

AN ABSTRACT OF THE THESIS OF

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Adaptation to role transitions can have various outcomes. Health and demographic characteristics as well as environmental control have been shown to affect the transition to the role of patient. The acutely ill elderly's adaptation to the role of hospitalized patient has not been measured from the elderly patient's perspective.

This study utilized a random sample of 176 hospitalized elderly medical-surgical patients and the patients' registered nurses to examine the relationships among demographic and health characteristics, latitude of choice and elderly hospitalized patient adjustment. Patients were excluded who had been in ICU for more than 24 hours, had decreased mental status, or were judged to be too physically ill to participate.

The study used an adaptation of the Latitude of Choice Scale (a measure of environmental control) developed by Hulicka and colleagues, a nurse-rated hospitalized patient adjustment scale developed by Cicirelli, and an adaptation of the adjustment scale for patients' self-assessment.

Results from a series of multiple regression analyses indicate that, taken as a group, neither demographic nor health characteristics predict environmental control, as measured by the adapted version of the Latitude of Choice Scale (LOC). However, one individual health characteristic, length of time since last hospitalization, was a negative predictor of LOC. Further, the results indicate that taken as a group, health and demographic characteristics, along with patient LOC scores are not predictive of either nurse or patient-rated adaptation.

The individual health characteristic "patient acuity rating" did negatively predict both nurse and patient-rated adjustment scores. Nurse-rated patient adjustment scores were also negatively predicted by the participants' prior number of hospitalizations. A paired-t test indicated that patients rated themselves significantly better adjusted than did their nurses. This finding was judged to be clinically unimportant because of the small real difference in the mean scores. Random-effects ANOVA found no significant variance between nurses' ratings of patients.

Relationships Among Health and Demographic
Characteristics, Latitude of Choice, and Elderly
Hospitalized Patient Adjustment

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Relationships Among Health and Demographic Characteristics,
Latitude of Choice, and Elderly Hospitalized Patient
Adjustment

INTRODUCTION

Role transition is a well known concept in the field of human development. Role transitions occur repeatedly throughout the lifetime and offer opportunities for development. Role transition can be relatively easy or very difficult and may be done successfully or accomplished in only a partial or unsuccessful manner (Erikson, 1963).

George (1980) defines role transition as "situations in which both the status and its accompanying role are changed (for example, the transition from single person to spouse) or lost (for example, retirement, which represents loss of the work status and role)" (p.140). Role transitions pose several challenges for the individual experiencing the transition. George (1980) identifies four features which influence the degree of challenge experienced by an individual. These features are: the normative significance of the role transition; the personal significance of the transition; the effect on established behavior patterns; and the extent to which the individual has been socialized for the role shift (George,1980).

According to George (1980), the normative significance of a role transition is directly proportional to individual challenge. That is, a role transition which is more significant will have a higher degree of challenge for the individual because greater potential benefits await depending on achievement or adequacy of role performance. Conversely, if a significant role transition is not adequately achieved, the negative consequences will be much greater (George, 1980).

Personal identity often is associated very closely with a certain role. If that role is lost, even to a role that is more highly valued by society, a profound sense of loss may occur for the individual. According to George (1980, p.8), "the greater the sense of personal loss experienced by an individual, the more difficult the role change or transition will be".

Role transitions, by their very nature, disturb existing behavior patterns to some degree. The greater the degree of disruption to established behavior patterns, the greater will be the difficulty the individual experiences in the role transition.

Past socialization experiences will affect the degree of challenge perceived by an individual in any given role transition. "Generally, individuals who have had many {relevant} experiences are able to deal more successfully with ... transitions" (George, 1980 p.8). For example, a

woman whose elderly husband was ill and physically deteriorating for many months may be somewhat prepared for the transition to widowhood. Expected role transitions offer more opportunity for anticipatory socialization and mental rehearsals than do unexpected transitions.

A concept similar to anticipatory socialization is Bernice Neugarten's (1968) "social clock". Neugarten (1968) uses the phrase "social clock" to describe the internal, societally normed, force which helps determine an individual's ease or readiness in navigating a specific role transition. For example, the transition to parenthood by adults in their twenties or thirties may be viewed as "on time" by the social clock. A person who becomes a parent, for the first time, in his/her forties would be normatively "late". According to Neugarten (1968), the timing of a role transition has much to do with the ease of navigation of that transition and whether it will be viewed as a crisis. On-time transitions are believed to be less disruptive and different than are off-time transitions (Neugarten, 1968).

