hearing impairments can hinder the mobility for some elderly. These impairments can contribute to how elderly adults navigate in their surroundings (Green, 1985). Also, sensory impairments, such as touch, decline with age because skin becomes drier and less elastic (Green, 1985). Other physical changes in elderly adults may include difficulties with strength, mobility, dexterity, agility, and balance (O' Connor, 1986).

There is a substantial number of older persons suffering from one or more chronic conditions. Conditions such as arthritis, hypertension, heart disease, hearing impairments, and cataracts may cause functional limitations among this age group. Although "there is no direct correspondence between the presence of chronic illnesses and a person's ability to function " (Leon and Lair, Golant, 1992, p. 33), there is a decrease in autonomy and an increase in their reliance on others. Those older adults suffering from chronic illnesses may have a higher risk for some psychiatric disorders (George, 1990).

Due to medical illnesses, multiple life losses, and increased risk of poverty, many elderly adults may develop psychiatric illnesses (Moreno, & Wile, 1989; Phifer &

Murrell, 1986). Psychiatric illnesses such as depressive disorders, anxiety disorders and/or dementias may be experienced by older adults. Research has indicated that perceived control over factors such as health, social issues, and environment may contribute to these illnesses (George, 1990; Grant, Patterson, & Yager, 1988; Phifer & Murrell, 1986). Even though mental health care awareness is increasing for the elderly population, diagnosing these illnesses is difficult. Many symptoms of physical illnesses are similar to those indicating depression or anxiety (Gatz & Smyer, 1992). This makes it more difficult for older adults to seek and get treatment for their psychiatric problems.

For most of the aging population, decline in physical capabilities, chronic conditions, and psychological problems can prove to be overwhelming. Recognizing the physical and psychological capabilities associated with the advancement of age are important considerations when they begin to influence the person's ability to live and function independently. Providing independence and the ability for one to control their environment can be instrumental to one's quality of life.

Environment and Behavior

In recent years there has been an increased interest directed toward the congruence of individuals and their environment (Kaplan, 1983). Mumford viewed an ideal environment as "seeking continuity, variety, orderly and purposeful growth" (Mumford, 1968, p. 221). There are no clearly defined criteria for an ideal environment that can meet the needs of everyone, but it can be possible to create an optimum

environment by designing facilities which will maximize certain intended behaviors.

With the growth of environmental psychology as a discipline, there have been significant findings which have broadened the understanding of the built environment and human behavior (Lang, 1987).

The modern history of research on environment and behavior have evolved out of those fields by focusing primarily on the psychological and social processes of the mainstream population. There has been less concern with special populations, such as the elderly, and how certain environments affect this special population. Due to this rationale there is relatively little direct knowledge pertaining to gerontological design-oriented environmental research (Altman, 1984). There is, however, an abundance of research concepts and processes applicable for understanding the elderly population and their relationship with their physical environment.

Many models which exist have derived from Lewin's (1935) person-environment interaction theory. One of these is the congruence model of person-environment fit, developed by Kahana (1982). According to Kahana (1982), individuals with certain needs are most likely to seek and be found in environments that are congruent to their needs. Kahana's application to the elderly population, emphasizes that with the advancing of age comes the reduction of options and choices to seek or maintain supportive environments. Kahana hypothesized that a close fit between environmental characteristics and individual preferences should foster a sense of satisfaction and adequate functioning of the elderly individual (Kahana, 1982).

One environment and behavior trend is that the physical and social environment can influence an individual's health (Moos, 1976). This trend states that health is "defined in terms of the adaptive capacity of man in relation to environmental circumstances" (Moos, 1976, p. 15). This trend examines the relationship between people's ability to adapt to an environment and their health levels. Moos states that if individuals can adapt to their environmental surroundings they will be healthy. If the adaptation fails the individual will suffer from health problems.

Moos' theory is very helpful for those designers and planners of therapeutic environments, such as hospitals and nursing homes. Providing a more humanistic and nurturing environment will affect the patients' behaviors, as well as their well being. This theory predicts that the built environment has the capability to provide a curative atmosphere for the inhabitants. The ultimate goal of environmental design is to create environments that are congruent with human activity.

Adult Day Care /Treatment facilities

Adult Day Care has originated from the philosophy of providing more supportive services for the aging population. This service helps alleviate isolation for elderly adults, prevents or delays unnecessary institutionalization, and provides respite for families who are caring for elderly adults (Gillespie & Sloan, 1990). Adult Day Care provides individual plan care through a variety of health, social, and related support services in a protective setting during any part of the day, but less than 24 hours.

Prior research indicates a great variation exists among Adult Day Care centers across the United States (Conrad, 1993). Research has indicated that there is a great deal of diversity within the programs and services of Adult Day Care centers. For the purpose of this research the Adult Care Centers which are being studied have restorative programs, offering intensive, supportive services prescribed in individual plans for the participants (Conrad, 1993). These Adult Day Care centers have been classified as an Senior Day Treatment Centers. The Senior Day Treatment center specializes in prescribing therapeutic services provided by a multi-disciplinary program team (Conrad, 1993). Constant health monitoring and provision of therapeutic activities along with psychological services are integral components of the total program.

Senior Day Treatment facilities are increasing as preferred alternatives to inpatient treatment, and are being considered as "modalities in their own right within a comprehensive system of care" (Kiser, Wagner, & Knight, 1994, p. 31). Many programs have two basic principles: elderly adults should remain within the community as long as they wish and/or as long as medically possible and geriatric treatment program participants should be encouraged to help themselves (Smyer & Gatz, 1983).

Many Senior Day Treatment centers specialize in treating elderly adults with acute psychiatric problems. Clients are often referred to the program for treatment of depression, isolation and withdrawal, anxiety with agitation, bizarre or disruptive behavior, and cognitive deficits (Simon & Carner, 1987). Those individuals who suffer from Senile Dementia of the Alzheimer's Type are not considered suitable for the Senior

Day Treatment program (Simon & Carner, 1987). Clients must be continent and able to assume minimal self-care and be able to participate within a group setting. Senior Day Treatment programs utilize a wide range of techniques which include group therapy, health lifestyles and exercise groups, stress management, reminiscence and remotivational activity groups, and therapeutic communication sessions.

Methodology

This study was designed to determine if elderly adults are affected by the built environment of Senior Day Treatment facilities. This research was designed to yield descriptive quantifiable data on the relationship between the individual and the built environment. The data for this research were obtained from clients of two Senior Day Treatment facilities in the state of Oklahoma. The two facilities were chosen based on the diversity of their built environment.

Facility A (Figure 3) is located in a single-story, brick home which was renovated to serve as a living laboratory for individuals with disabilities. The environmental setting is a barrier-free home-like environment combined with office space for staff members. It is located in a non-urban neighborhood/business area. Facility B (Figure 4) is located in an urban business area, in a single-story building which houses variety of business and healthcare agencies. Facility B utilizes two different spaces within the building. One space is utilized for staff offices, while the other is utilized for sessions with the clients. Facility B shares its restroom facility with other tenants within the building. Both Senior

Day Treatment centers are operated by the same mental health company.

Facility A yielded a population size of four, which included three women and one man. Facility B had population size of six, two men and four women. The total population size of the study was ten. The participants were all 55 years or older and were clients of the Senior Day treatment center because of an acute psychiatric illness. The mean age for the clients at Facility A was 81.3, while Facility B's clients had a mean age of 71.5. All participants in the study were retired. The participants at each facility volunteered to participate in the study.

Insert Table II

Observations and interviews were utilized to record the clients' relationships and perceptions of the built environment. The clients were observed doing five specific activities: group therapy, lunch, activity therapy, free time, and exercise therapy. Observations were taken systematically by utilizing a checklist for four days at each location (Instrument 1). Interviewing was utilized to gain insight into the perceptions and satisfaction of the clients in relationship to their treatment environment. Pre-worded questions were utilized to help elicit empirical discussion on the research topic (Instrument 2).

The Physical & Architectural Feature Checklist (PAF) was utilized to describe the built environment of the two Senior Day Treatment centers (Moos and Lemke, 1992).

The PAF, is a component of Moos and Lemke's Multiphasic Environmental Assessment Procedure instrument (MEAP). This instrument allowed the researcher to assess physical features, such as location, features inside and outside the facility, and space allowances.

Although the PAF was designed to measure the physical and architectural resources of group residential settings for older people, it has been successfully adapted to other programs. For the purpose of this study only the questions within the PAF checklists which were applicable to Adult Day Care settings were utilized. The PAF has eight subscales, for this study a comparison on three subscales was employed, Physical Amenities, Social-Recreational Aids, and Prosthetic Aids (Instrument 3)(Moos and Lemke, 1992). Physical Amenities focus on the physical features that add convenience, attractiveness, and comfort. The second subscale, Social-Recreational Aids measures the physical features which foster social behavior and recreational activities. The last subscale, Prosthetic Aids assesses the extent to which the facility provides a barrier-free environment and aids to physical independence and mobility (Moos and Lemke, 1992)

Findings and Discussion

The Built Environment

The comparison between the two facilities built environment yielded valuable information. Facility A's built environment ranked higher in social-recreational and

prosthetic aids, whereas Facility B's built environment ranked higher on physical amenities. Facility A had physical features which fostered social behavior and recreational activities in a barrier-free environment which aided in physical independence and mobility of the participants. Facility A's overall layout and design accomadates individuals with disabilities. Some of the features include: an automatic front door; handrails and lift bars next to the toilet; turning radius for wheelchiars in everyroom; and low threshold at entrances. Facility A social-recreational aids included: an outside patio and barbecue grill; small tables for games; and stereo equipment. However, Facility A needed more physical features which would add convenience, attractiveness, and comfort.

Facility B's built environment, although convenient and aesthetic, lacked in support features for their clients. Facility B physical amenities features include: a drinking fountain; public telephones; vending machines; and a meditation room.

Insert Figure 1

Each facility's built environment had advantages and disadvantages. One advantage that the built environment had at Facility B was versatility. The design of Facility B allowed for various activities of the Senior Day Treatment program to proceed without distractions. This is something that the built environment of Facility A needs. It was observed that Facility A's homelike built environment fostered closer interaction among

clients. Both facilities' built environment needed more attention given to optimizing the performance of the clients within the Senior Day Treatment program.

Different activities throughout the day required different usage of space. For example, Facility B had an appropriate space for group therapy, a small room which was isolated from distraction. This allowed the clients to feel comfortable and secure discussing personal matters. Facility A utilized a space, the living room, which could not be isolated from outside distraction. It was frequently observed that it was easy for the clients at Facility A to become distracted from outside activities from other clients and staff members during group therapy. The goal of successful environments is to unite the physical features and support elements which allow the users to maximize their ability.

Comparing each facilities Environmental Press was done by using the PAF subscales. Facility A's built environment had a stronger environmental press than Facility B's built environment. This is a result from less behavioral demands placed on the clients at Facility A than there was for the clients at Facility B. Ideally, the environment should provide a zone of maximum comfort and performance potential for the users.

A comparison between the two facilities using the observation checklist provides a variety of information. Each activity was examined independently, using the variables; space, verbal communication, body language and interaction for the comparison. The behaviors which occurred most frequently for each variable were utilized for the comparison and discussion of the observational checklist.

During Group Therapy, the clients in both facilities seemed to utilize private single detached spaces, such as chairs or wheelchairs, rather than shared spaces, such as tables. Also there was little differences in verbal communication during group therapy, both Facility A and Facility B client's either did not talk at all or spoke only to staff members. Body language between the two facilities differed. During group therapy, clients from Facility A avoided eye contact more frequently than they had direct eye contact. Whereas, in Facility B, the clients had more direct eye contact, but also had a substantial percentage of folding their arms. Facility A's clients avoidance of eye contact during group therapy indicated insecurity, nervousness, and concealment. Facility B's clients eye contact indicated self-confidence and sincerity. Whereas, the folding of the arms could be interpreted as defensive and disproving behavior.

Insert Table III

Interaction observations of space, or proxemics, between the two facilities also varied. Although it was evident that during three fourths of the observations a social-causal interaction pattern existed in both facilities, the other fourth differed. Social-causal interaction space refers to the space 18 to 30 inches which surround an individual, usually only friends or close acquaintances are allowed to enter this space. The social-causal interaction space indicated that the clients felt comfortable with other clients and staff members during group therapy.

The clients at Facility A also had public-aggressive interaction patterns. Public-aggressive interaction space refers to the space 30 inches or more which surrounds an individual. An individual has a reduced control over what occurs within this space. Having a public-aggressive interaction space can be interpreted as unbeneficial to group therapy, because the larger space does not elicit trust or privacy. In contrast, the clients at Facility B were observed in the intimate-personal range during group therapy. Intimate-personal space is the space of 0 to 18 inches which surround an individual. An individual will allow familiar persons that he/she trust within this space. This contrast between the two interaction patterns is evidence of the different spaces, or rooms, two facilities utilize for group therapy. Facility A holds group therapy in the living room, which is also used for the majority of other activities. Facility B utilizes a special room which is small and secluded from outside distractions. This observation of the differences in space could also explain the differences in body language mentioned earlier.

During lunch time for both facilities, it was observed that participants had similar space and verbal communication patterns. The most frequently used space during lunch time for both facilities were tables, shared space with two or more people. It was observed that half of the time clients were not talking during lunch. However, talking with other clients ranked second at both facilities. Body language mainly consisted of eating lunch at both facilities, but the type of eye contact varied. At Facility B it was observed that direct eye contact was prevalent. Where as in Facility A an equal amount

of direct and avoidance of eye contact existed.

Insert Table IV

Interaction patterns between the Senior Day Treatment facilities also differed. Facility A's clients interacted among each other in a Intimate-Personal range, and in Facility B, the main interaction pattern during lunch was Social-Causal. This was probably due to the arranging and styles of the tables. Facility A's clients ate lunch around a pedestal dinning room table, which could seat six. Facility B's clients ate lunch at four card-type tables which had been pushed together, to form a huge table which could seat eight.

Observations during activity therapy proved to indicate the most differences between the two facilities. At Facility B, clients always used shared space with two or more people. The activity session at Facility B always took place around the tables in the greatroom. Facility A client's seemed to utilize shared space with two or more people half the time and the other half they would utilize single detached spaces. This is due to the fact that depending on the activity, clients at Facility A would either use the living room or dinning room.

It was observed that there was less conversation among participants at Facility B. Observation at Facility A indicated that clients tended to talk more to staff members during activity therapy. It was also noted that the participants at Facility B had more

direct eye contact than the participants at Facility A. Even though the majority of interaction was Social-Causal for the participants at both facilities, participants at Facility A also indicated a more Intimate-Personal, whereas Facility B evidenced Public-Aggressive interaction. As noted during lunch observations, the differences in interaction distances could be because of the types of tables or spaces the facilities used.

Insert Table V

There was little difference in terms of the clients utilizing space during free time. In Facility A the predominate space used was private single detached spaces, whereas in Facility B clients used spaces which were not listed on the checklist. This was due to the fact that during free time in Facility B the clients would leave the confines of the Senior Day Treatment to either go outside and smoke, walk in the hallway, or use the restroom. Clients at Facility A would also use freetime to attend to personal matters, such as using the restroom. Verbal communication had no profound variations between the two facilities. Observation at both facilities indicated that approximately half of the time clients did not speak during free time or that they would speak to other clients, instead of talking to staff members as observed during other activities. Body language was difficult to record during this time, due to the fact that the majority of clients in Facility B were out of sight from the researcher.

Insert Table VI

Exercise sessions varied between the facilities. Although it was a regular session held at Facility A, it was only observed on one day at Facility B. Therefore comparisons between the facilities would not be reliable. A table of the observations made is included in the appendix.

Insert Table VII

Upon observations at both facilities it was noted by the researcher that competence levels of the clients differed among the facilities. Competence levels were assessed by the researcher by observing the clients' "biological health, sensorimotor functioning, cognitive skills, and ego strength" (Lawton, 1986, p. 11). The overall competence level of the clients at Facility B was higher than those at Facility A. This could be attributed to the accessible services offered in each community. The majority of clients at Facility B had prior mental health treatments before entering the program at the Senior Day Treatment center. This treatment usually was in the form of temporary institutionalization which required Senior Day Treatment as a follow up treatment. All the clients at Facility A had no prior mental health services, because there is no mental health institutions

located within that non-urban community. The clients at Facility A had more functional and psychiatric limitations.

Interviews

The interview findings from each facility give an overall perspective of how the clients themselves perceived their treatment environments. In Facility A, the majority of the clients described the environment as, "homey", "like a home", "attractive", and "comfortable". Facility B's clients characterized their surroundings as, "enough room to accommodate everyone", "pleasant, relaxed, business-like", "clean and organized", and "very secure".

When asked about the features the clients liked most about the facility, clients seemed to have a wide range of opinions. At Facility A, the responses ranged from talking about the overall design to specific details in certain rooms. Ed, a 85 year old retired engineer answered, "It's usefulness" and has a "comfortable atmosphere" and "it (home) is well laid out and very attractive". Many responses addressed the bathrooms and kitchen. Ellen, a 71 year old stroke victim, who uses a walker to get around stated, "I like that I can use the bathroom easily, my biggest concern is using the bathroom". Ruby, a 85 year old with debilitating arthritis, commented, [I like the] "Big bathroom, and the convenience of having a kitchen".