A universal phenomenon of aging is the experience of physical change. One role transition which is associated with the physiological aging process is that of healthy to ill. Senescence makes the transition from healthy to ill more likely and more common for the elderly. Since physiologic aging brings with it an increased incidence of

disease, it is not surprising that in the United States people over the age of 65 comprise 13 percent of the population but consume over 30 percent of the health care dollars and comprise 36 percent of all hospitalized patients (U.S. Department of Commerce, 1988). Based on the physiologic changes of aging, the elderly would be more likely to experience illness and disability. This then becomes a "social clock" transition which many elderly will experience.

Once a person makes the physiological transition from healthy to ill, either temporarily or permanently, the social role transition from non-patient to patient frequently occurs. The role of patient has been identified with certain societally defined obligations, rights, and privileges. Parsons (1951) was one of the earliest sociologists to describe the "sick role". He described this role in terms of those special privileges granted by a society to the sick person and the special obligations of the sick person demanded by society (1951). The privilege is "withdrawal into a dependent relation, it is asking to be taken care of" (Parsons, 1951 p.285). The obligations include cooperation with the health care provider and a motivation to get well (Parsons, 1979).

Parsons's (1951 & 1979) descriptions of the patient role referred to outpatient not to hospital settings. Lorber (1975, p.24) elaborated on this point stating that

Parson's (1951) description of the "sick role" as, "the voluntary cooperativeness, one-to-one intimacy, and conditional permissiveness ... is applicable only to outpatient care by a private physician".

When a patient enters the hospital, the sick role has an added obligation, that is, to submit to the hospital's routines without protest (Lorber, 1975). Voluntary cooperativeness may now become involuntary. The patient has entered a large organization and must now become part of it. The sick role in the one-to-one private physician arena is replaced with an imposed patient role "characterized by submission to professional authority, enforced cooperation, and depersonalized status" (Lorber, 1975, p.214). When a person assumes a hospitalized patient role, as described by Lorber (1975) and others (Coser, 1962, Taylor, 1979, Tagliacozzo & Mauksch, 1979), s/he becomes part of an organizational structure. A passive, submissive stance by the patient, allows the medical staff to maintain the organizational efficiency which promotes routinization of the staff's work (Taylor, 1979).

The hospitalized patient role has been described as passive or submissive to authority (Coser, 1962; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979; Karuza, Zevon et al., 1982), cooperative (DiNicola & DiMatteo, 1982; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Cicirelli, 1987), and depersonalized (Gatchel & Baum, 1983;

Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979). When compliance with this role is high, a person is seen as a "good patient". Conversely, when compliance is low with these role characteristics a person is often labeled as a "bad patient". Some research has utilized the "good" patient and "bad" patient categories as independent or dependent variables (For example see, Cicirelli, 1987; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979).

It appears that the "good" patient and "bad" patient labels are often used in scientific literature to describe patient adjustment, with better and poorer adjustment linked to the "good" and "bad" patient label respectively. However, the literature does contains varied descriptions of hospitalized adjustment. Hospitalized patient adjustment can be conceptualized as including several dimensions. The dimensions of hospitalized adjustment have been described as follows:

1. Cooperation with staff (Cicirelli, 1987; Lorber, 1979; Strauss et al., 1982; Tagliacozzo & Mauksch, 1979).
2. Motivation or desire to get well (Cicirelli, 1987; Parsons, 1951).
3. Submission to hospital routines without protest or resistance and adherence to treatment or passiveness (Cicirelli, 1987; Karuza et al., 1982; Tagliacozzo & Mauksch, 1979; Taylor, 1979).
4. Stoicism (Lorber, 1979; Taylor, 1979).
5. Complications to recovery (Cicirelli, 1987).

6. Being a "good patient" (Cicirelli, 1987).
7. Complaints of pain (Cicirelli, 1987).
8. Helping the staff (Gatchel & Baum, 1983).
9. Asking or not asking for information (Tagliacozzo & Mauksch, 1979; Taylor, 1979).

With the exception of Coser's (1962) descriptive study, the literature does not contain patient assessments of their own adjustment. Each of the preceding patient characteristics was assessed by the staff and/or researcher. It is not uncommon (for example see Boyd, Yeager, & McMillan, 1973) for patients' adjustment to be determined by staff and/or researchers without defining the concept of patient adjustment or without describing how the concept is measured.

Although the literature contains a variety of studies on adjustment to chronic illness (see Jaco, 1979, and Reid, 1984, for literature reviews), there are relatively few studies which empirically measure acutely ill, hospitalized patient adjustment (Cicirelli, 1987; Lorber, 1979). Such empirical work is needed to identify factors which influence the elderly persons' adjustment to the hospitalized patient role.

The cooperation expected of a hospitalized patient, whether voluntary or enforced, can disrupt the patient's existing behavior patterns and affect adjustment to the role of hospitalized patient. Role adjustment has been

associated with a number of factors in the environment or within the individual. These include: environmental constraint, choice or control; demographic characteristics; health characteristics; locus of control; or other factors. Each of these factors is briefly reviewed here.

Constraint, Choice, or Control Control over actions in an attempt to manipulate the environment to one's advantage is a basic activity of human life. Control over immediate surroundings and personal activities is taught from early childhood. When an elderly adult is hospitalized and must relinquish that control, either voluntarily or involuntarily, the resultant stress which may occur has the potential to affect numerous facets of that person's life; including adjustment to the role of patient. While each of these factors can have an impact on a person's adjustment to the hospitalized patient role, each does not affect adjustment in the same manner. Neither does each of these factors affect adjustment with the same level of impact.

The ability to control some aspect of one's environment has been shown to have a direct, positive impact on the outlook, self-esteem, and morale of elderly in institutional settings (for example see, Hulicka, Morganti, & Cataldo, 1975; Schulz & Hanusa, 1978; Berkowitz, Waxman, & Yaffe, 1988; Timko & Moos, 1988). These studies have demonstrated the major impact control

has in the lives of institutionalized elderly. Suggestions about the relationship of control to adaptation in hospitalized patients have been made (for example: Taylor, 1979; Cicirelli, 1987). Taylor (1979) for example, described the lack of control (choice) in the hospitalized patients environment. She further states that patients labeled as "good patients", or well adjusted, by the hospital staff could receive that label as a result of learned helplessness in thwarted attempts by the patient to maintain environmental control (Taylor, 1979). The current study attempted to clarify the relationship of control (as measured by latitude of choice) and adjustment in the hospitalized elderly.

Perceived high levels of environmental constraint or control have been associated with relatively poorer levels of adjustment by patients (Cicirelli, 1987; Reid, 1984), retirement home residents (Wolk, 1976), and students (Parkes, 1984 & 1986; Sandler & Lakey, 1982; Suls & Mullen, 1981). Perceived control has been observed to be lower in nursing home residents who are in poorer health than for those elderly residents in better health (Teitelman & Priddy, 1988). Lower levels of perceived choice in daily living activities has been associated with lower levels of life satisfaction and self-concept in institutionalized elderly (Hulicka, Morganti, & Cataldo, 1975; Morganti, Nehrke, & Hulicka, 1980).

Demographic characteristics Virtually all studies which have examined patient adjustment have attempted to relate demographic characteristics, such as age and education, to level of adjustment. For example, as a group, older patients desire less input into medical decisions than younger patients and tend to be better adjusted to the patient role in both outpatient and hospital settings (Beisecker, 1988; DeWolfe, Barrell & Cummings, 1966). Hospitalized patients who have relatively higher levels of education are generally less well adjusted than patients with lower levels of education (Lorber, 1975).

Health Characteristics Surgical patients have been reported to be better adjusted than those with medical diagnoses (Volicer, Isenberg, & Burns, 1977). Greater numbers of prior hospitalizations have been associated with a more positive adjustment (Coser, 1962). The amount and frequency of sedation also has been shown to have a direct, positive relationship on adjustment in the hospitalized patient (Lorber, 1979).

Patient classification systems (PCS) were developed as a way to achieve more flexibility in nursing staffing than the traditional census-driven system allowed (DeGroot, 1989; Trofino, 1989; Mion, McLaren, & Frengley, 1988). PCS are based on patient acuity ratings in several categories. The categories may include such items as: Hygiene; activity status; nourishment; vital signs; medications;

patient teaching; emotional support; treatments or interventions; IVs; elimination. There is an inverse relationship between the amount of patient independence and the amount of nursing time required for that category. That is, a patient who is self-sufficient in a category may receive no or very few predetermined points for that category.