Facility B's clients had much different responses. Two clients mentioned the large plate glass window in the multi-purpose room. Sarah, a 58 year old commented, "I really

enjoy the view from the window, it doesn't make you feel closed in". Another client, Beth, a 74 year old widow, suffering from anxiety attacks, commented on the windows. "I enjoy the windows - good for people who are distressed". Other responses included: "I like the chairs, and I can get coffee or tea whenever". Raymond, a 80 year old man who occasionally has to walk with a cane stated, "I like the long hallways, for walking"; Others commented on the "rocking chair and the spaciousness of this room" (multi-purpose room). One client even mentioned the garden atrium in the main building entrance way.

The responses from the other two questions, "What features would you change," and "What features do you most dislike," seemed to be difficult to answer for the majority of clients at both facilities. Many clients would answer "none" abruptly, while others had to think about their answers. This hesitation or unwillingness to give negative responses could be assessed that the clients looked at the program and the environment as a service which was provided for them and they did not want to appear ungrateful.

At Facility A the responses for disliked features all differed. Ellen, the stroke victim, replied, "Difficult to shut doors". Ed commented on how he, "Needed an easier way to get drinking water in restroom". One client responded "I don't find any faults". Ruby, had a variety of opinions about improvements, "The chairs are not too comfortable for me, the back is a little straight for comfort. Also the door (side door) let's in too much cold air during the winter. It seems to be either too hot or too cold in here a lot of time, and oh- facing the blinds (window) is too hard on the eyes".

Facility B's clients had different suggestions. Sarah and Bill, both smokers commented on "getting outside seating". Sarah also suggested installing "carpet in this room (multi-purpose room)." Velma, a client that likes to take walks during freetime, suggested putting a sign on the outside of the door of the Senior Day treatment facility because "I always pass it up."

Implications

Most interior components in both facilities were found to be those existing from previous purposes and use of the building. Due to this factor many of the programs sessions seemed to be at the mercy of the existing architectural components of the built environment. Modification, either large or small, of the physical environment may prove to be instrumental in promoting safety, rehabilitation, and well-being of the clients.

Facility A's built environment provided a barrier-free environment which was supportive to the clients. Although Facility A was assessed to provide some physical features which fostered social behavior and recreational activities, it would be beneficial to the participants of the Senior Day Treatment center if the environment had additional social-recreational aids. Facility A's built environment also scored low on the PAF physical amenities subscale. Facility A could improve these areas by providing outdoor furniture, such as covered picnic tables and swings. Facility A could also provide raised planters outside. Both of these suggestions could be beneficial to some activity groups. This would allow some of the sessions to be held outside during good weather. Also, if

there were seating outside, many clients may utilize it during freetime.

Other suggestions which would increase social-recreational activities include: providing a library of books, from which books can be borrowed; furnishing an organ or piano; and providing an area for games to be played during freetime and after lunch. During observations, Facility A held group therapy in the living room. This area is open and is susceptible to outside distractions. Holding group therapy in the back seminar room might provide a more secure, private area free from outside distractions.

Facility B's built environment was assessed to have physical features which added convenience, attractiveness, and comfort. However, Facility B's built environment lacked in social-recreational aids and prosthetic aids. Facility B could provide more of a social-recreational environment if it provided more outdoor features for the clients. Outdoor seating, which was requested by some clients, would be valuable to the environment. Adding more comfortable seating and an area rug in the multi-purpose room would provide a more cozy atmosphere for the clients and be less "business-like".

The environment at Facility B needed to improve its accessibility. Providing an automatic door opener at the main entrance would be advantageous to the clients of the Senior Day Treatment facility. The restrooms, although having a specified handi-capped stall, did not provide accessible sinks and mirrors. Installing wayfinding features, such as signs in the halls and outside doors would also be helpful for the clients.

Summary and Conclusion

The purpose of this study was to see if differences existed between two Senior Day Treatment programs on the basis of the built environment and the affordances for interaction. Although there were vast differences which existed within the built environments, in terms of layout and design, furniture and finishes, lighting, and accessibility, there were differences in the perceptions and observations of the clients. Facility A's homelike environment was described as "homey" and "comfortable", while Facility B's environment was perceived as "business-like" and "clean and organized". At both facilities the clients focused on the strong and positive characteristic within the built environment.

The comparison of the PAF subscales between the two facilities yield significant information about their overall physical and architectural features. Facility A built environment was very supportive to the clients, while Facility B's built environment was attractive and convenient. Although both facilities ranked high on the PAF subscales in different areas, attention should be given that a well-designed facility should incorporate both aesthetics and accessibility.

Applying Lawton and Nahemow's competence versus environmental press to the two Senior Day Treatment facilities will give a clearer understanding of how important a balance between the environment and the users effects satisfaction. Facility A's built environment was stronger than Facility B's built environment but the competence level of

the clients was lower than Facility B's clients. This would place Facility A in the zone of maximum performance potential. Facility B's clients, assessed with a higher competence level, interacted in an environment which had a weaker environmental press. This placed Facility B in the zone of maximum comfort. Ideally, an environment which would best suit clients of Senior Day Treatment centers would contain elements of comfort and elements for performance potential.

Insert Figure 2

The findings of this study will give gerontologists, designers, and planners a clearer understanding of how the built environment of Senior Day Treatment facilities can be used to maximize their clientele's performance level. For future environmental studies on adult day care consideration should be given to the following suggestions. A longer time line would yield more information in a comparison study. Having a larger sample size would also be more advantageous. Due to the time constraints for the study it was inconvenient to defer until the sample size for both facilities were larger.

In qualitative studies the preference is to have both facilities engage in the same programs for each session. For example, it would be useful to observe clients in both facilities engaged in the same activity, such as making a quilt or reminiscing about past vacations during activity therapy. It would be difficult to achieve this goal, since the purpose of the study was to observe without manipulation. If the director and staff

members were willing to arrange identical programs for the observation period it would prove to be beneficial. Another suggestion would be to have focus groups instead of individual interviews. Focus groups could be beneficial in eliciting more information on likes and dislikes for future changes or recommendations for the built environment.

Poorly planned environments can not only threaten the person's health, safety, and welfare, but produce anxiety which may result in negative responses (Shroyer & Hutton, 1988). The process of perception, cognition, and behavior within the built environment are affected by the competencies of the individual and the group to which he or she is a member (Lang, 1987). This being the case, design consideration should be made to consider the users. The users of the Senior Day Treatment facilities, although observed having different competence levels, all have similar attributes to be considered. All of the clients at both facilities were 55 years or older with a psychiatric disorder. The built environment of both facilities needed to consider those commonalities.

Design of the facilities need to be modified to accommodate the general changes which are associated with the aging process in physical, sensory, and perceptual realms. The facilities' built environment should also be designed to foster a comfortable, secure, and therapeutic atmosphere, which would allow the client to cope with their psychiatric illness. The goals of Adult Day Care/Senior Day Treatment is to restore or improve the participants physical and mental functioning through a variety of programs. It is imperative to have a built environment which will secure success for those goals, as well as, the well being of the clients.

SELECTED BIBLIOGRAPHY

- Altman, I. & Chemers, M. (1980). *Culture and environment*, Brooks/Cole Publishing Co.
- Conrad, K. , Hughes, S. , Hanrahan, P. , & Wang, S. (1993). Classification of adult day care: A cluster analysis of services and activities. *Journal of Gerontology*, 48, 3, S112-122.
- Dubos, R. (1965). *Man adapting*. New Haven, CN: Yale University Press.
- Gatz, M. & Smyer, M. A. (1992). The mental health system and older adults in the 1990s, *American Psychologist*, 47, 741-751.
- George, L. (1990). Psychiatric disorders. *Gender & Aging Generations*, Summer 1995.
- Gillespie, A. E. , & Sloan, K. S. (1990). *Housing options and services for older adults*. Santa Barbara, CA: ABC Clio Press.
- Golant, S. M. (1992). *Housing America's elderly: Many possibilities/ few choices*. Newbury Park: Sage Publications, Inc.
- Grant, I. , Patterson, T. L. , & Yager, J. (1988). Social supports in relation to physical and symptoms of depression in the elderly. *American Journal of Psychiatry*, 145, 10, 1254-1258.
- Green, K. (1985). *Design for aging*, Architectural Technology, Summer

Kahana E. (1982). A congruence model of person-environment interaction. In M. P. Lawton, P. G. Windley, & T. O. Byerts (Eds.), *Aging and the environment*. (pp. 97-121). New York, NY: Springer Publishing Company.

Kaplan, S. (1983). A model of person-environment compatibility. *Environment and Behavior*, 15, 3.

Kiser, L. , Wagner, B., & Knight, (1994). Quality indicators for partial hospitalization. *Behavioral Healthcare Tomorrow*, Nov/Dec. 31-35.

Lang, J. (1987). *Creating architectural theory: The role of behavioral sciences in environmental design*. Van Nostrand Reinheld.

Lewin, K. (1935). *A dynamic theory of personality: Selected papers*. New York, NY: McGraw-Hill.

Moos, R. (1976). *The human context: Environmental determinants of behavior*. A Wiley-Interscience Publication.

Moos, R. & Lemke, S. (1992). *Physical and Architectural Features Checklist Manual*. Palo Alto, CA. : Center for Health Care Evaluation.

Moreno, C. & Wile J. (1989). Community residential treatment for elderly psychiatric patients. *Hospital and Community Psychiatry*, 40, 7, pp. 743-745.

Mumford, L. (1968). *The urban prospect*. New York, NY: Harcourt Brace Jovanovich.

National Institute for Adult Day Care. (1992). *Position paper: Public policy statement*. Washington, DC: National Council on the Aging.

- O' Connor, G. (1986). Remodeling for the handicapped and elderly. Remodeling Contractor. pp. 44-50.
- Phifer, J. & Murrell, S. (1986). Etiologic factors in the onset of depressive symptoms in older adults. *Journal of Abnormal Psychology*, 95, 3, 282-291.
- Simon, D. A. & Carner, E. A. (1987). An off-site day treatment program for mentally impaired nursing home residents, *The Gerontologist*, 27, 585- 587.
- Shroyer, J. & Hutton, J. T. (1988). Optimal living environments for Alzheimer patients. In R. L. Dippel & J. T. Hutton (Eds.), *Caring for the Alzheimer patient* (pp. 44-50). Buffalo, NY: Prometheus Books
- Williams, F. (1992). Aging versus disease. *Generations*, Fall/Winter. 21-25.

BIBLIOGRAPHY

- Adams, G. R. & Schvaneveldt, J. D. (1991). *Understanding research methods*, New York, NY: Longman.
- Altman, I. & Chemers, M. (1980). *Culture and environment*, Brooks/Cole Publishing Co.
- Cohen-Mansfield, J. , Besansky, J. , Watson, V., & Bernhard, L. (1994). Underutilization of adult day care: An exploratory study, *Journal of Gerontological Social Work*, 22, 22-39.
- Coni, N. , Davison, W. , & Webster, S. (1992). *Ageing: The facts*, New York, NY: Oxford University Press.
- Conrad, K. , Hughes, S. , Hanrahan, P. , & Wang, S. (1993). Classification of adult day care: A cluster analysis of services and activities. *Journal of Gerontology*, 48, 3, S112-122.
- Dubos, R. (1965). *Man adapting*. New Haven, CN: Yale University Press.
- Faletti, M. V. (1984). Human factors research and functional environments for the aged. In I. Altman, M. P. Lawton, & J. F. Wohlwill (Eds.), *Elderly people and the environment* (pp. 191-237). New York, NY: Plenum Press.
- Ferrini, A.F. & Ferrini, R.L. (1992). *Healthy in the later years*. Dubuque, Iowa: Wm. C. Brown Publishers.

Gatz, M. & Smyer, M. A. (1992). The mental health system and older adults in the 1990s, *American Psychologist*, 47, 741-751.

George, L. (1990). Psychiatric disorders. *Gender & Aging Generations*, Summer 1995.

Gillespie, A. E. , & Sloan, K. S. (1990). Housing options and services for older adults. Santa Barbara, CA: ABC Clio Press.

Golant, S. M. (1992). *Housing America's elderly: Many possibilities/ few choices*. Newbury Park: Sage Publications, Inc.

Grant, I. , Patterson, T. L. , Yager, J. (1988). Social supports in relation to physical health and symptoms of depression in the elderly. *American Journal of Psychiatry*, 145, 10, 1254-1258.

Green, K. (1985). Design for aging, *Architectural Technology*, Summer

Kahana E. (1982). A congruence model of person-environment interaction. In M. P. Lawton, P. G. Windley, & T. O. Byerts (Eds.), *Aging and the environment*. (pp. 97-121). New York, NY: Springer Publishing Company.

Kaplan, S. (1983). A model of person-environment compatibility. *Environment and Behavior*, 15, 3,

Kiser, L. , Wagner, B., & Knight, (1994). Quality indicators for partial hospitalization. *Behavioral Healthcare Tomorrow*, Nov/Dec. 31-35.

Lang, J. (1974). *Designing for human behavior: Architecture and behavioral sciences*, Stroudsburg: Dowden, Hutchinson & Ross, Inc.

Lang, J. (1987). Creating architectural theory: The role of behavioral sciences in environmental design. Van Nostrand Reinheld.

Lawton, M. P. (1986). Environment and aging. New York, NY: Center for the Study of Aging.

Lawton, M. P. & Nahemow, L. (1973). Ecology and the aging process. In C. Eisdorf and M. P. Lawton (Eds.). Psychology of adult development and aging. Washington, DC: American Psychological Association.

Lawton, M. P. , Windley, P. G., & Byerts, T. O. (1982), Aging and the environment. New York, NY: Springer Publishing Co.

Lewin, K. (1935). A dynamic theory of personality: Selected papers. New York, NY: McGraw-Hill.

Lewy, A. L. , Dolan, T. R. , & Karan, O. C. (1986). A baseline assessment of the physical and social environment of Alverno. Madison: University of Wisconsin, Waisman Center on Mental Retardation and Human Development.

Marshall, C. & Rossman, G. B. (1989). Designing qualitative research, Newbury Park, CA. : Sage Publications.

Montgomery, R. J. V. , & Hirshorn, B. A. (1991). Current and future family help with long-term care needs of the elderly. Research on Aging, 13, 171-204.

Moos, R. (1976). The human context: Environmental determinants of behavior. A Wiley-Interscience Publication.

- Moos, R. & Lemke, S. (1992). Physical and Architectural Features Checklist Manual. Palo Alto, CA. : Center for Health Care Evaluation.
- Moreno, C. & Wile J. (1989). Community residential treatment for elderly psychiatric patients. Hospital and Community Psychiatry, 40, 7, pp. 743-745.
- Morrison, P. A. (1990). Demographic factors reshaping ties to family and place. Research on Aging, 12, 399-409.
- Mumford, L. (1968). The urban prospect. New York, NY: Harcourt Brace Jovanovich.
- National Council on the Aging. (1990). Standards and guidelines for adult day care (2nd ed.). Washington, DC: Author.
- National Institute for Adult Day Care. (1992). Position paper: Public policy statement. Washington, DC: National Council on the Aging.
- Null, R. (1988). Environmental design for the low-vision elderly. Journal of Home Economics, Fall. 29- 35.
- O' Connor, G. (1986). Remodeling for the handicapped and elderly. Remodeling Contractor. pp. 44-50.
- Phifer, J. & Murrell, S. (1986). Etiologic factors in the onset of depressive symptoms in older adults. Journal of Abnormal Psychology, 95, 3, 282-291.
- Phillips, M. A., Murrell, S. A. (1994). Impact of psychological and physical health, stressful events, and social support on subsequent mental health help seeking among older adults, Journal of Consulting and Clinical Psychology, 62, 270-275.

- Rapoport, A. (1990). *History and Precedent in Environmental Design*. New York, NY: Plenum Press.
- Schulz, R. & Hanusa, B. (1979). Environmental influences on the effectiveness of control and competence enhancing interventions, in Perlmutter, L. C. & Monty, R. A. *Choice and perceived control*, New Jersey, Lawrence Erlbaum Associates, Publishers.
- Smion, D. A. & Carner, E. A. (1987). An off-site day treatment program for mentally impaired nursing home residents, *The Gerontologist*, 27, 585- 587.
- Smyer, M. & Gatz, M. (1983) *Mental health and aging*, Beverly Hills, CA: Sage Publications, Inc.
- Taylor, S. & Bogdan, R. (1989). Relationships with severely disabled people: The social construction of humanness. *Social Problems*, 36, 2, 135-148.
- Taeuber, C. (1992). *Sixty-five plus in America*, Washington, DC: U.S. Department of Commerce.
- Timko, C. & Moss, R. H. (1989). Choice, control, and adaptation among elderly residents of sheltered care settings. *Journal of Applied Social Psychology*, 19, 8, 636-655.
- Touliatos, J. & Compton, N. H. (1988). *Research methods in human ecology/ home economic*, Ames, Iowa: Iowa State University Press.
- U. S. Senate Committee on Aging. (1991). *Developments in aging: 1990*. Washington, DC: U.S. Government Printing Office

Weaver, J. W. (1994). Temporary housing: Adult day care and respite service. In W. E. Folts & D. E. Yeatts (Eds.), *Housing and the aging population: Options for the new century*. (pp. 203-220). New York, NY: Garland.