Typically the acuity rating is derived by summing the predetermined point values for the highest level of nursing care required for each patient across categories. The acuity rating is completed once every eight to twelve hours for each patient. The higher the acuity rating, the more nursing care is required for the patient. No literature was found exploring the relationship between acuity and hospitalized patient adjustment.

Locus of control People who are more external in their locus of control beliefs often view life events as occurring randomly or by chance. On the other hand, people who are more internal in their orientation, frequently view life events occurring as a direct result of their own actions or choices (Rotter, 1966). Patients with greater external locus of control generally have been found to have relatively higher levels of positive adjustment to the patient role (Cicirelli, 1987; Felton & Kahana, 1974; Schulz, 1986). Some studies have demonstrated the opposite finding; that higher levels of internal locus of control or

purposeful personal actions in a predictable world, controlled by powerful others, are associated with higher levels of adjustment (Levenson, 1981; Parkes, 1984 & 1986).

In the context of hospital adjustment, patients who have an external locus of control will fit more closely with the passive, "good patient" role, since they tend to believe that they have little, if any, control over their hospital course (Cicirelli, 1987, Felton & Kahana, 1974, Schulz, 1986). Patients who have an internal locus of control will assume the passive stance of the "good patient" less often, unless they maintain control of their environment by actively giving control to a person who, they believe, can control the outcome for them, e.g. the doctor or nurse (Levenson, 1981).

Other factors Interpersonal factors such as interactions with staff, family and friends and the patient's belief about the staff's work environment, have been shown to affect patient adjustment. Patients in nursing homes who exhibit a certain level of dependence on the caregiver are rated as better adjusted (Baltes, 1982). A patient and health care provider whose health care belief systems match show the patient as being better adjusted (Brickman, Rabinowitz, Karuza, Coates, Cohen, & Kidder, 1982; Karuza, Zevon et al., 1982). Further, physicians who are perceived as non-oppressive, non-dominant, and non-hostile by

patients have patients who are better adjusted in the hospital setting (Auerbach, Martelli, & Mercuri, 1983).

On the other hand, hospitalized patients with greater numbers or frequency of family and friend visits are generally rated as less well adjusted by staff (Lorber, 1979). Physical elements in hospitals also have been associated with patient adjustment. Lower levels of noise and the ability to control noxious noise are associated with better patient recovery and coping (Topf, 1983 & 1985). An angular hospital ward design was found to favor patient privacy satisfaction over a circular design (Jaco, 1979). Nurses tended to prefer a circular room arrangement as it improved their access to patients, thus saving them time (Jaco, 1979).

Justification & Purpose

Becoming a hospitalized patient is a role transition made by many elderly individuals. This transition is usually thought of as being stressful and requiring a behavioral or intrapsychic response (coping) in order to make a successful transition to the hospitalized patient role. While it is recognized that many variables affect the outcome of patient adjustment, the specific variables of interest in this study of hospitalized patients are health characteristics, demographic characteristics, and latitude of choice, as a measure of environmental constraint/control. This study examined three groups of variables hypothesized to affect the elderly's adjustment to the role of hospitalized patient. The variables include: (1) Demographic characteristics (age, gender, race, marital status, educational level, medical training); (2) health characteristics (number of prior hospital admissions, length of time since the last hospital admission, whether a patient has a diagnosis of cancer, whether the patient was in an ICU during the current hospitalization, surgical vs. medical reason for admission, acuity rating); (3) the patient's perception of situational choice. This study related these variables to the role adjustment of the hospitalized elderly patient. Unlike prior studies, this study examined patient adjustment from the hospitalized patient's perspective. It also examined

patient adjustment from the nurse's perspective. Finally, this study compared nurse-rated adjustment and patient-rated adjustment.

Research Questions

This study addressed the following questions:

1. How do the elderly perceive their adjustment to the role of hospital patient?
2. How do nurses perceive their elderly patients' adjustment to the role of hospital patient?
3. Is there a significant difference between the patients' ratings of their hospital adjustment and nurses' ratings of the patients' adjustment?
4. How do patients perceive the level of constraint (as measured by the latitude of choice scale) experienced in their hospitalization?
5. Do demographic and health characteristics predict latitude of choice scores?
6. Are patients' perceptions of their hospital adjustment predicted by latitude of choice, demographic, and/or health characteristics?

7. Are nurses' perceptions of patient adjustment predicted by the patients' demographic and health characteristics?

8. Is there a difference in nurse-rated patient adjustment scores among nurses?

REVIEW OF THE LITERATURE

Adaptation to role transition is a familiar concept in the field of human development. Some common role transitions throughout the life span include: student to worker; single to spouse; non-parent to parent; worker to retired; spouse to widow/er. Erikson (1963) compared life and its transitions to a branching stream. The navigation of the stream and its branches could be done successfully or in only a partial or unsuccessful manner and the transitions could be relatively easy or difficult (Erikson, 1963).

Role transitions are situations in which the role and its status are changed or lost (George, 1980). Like Erikson (1963), George (1980) recognized that adaptation to role transition poses challenges for the individual. Four features which influence the degree of challenge an individual experiences are: the normative significance of the role transition; the personal significance; the effect on established behavior patterns; and the extent to which an individual has been socialized to the role transition (George, 1980).

Physiologic changes of the aging process make the elderly more likely to experience, at least temporarily, the transition of healthy to ill. Once this occurs, the elderly frequently may make several role transitions,

including the transition of non-patient to patient and out-patient to hospitalized patient. Parsons (1951) described the "sick role" as those special privileges granted to the sick person and the special obligations of the sick person demanded by society. Lorber (1975) further elaborated on Parsons' (1951) description of the "sick role" as occurring in an outpatient setting with a private physician. The "sick role" requires one-to-one intimacy, voluntary cooperativeness, and conditional permissiveness (Lorber, 1975). To these requirements of the "sick role" Lorber (1975) identifies an added obligation when a person becomes hospitalized, that of submitting to the hospital's routines without protest.

The role of the hospitalized patient has been described as passive or submissive to authority (Coser, 1962; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979; Karuza, Zevon et al., 1982), cooperative (DiNicola & DiMatteo, 1982; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Cicirelli, 1987), and depersonalized (Gatchel & Baum, 1983; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979). When compliance with this role is high, a person is seen as a "good patient." Conversely, when compliance is low with these role characteristics a person is often labeled as a "bad patient."

Adaptation or adjustment to the patient role in the hospitalized elderly can be conceptualized in terms of several descriptors and measures. These include: cooperation with staff; motivation or desire to get well; submission to hospital routines without protest or resistance; adherence with treatment; stoicism or complaining; complications to recovery; being a "good patient"; complaints of pain; helping the staff; and asking or not asking for information (Cicirelli, 1987; Lorber, 1979; Strauss et al., 1982; Tagliacozzo & Mauksch, 1979; Parsons, 1951; Karuza et al., 1982; Taylor, 1979; Gatchel & Baum, 1983).

Erikson's (1963) description of life transitions is applicable to the role transition that elderly persons experience when they become hospitalized patients. This transition can be accomplished in only a partial or unsuccessful manner or can be accomplished successfully. The role transition to hospitalized patient can pose challenges (described by George, 1980) which are similar to those of other role transitions. The literature describes several factors which specifically affect the adjustment and adaptation to the patient role in acute care settings (for example, Cicirelli, 1987; Coser, 1962; Gatchel & Baum, 1983; Lorber, 1975 & 1979).

Major factors, either within the environment or within the individual, have been identified which contribute to

hospital adjustment. These factors include: environmental constraint, choice or control; demographic characteristics; and health characteristics. Other interpersonal factors such as physician attitudes (Auerbach et al., 1983) number and frequency of visitors (Lorber, 1979) and environmental factors such as noise levels (Topf, 1983 & 1985) and ward design (Jaco, 1979) have also been examined although to a lesser extent. Locus of control has also been examined as a personality factor which affects patient adjustment (for example, Cicirelli, 1987; Levenson, 1981; Wallston, Wallston, & Devillis, 1978).

Following is a review of the research studies which report on environmental constraint, choice or control, demographic and health characteristics. These factors are the variables, examined in this study, which were thought to predict hospitalized patient adjustment. In all but one of the studies, patient adjustment was assessed by health care providers; there is only one descriptive study which has measured adjustment from the patient perspective (Coser, 1962).

Environmental Constraint, Choice, or Control

Constraint or control by factors outside the individual may lead to the appraisal that a situation is stressful. Lazarus and Folkman's (1984) framework of stress and coping states an individual's perception that a situation is threatening is the first step in the process

of adjusting to that situation. Most people agree that the act of being hospitalized is, of itself, appraised as stressful by most individuals. This is generally acknowledged to be because hospitalization is perceived as very controlling or constraining (Cicirelli, 1987; Coser, 1962; Devins, Binik, Hollomby, & Barre, 1981; Gatchel & Baum, 1983; Reid, 1984; and Volcier, 1973).