Weisser, W. G. (1989). Models of adult day care: Findings from a national survey. *The Gerontologist*, 29, 640-649.

Williams, F. (1992). Aging versus disease. *Generations*, Fall/Winter. 21-25.

Zeisel, J. (1987). *Inquiry by design*. Monterey, CA.: Brooks/Cole Publisher.

APPENDIXES

UNIVERSITY OF CALIFORNIA

APPENDIX A

FIGURES

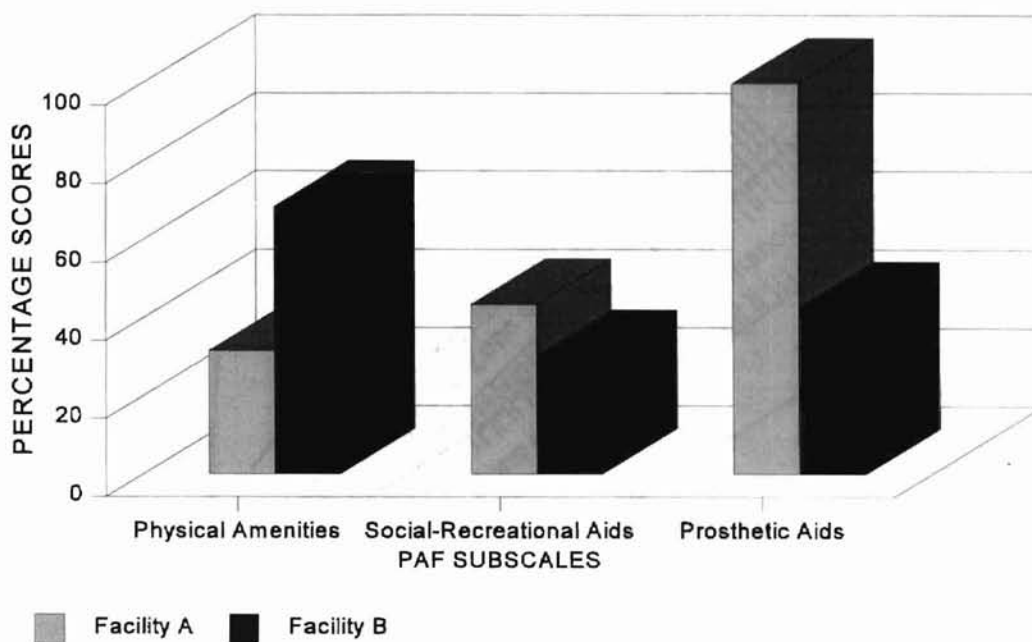


Figure 1. Physical and Architectural Features Subscale Comparison Between Both Facilities