Cicirelli (1987) measured constraint in patients over age 60 who were hospitalized for an acute or chronic condition. Constraint was assessed with a modified version of the Loss of Independence Subscale from Volcier's Hospital Stress Rating Scale (Volcier, 1973, Volcier, Isenberg & Burns, 1977). Cicirelli (1987) reported that the mean constraint score represented moderate levels of perceived constraint.

In this study, adjustment was measured by nurses responding on a five point scale to eight items about their patient. Further, in the relatively high constraint situation of the hospital, there were low but significant inverse correlations between constraint and patient adjustment ($r = -.24$).

The Loss of Independence Subscale from Volcier's Hospital Stress Rating Scale was developed by Volcier (1973) and refined after further psychometric testing by Volcier and Bohannon (1975) and Volcier, Isenberg & Burns (1977). This tool was developed to measure short term

stress in medical and surgical patients in a hospital setting. Volcier and colleagues (1973, 1975, 1977) found that events related to hospital personnel were ranked as most stressful by patients. The Loss of Independence Subscale contains some elements which may be characterized as measuring limitations on choice. However, this subscale is designed to measure overall stress of hospitalized patients (Volcier et al., 1973, 1975, 1977) and therefore does not assess environmental constraint or choice specifically.

In an early descriptive study, Coser (1962) paints a powerful verbal picture of the lack of control a patient has in the hospital, "The hospital is like a ship. ...it is a world unto itself. Illness has placed the patient into the hands of doctors and nurses who command his destiny and control the levers of life and death. And all are bound together within the hospital walls" (p. 3). Coser (1962) asked patients in an acute care hospital whether they had suggestions for improvement of patients' comfort. This question served as a measure to determine whether patients conformed to hospital rules because they felt forced to or because they perceived the rules as "good." Coser (1962) also inquired about feelings of deprivation while hospitalized. Some patients described lack of freedom and numerous rules and restrictions. Other patients reported missing people, activities, and

belongings. Only a few patients stated that they missed nothing in the hospital. These descriptions suggest the majority of hospitalized patients experience some sense of limited or relinquished control.

Among chronically ill hospitalized elderly patients in extended care settings, an inverse relationship has been reported between desire for control in general and adjustment as measured by nurses (Reid, 1984). On the other hand, when examined specifically in relationship to health control a significant positive direct relationship to patient adjustment was demonstrated (Reid, 1984). No relationship between health control beliefs and other (such as environmental) types of control beliefs were found by Reid (1984). Devins, Binik, Hollomby, Barre, & Guttman (1981) examined the control beliefs of patients with end stage renal disease and the relationship of these beliefs to depression. The investigators (Devins et al., 1981) found that patients who perceived a greater degree of control over the effects of their disease on their life activities rated themselves as less depressed than patients who perceived less control.

Health status itself is a factor which may have an impact on control in the elderly. A link between poor health and low perceived control has been observed in nursing home patients (Arling, Harkens, & Capitman, 1986; Pappas & White, 1982 in Teitelman & Priddy, 1988). Poor

health status has been correlated with a lower desire for control in the chronically ill institutionalized elderly (Reid & Ziegler in Lefcourt, 1981). The elderly hospital patient, who is usually in poor health, may also have low perceived control in the acute setting. This could further impact adjustment.

Patients' beliefs about how they should act in the hospital may constrain their behaviors. Further, if patients' beliefs conflict with how the hospital system expects patients to conduct themselves, then patients may be perceived as "bad" or not well adjusted. In a study of hospitalized surgical patients, Lorber (1975 & 1979) found that cooperativeness, compliance, and demanding the "appropriate" amount of attention earned a patient the "good patient" label by physicians and nurses. Most of the patients entered the hospital believing they should be obedient, cooperative, objective about their illness, and should demand attention only if they are very ill (Lorber, 1975 & 1979). The controlling or constraining environment of a hospital fits with the attitude that a "good" patient is passive.