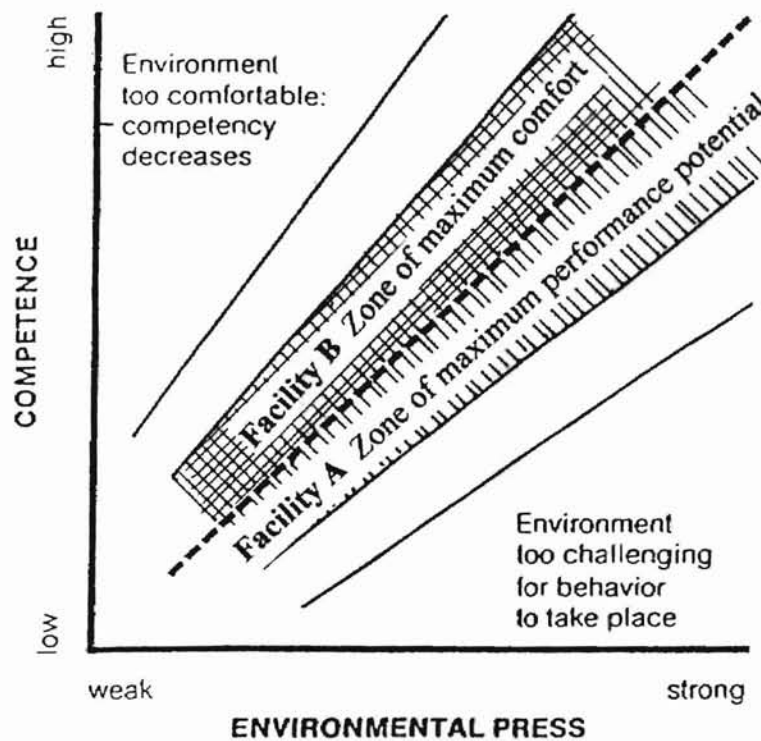


Figure II: Competence vs. Environmental Press Comparison Between Both Facilities

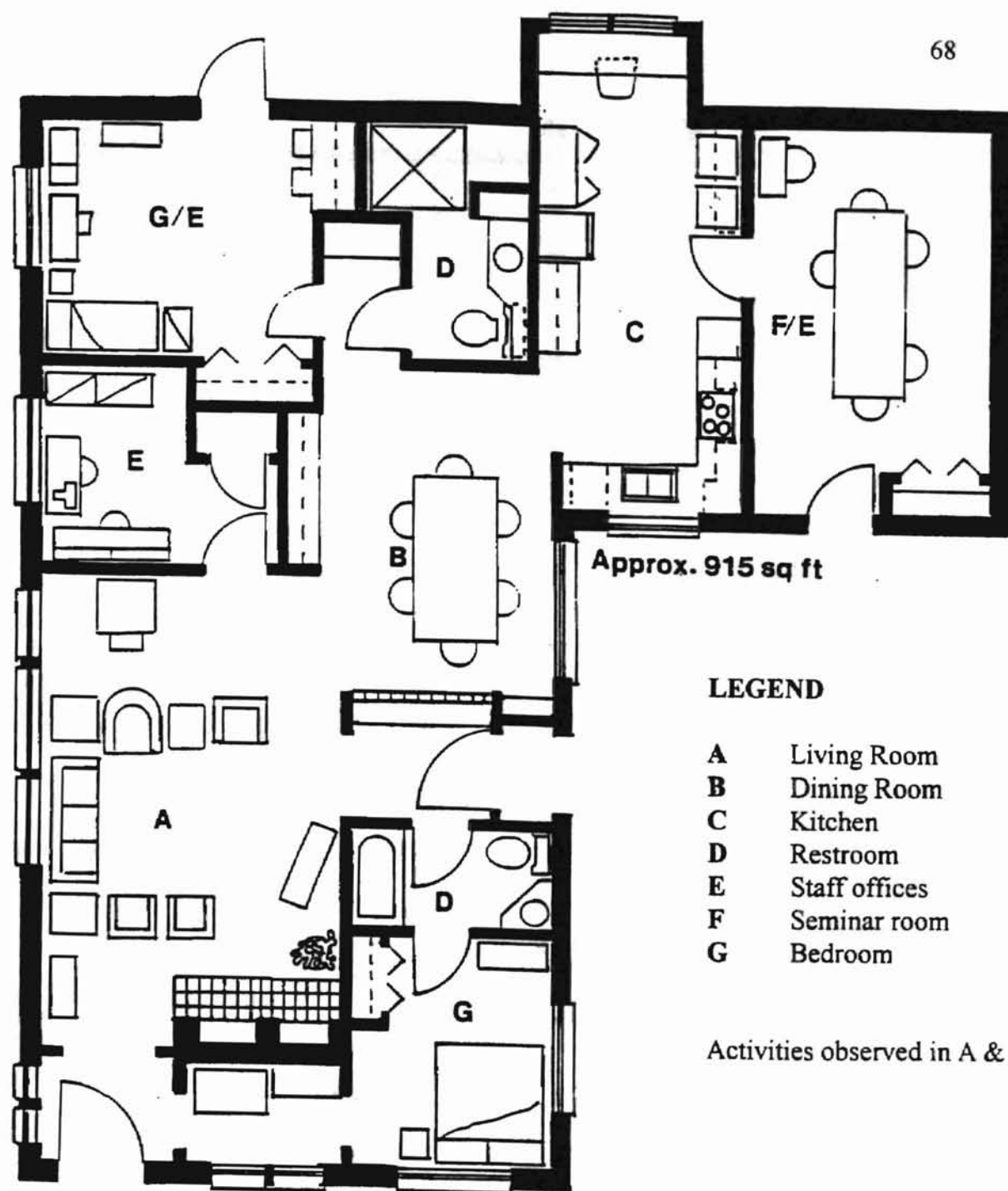


Figure III: Floorplan of Facility A

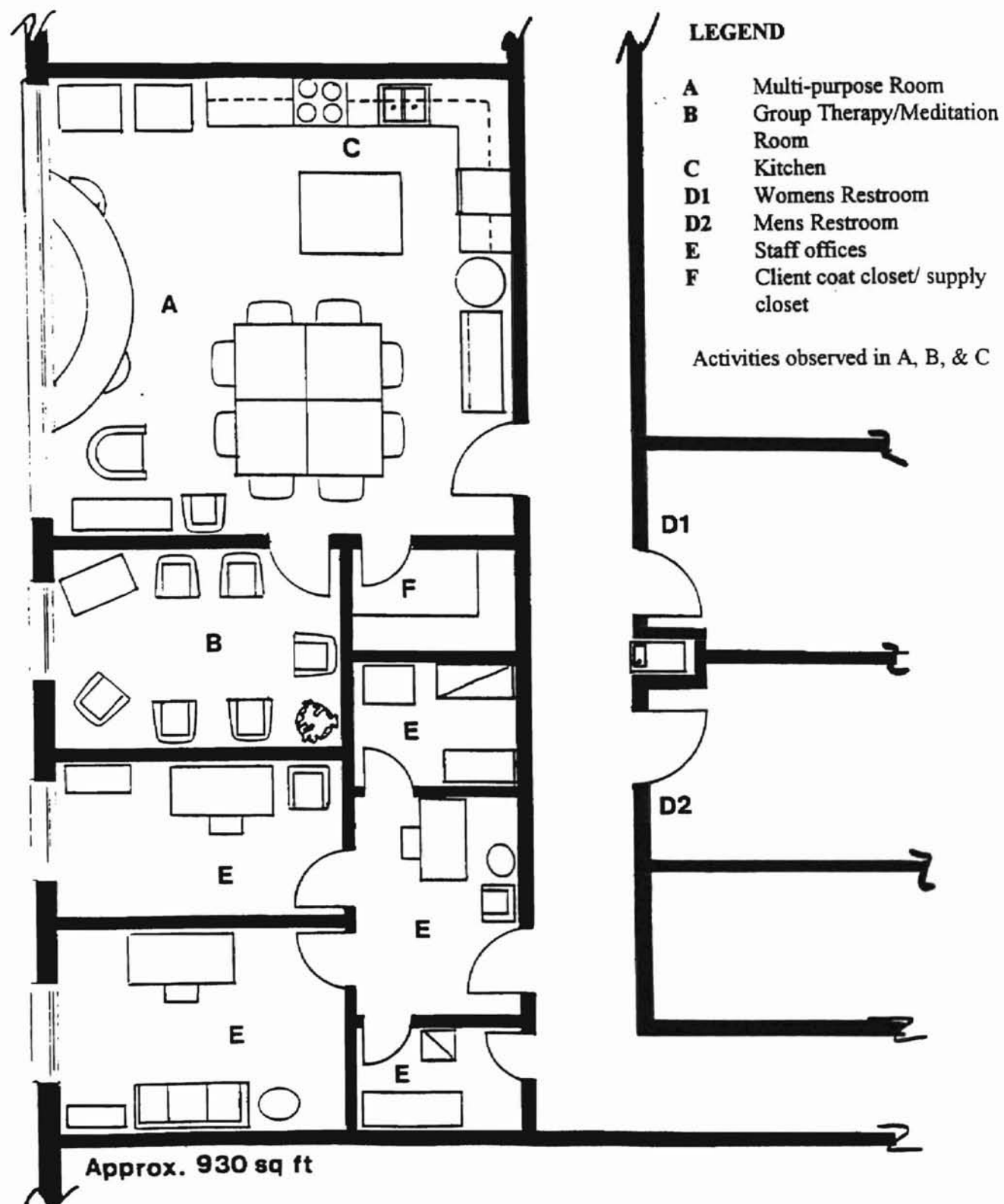


Figure IV: Floorplan of Facility B

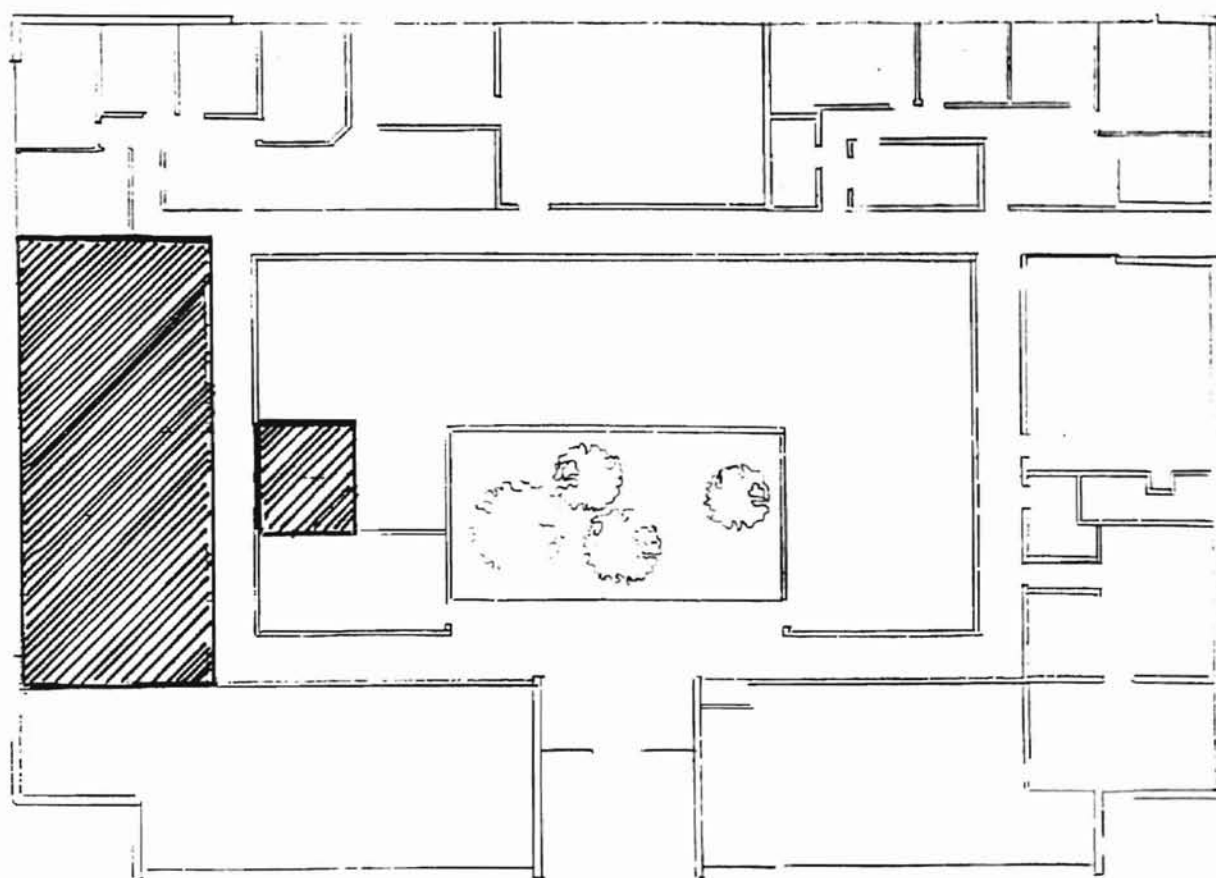


Figure V: Location of Facility B in relation to other offices within the complex.

APPENDIX B
TABLES & INSTRUMENTS

TABLE I

LENGEND FROM OBSERVATIONAL CHECKLIST

SPACE

- A. Private single space detached
- B. Two people each with individual spaces
- C. Two or more people with shared spaces
- D. Other

VERBAL COMMUNICATION

- A. Talking w/ a staff member
- B. Talking w/ another client
- C. Talking to a group
- D. Not talking at all
- E. Talking to inanimate objects
- F. Other

BODY LANGUAGE

- A. Making direct eye contact
- B. Avoiding eye contact
- C. Shaking head
- D. Smiling
- E. Tapping feet
- F. Folding arms
- G. Wringing hands
- H. Slouching in seat
- I. Sitting on edge of seat
- J. Shifting in seat
- K. Leaning forward
- M. Other

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

TABLE II
CLIENT PROFILES

FACILITY A	GENDER	AGE	RETIRED	MARITAL STATUS	# OF CHILDREN
A1	M	85	YES	WIDOWED	2
A2	F	84	YES	WIDOWED	NONE
A3	F	85	YES	WIDOWED	2
A4	F	71	YES	MARRIED	3
FACILITY B					
B1	M	80	YES	MARRIED	1
B2	F	58	YES	DIVORCED	2
B3	F	74	YES	WIDOWED	3
B4	F	70	YES	DIVORCED	2
B5	M	75	YES	DIVORCED	NONE
B6	F	72	YES	WIDOWED	2

TABLE III
AN OBSERVATIONAL COMPARISON BETWEEN
THE TWO FACILITIES DURING GROUP THERAPY

	FACILITY A	FACILITY B
SPACE		
	A 92.06%	A 61.33%
	B .079%	B 38.67%
VERBAL COMM.		
	D 58.46%	D 66.67%
	A 23.07%	A 20.00%
BODY LANGUAGE		
	M 35.76%	A 25.17%
	B 21.16%	F 23.07%
	A 17.51%	M 18.88%
INTERACTION		
	B 77.77%	B 76.00%
	C 22.22%	A 16.00%

SPACE

- A. Private single space detached
- B. Two people each with individual spaces

BODY LANGUAGE

- A. Making direct eye contact
- B. Avoiding eye contact
- F. Folding arms
- M. Other

VERBAL COMMUNICATION

- A. Talking w/ a staff member
- D. Not talking at all

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

TABLE IV
AN OBSERVATIONAL COMPARISON BETWEEN
THE TWO FACILITIES DURING LUNCH

	FACILITY A	FACILITY B
SPACE		
	C 82.69%	C 82.66%
	A 15.38%	A 12.00%
VERBAL COMM..		
	D 52.72%	D 52.56%
	B 34.54%	B 30.76%
BODY LANGUAGE		
	M 54.21%	M 67.92%
	A 18.07%	B 13.20%
	B 18.07%	
INTERACTION		
	A 71.15%	B 54.66%
	C 21.15%	C 44.00%

SPACE

- A. Private single space detached
- C. Two or more people with shared spaces

VERBAL COMMUNICATION

- B Talking w/ another client
- D. Not talking at all

BODY LANGUAGE

- A. Making direct eye contact
- B. Avoiding eye contact
- M. Other

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

TABLE V
AN OBSERVATIONAL COMPARISON BETWEEN
THE TWO FACILITIES DURING ACTIVITY THERAPY

	FACILITY A	FACILITY B
SPACE		
	C 54.68%	C 100%
	A 45.31%	
VERBAL COMM.		
	D 37.87%	D 61.29%
	A 27.27%	C 20.96%
BODY LANGUAGE		
	M 21.15%	M 41.50%
	A 20.51%	B 19.81%
INTERACTION		
	B 64.06%	B 75.40%
	A 29.68%	C 24.59%

SPACE

- A. Private single space detached
- C. Two or more people with shared spaces

BODY LANGUAGE

- A. Making direct eye contact
- B. Avoiding eye contact
- M. Other

VERBAL COMMUNICATION

- A. Talking w/ a staff member
- C. Talking to a group
- D. Not talking at all

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

TABLE VI

AN OBSERVATIONAL COMPARISON BETWEEN
THE TWO FACILITIES DURING FREETIME

	FACILITY A	FACILITY B
SPACE		
	A 71.42%	D 75.00%
	D 28.57%	A 12.50%
		C 12.50%
VERBAL COMM.		
	D 45.45%	D 43.75%
	B 40.90%	B 37.50%
BODY LANGUAGE		
	M 57.57%	M 92.85%
	A 18.18%	A 7.14%
	B 18.18%	
INTERACTION		
	C 63.15%	C 60.00%
	B 36.84%	B 26.66%

SPACE

- A. Private single space detached
- C. Two or more people with shared spaces
- D. Other

BODY LANGUAGE

- A. Making direct eye contact
- B. Avoiding eye contact
- M. Other

VERBAL COMMUNICATION

- B. Talking w/ another client
- D. Not talking at all

INTERACTION

- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

TABLE VII

AN OBSERVATIONAL COMPARISON BETWEEN
THE TWO FACILITIES DURING EXERCISE THERAPY(THL)

	FACILITY A	FACILITY B
SPACE		
	A 63.63%	C 87.50%
	C 19.69%	D 12.50%
VERBAL COMM.		
	D 60.65%	D 57.89%
	A 18.03%	A 15.78%
		B 15.78%
BODY LANGUAGE		
	M 30.00%	M 56.52%
	A 22.30%	A 17.39%
INTERACTION		
	B 87.50%	B 70.58%
	A 8.92%	C 29.41%

SPACE

- A. Private single space detached
- C. Two or more people with shared spaces
- D. Other

VERBAL COMMUNICATION

- A. Talking w/ a staff member
- B. Talking w/ another client
- D. Not talking at all

BODY LANGUAGE

- A. Making direct eye contact
- M. Other

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

INSTRUMENT 1.
OBSERVATIONAL CHECKLIST

ACTIVITY THERAPY
INTERVAL ONE (10 MINUTES)

CLIENT	MALE/FEMALE	SPACE	VERBAL COMM.	BODY LANG.	INTER-ACTION
1					
2					
3					
4					
5					
6					

SPACE

- A. Private single space detached
- B. Two people each with individual spaces
- C. Two or more people with shared spaces
- D. Other

VERBAL COMMUNICATION

- A. Talking w/ a staff member
- B. Talking w/ another client
- C. Talking to a group
- D. Not talking at all
- E. Talking to inanimate objects
- F. Other

BODY LANGUAGE

- | | | |
|------------------------------|----------------------|----------------------------|
| A. Making direct eye contact | E. Tapping feet | I. Sitting on edge of seat |
| B. Avoiding eye contact | F. Folding arms | J. Shifting in seat |
| C. Shaking head | G. Wringing hands | K. Leaning forward |
| D. Smiling | H. Slouching in seat | M. Other |

INTERACTION

- A. Intimate-Personal 0"-18"
- B. Social-Causal 18"-30"
- C. Public-Aggressive 30"-

INSTRUMENT 2

OPEN-ENDED INTERVIEW QUESTIONS

- 1) Could you please describe the environment at Reflections?
- 2) What features within this facility would you change?
- 3) What features do you like most about this facility?
- 4) What features do you dislike most about this facility?

INSTRUMENT 3

PHYSICAL AND ARCHITECTURAL FEATURES
(PAF) CHECKLIST SUBSCALES

2. Physical Amenities

Step 1: TRANSFER THE FOLLOWING INFORMATION FROM THE PAF BY CIRCILING THE ANSWER. (SECTION AND ITEM NUMBER ARE INDICATED FOR EACH QUESTION.)

Section II (Page 3)

Score

1. Is the main entrance sheltered for sun and rain? Yes No ____

4. If there is seating in front of the building:

4c. Is it protected from the weather? Yes No ____

6. If there is an outside area:

6b. Are umbrella tables available? Yes No ____

6c. Is the outdoor furniture in good condition Yes No ____

6d. Is there a covered area (rainproof)? Yes No ____

6e. Is there an area with a sun screen (not necessarily rainproof) or protection from the sun (e.g., trees)? Yes No ____

8. Is there a lawn? Yes No ____

Section III: Part II (page 6)

4. Are the halls decorated (e.g., pictures or plants)? Yes No ____

5. Are there drinking fountains? Yes No ____

5a. If so, how many per floor? _____

Is there at least one drinking fountain on each floor? . . . Yes No ____

Section II: Part II (Cont.)

6. Are there public telephones? Yes No ____

6a. If so, how many per floor? _____

Is there at least one public telephone
on each floor? Yes No ____

6b. Is there a writing surface by the phone? Yes No ____

Section III: Part III (page 7)

6. Are there any table lamps? Yes No ____

Section III: Part VII (page 10)

6. Is there an air-conditioning system? Yes No ____

7. Is there a chapel or meditation room? Yes No ____

11. If there are vending machines:

11a. Are they used by residents(clients)? Yes No ____

Section III: Part VIII (page 11)

6. Are there mirrors in the bathrooms? Yes No ____

Section III: Part VII (page 10)

9. Is there a kitchen area in which a resident or visitor can
make a cup of coffee, heat some soup, or the like? Yes No ____

STEP 2: FOR EACH "YES" OR "ALL" THAT HAS BEEN CIRCLED, PUT A "1"
IN THE SCORE COLUMN. OTHERWISE PUT A "0" IN THE SCORE
COLUMN.

STEP 3: TRANSFER THE FOLLOWING INFORMATION FROM THE PAF BY CIRCLING THE ANSWER.

STEP 4: ADD THE NUMBERS IN THE SCORE COLUMN AND ENTER THE SUM AS THE TOTAL SCORE.

TOTAL SCORE _____

STEP 5: TO CALCULATE THE PERCENTAGE SCORE, DIVIDE THE TOTAL SCORE BY 19 AND MULTIPLY BY 100.

_____ $19 \times 100 =$ _____

3. Social-Recreational Aids

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STEP 1: TRANSFER THE FOLLOWING INFORMATION FROM THE PAF BY CIRCLING THE ANSWER. (SECTION AND ITEM NUMBER ARE INDICATED FOR EACH QUESTION.)

Section II (page 3)

Score

4. Is there outside seating in the front of the building? Yes No ____
- 4d. Does it provide a view of pedestrians and
other activity? Yes No ____
5. Is there a patio or open courtyard? Yes No ____
6. If there is an outside area:
- 6a. Are tables available? Yes No ____
- 6f. Is there a barbecue? Yes No ____
- 6g. Is there a shuffleboard game area? Yes No ____
7. Is there a garden area for resident(client) use? Yes No ____
11. Is there parking for visitors? Yes No ____

Section III: Part III (page 7)

2. Are any lounges near an entrance or traveled hallway? Yes No ____
3. Are there writing desks or tables? Yes No ____
4. Are there small tables for several people to sit and talk
or play games? Yes No ____
5. Is reading material available on tables or shelves? Yes No ____
8. Is there a quite lounge with no television? Yes No ____

2. Is there a library from which books can be borrowed? Yes No _____
3. Is there a music or listening room? Yes No _____
4. Pool or billiard table? Yes No _____
5. Ping pong table? Yes No _____
6. Piano or organ? Yes No _____
7. One or more televisions sets? Yes No _____
8. One or more phonographs? Yes No _____
9. One or more radios? Yes No _____
10. One or more sewing machines? Yes No _____

Section III: Part V (page 9)

2. Are there small tables which seat fewer than six?

yes no

3. Are there large tables which seat more than six?

yes no

Are both questions 2 and 3 answered yes? Yes No _____

STEP 2: FOR EACH "YES" OR "ALL" THAT HAS BEEN CIRCLED, PUT A "1" IN THE SCORE COLUMN. OTHERWISE PUT A "0" IN THE SCORE COLUMN.

STEP 3: ADD THE NUMBERS IN THE SCORE COLUMN AND ENTER THE SUM AS THE TOTAL SCORE.

TOTAL SCORE _____

STEP 4: TO CALCULATE THE PERCENTAGE SCORE, DIVIDE THE TOTAL SCORE BY 23 AND MULTIPLY BY 100.

_____ 23 X 100 = _____

4. Prosthetic Aids

STEP 1: TRANSFER THE FOLLOWING INFORMATION FROM THE PAF BY CIRCLING THE ANSWER. (SECTION AND ITEM NUMBER ARE INDICATED FOR EACH QUESTION.)

Section II (page 4)

Score

9. Is there parking reserved for handicapped? Yes No ____

Section III: Part I (page 5)

1. Can one enter the building from the street without having to use any stairs? Yes No ____
5. Does the front door open automatically? Yes No ____
6. Does the front door swing closed by itself? Yes No ____
7. Is the front door wide enough for a wheelchair? Yes No ____

Section III: Part III (page 7)

7. Is the furniture spaced wide enough for wheelchairs? Yes No ____

Section III: Part V (page 9)

4. Is aisle space between tables at least 60"? Yes No ____

Section III: Part VIII (page 11)

2. Do the bathroom doors open out? Yes No ____
3. Are there handrails or safety bars? Yes No ____
4. Are there lift bars next to the toilet? all some none ____
9. Is there turning radius for wheelchair (5' x 5')? all some none ____

STEP 2: FOR EACH "YES" OR "ALL" THAT HAS BEEN CIRCLED, PUT A "1" IN THE SCORE COLUMN. OTHERWISE PUT A "0" IN THE SCORE COLUMN.

STEP 3: TRANSFER THE FOLLOWING INFORMATION FROM THE PAF
BY CIRCLING THE ANSWER.

Section III: Part II (page 6)

8. Does a resident(client) have to climb any steps to have access
to all areas of the building intended for resident(client) use? . . . Yes No _____

Section III: Part VIII (page 11)

1. Are there raised thresholds at the entrances? all some none _____
5. Are there towel racks and dispensers higher than
40" from the floor? all some none _____

STEP 4: FOR EACH "NO" OR NONE" THAT HAS BEEN CIRCLED,
PUT A "1" IN THE SCORE COLUMN. OTHERWISE PUT
A "0" IN THE SCORE COLUMN.

STEP 5: ADD THE NUMBERS IN THE SCORE COLUMN AND
ENTER THE SUM AS THE TOTAL SCORE.

TOTAL SCORE _____

STEP 6: TO CALCULATE THE PERCENTAGE SCORE, DIVIDE THE
TOTAL SCORE BY 14 AND MULTIPLY BY 100.

_____ 14 X 100 + _____

Moos, R. & Lemke, S. (1992). Physical and Architectural Features Checklist
Manual. Palo Alto, CA: Center for Health Care Evaluation, Department of Veterans
Affairs and Stanford University Medical Centers.

portion of subscales only relevant to this study have been listed above

APPENDIX C
MISCELLANEOUS

OBJECTIVES ANALYSIS

The objectives of this study were:

1. To determine if a difference exists between two Senior Day Treatment Centers in terms of perceptions, behavior, and interactions within the built environment.

There were small differences in terms of client's perceptions within the built environment. At both facilities, clients focused on the positive features of the built environment. The behavior and interaction observations are discussed in objective 2.

2. To observe various behavioral and interaction patterns among clients while they participate in various activities.

There was a difference in behaviors and interaction within the built environment of both facilities. After the observations were conducted, the behaviors which occurred most frequently were utilized in the comparison. Each of the five activities, which were observed, differed in terms of behaviors and interaction patterns of the clients. Overall, the clients at Facility A had closer interaction patterns with staff members and other clients. Clients at Facility A also seemed to talk more than the clients at Facility B. It was also observed that clients at Facility A, overall, had more direct eye contact.

3. To assess how clients perceive the built environment of Senior Day Treatment Centers.

The clients at both facilities tended to focus on the strong and positive characteristics of the built environment. Comments like, "homey", "attractive", and comfortable were used to describe Facility A's built environment. Facility B's built environment was perceived as "pleasant, relaxed, and business-like," and "clean and organized", and "very secure".

OBJECTIVES ANALYSIS (cont).

4. To make recommendations concerning the built environment which reflect the needs of the clients of Senior Day Treatment Centers based on this comparative study.

Most interior component in both facilities were found to be existing from previous purposes and use of the building. Due to this factor many of the program sessions were at the mercy of the existing architectural components of the built environment. Modification, either large or small, of the built environment would prove to be instrumental in promoting safety, rehabilitation, and well-being of the clients. Facility B need more age appropriate furniture and finishes and need to work to providing a more accessible environment. Both Facility A and Facility B both needed to add more elements which would foster social- recreation. This could be done by providing outdoor furniture such as covered picnic tables and benches. Facility A provide an easier accessibility to games and books. Facility A also needs to implement some interior changes which would reduce distractions, especially during group therapy. Facility B needed to install wayfinding features such as signs in hallways and outside doors.

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD
HUMAN SUBJECTS REVIEW

Date: 03-21-96

IRB#: HE-96-048

Proposal Title: ENVIRONMENTAL COMPARISON BETWEEN TWO SENIOR DAY
TREATMENT FACILITIES

Principal Investigator(s): Margaret Weber, Alanna L. Barnett

Reviewed and Processed as: Expedited

Approval Status Recommended by Reviewer(s): Approved


ALL APPROVALS MAY BE SUBJECT TO REVIEW BY FULL INSTITUTIONAL REVIEW BOARD
AT NEXT MEETING.

APPROVAL STATUS PERIOD VALID FOR ONE CALENDAR YEAR AFTER WHICH A
CONTINUATION OR RENEWAL REQUEST IS REQUIRED TO BE SUBMITTED FOR BOARD
APPROVAL.

ANY MODIFICATIONS TO APPROVED PROJECT MUST ALSO BE SUBMITTED FOR
APPROVAL.

Comments, Modifications/Conditions for Approval or Reasons for Deferral or Disapproval
are as follows:

Signature:


Chair of Institutional Review Board

Date: April 5, 1996

VITA

Alanna Barnett-Lewallen

Candidate for the Degree of

Master of Science

Thesis: ENVIRONMENTAL COMPARISON BETWEEN TWO SENIOR DAY
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