Perception of choice and importance of choice impact individuals in a variety of ways. Hulicka and colleagues (1975) developed a tool called the Latitude of Choice (LOC) in which the combination of degree of choice and the importance of choice were measured. Thus, the LOC measures

acknowledge that the degree (or amount) of choice that one has over some activity or behavior may vary in importance to an individual. That is, one may have a great deal of choice over some activity but feel that choice is not important. On the other hand, one may feel little choice over an activity but feel that choice highly valued. In combining measures of degree and importance of choice the LOC attempts to reflect the relationship between these two dimensions of choice. In a study examining the validity of the LOC, Hulicka and colleagues (1975) found that young men in the military perceived a lower latitude of choice than similar non-military young men. The investigators (Hulicka et al., 1975) hypothesized that the military authoritarian structure contributed to the differences.

Since residents of retirement homes and patients in hospitals also have relatively high levels of organizational structure in their daily lives (see for example, Lorber, 1979; Taylor, 1979; Reid, 1984) their perceptions of latitude of choice are likely to be realistically lower than people in the community. This hypothesis was partially supported by an assessment of women residing in homes for the elderly who perceived themselves to have less latitude of choice than did elderly women in the community (Hulicka et al., 1975). The investigators also found a direct relationship between latitude of choice and self-concept and life satisfaction

in both groups of women (Hulicka et al., 1975). On the other hand, Morganti, Nehrke, and Hulicka (1980) found that mean LOC scores of male V.A. domiciliary residents correlated with life satisfaction but not with self concept.

In summary, degree of choice available in the environment appears to potentially affect life satisfaction, self-concept and adjustment in a variety of settings. The hospital setting commonly limits a patient's choice about activities which the person usually controls or decides (Taylor, 1979). In the relatively authoritarian hospital environment, choices are often made for the patient which s/he would normally make for him/herself. Thus it may be that adaptation to this setting can be affected by how a patient perceives his/her latitude of choice.

Health Characteristics

Number of Prior Hospital Admissions

According to Coser's (1962) descriptive study, patients who have greater numbers of hospitalizations are generally better adjusted. This is not surprising in light of George's (1980) description of the importance of past socialization experiences to role transitions. The more hospitalizations an individual experiences, the more opportunity s/he will have to learn the "rules" or accepted norms for patient behavior.

"Patients who have been more frequently exposed to the hospital atmosphere are more likely to be hospital-oriented and to find in the hospital structure the sources of gratification of their passive needs" (Coser, 1962, p. 124). An experienced patient talking to a new patient stated, "I was here when you weren't even born. This is my fifteenth admission. ...I know how it goes around here. They take good care of you" (Coser, 1962 p.80). Generally, the greater number of hospital admissions a patient experienced, the more passive orientation they held toward the doctor or hospital (Coser, 1962). The possible effects of age which would logically correlate with number of hospitalizations, was not addressed.

Researchers who examine adjustment or related concepts often exclude patients who have previously experienced the same medical diagnosis or surgical procedure under examination (for example, Boyd, Yeager, & McMillian, 1973; Cohen & Lazarus, 1973). Most research on patient adjustment has been with patients in long term care settings, where the number of prior hospitalizations or admissions is not addressed. Coser's (1962) descriptive study is the only one found in the literature which specifically relates number of prior hospitalizations to hospitalized patient adjustment.

Length of Time Since Last Hospital Admission

Not only the number of socialization experiences but also the timing of those experiences may be important in the adjustment to role transitions (George, 1980). Thus, the length of time since a person's last hospital admission may affect her/his adjustment to the patient role on current or subsequent admissions. Logic suggests two reasons for this. First, the more recent the prior socialization experience (e.g. prior hospitalization) the clearer the experience is in an individual's mind. Secondly, like all social institutions, hospitals change over time. Routines, procedures, rules and norms which characterize past hospital practice may be dramatically different now. In particular, in recent years hospitals frequently moved to improve patient services to attract the patient as a consumer (Moore & Lassiat, 1989; Simon & Cohen, 1989). Unfortunately, no previous studies were found which specifically address the potential relationship between length of time since last hospitalization and patient adjustment.

Medical Versus Surgical Admitting Diagnosis

Because numerous medical diagnoses exist, it is difficult to study the relationship among each possible diagnosis, patient adaptation, and latitude of choice. Medical diagnoses can vary on several dimensions, including seriousness of the illness, length of hospital stay, and

types, numbers and severity of procedures typical for patients with a given diagnosis.

Despite this complexity, it is important to identify the diagnosis in some manner. Researchers typically choose one or two diagnoses to study or divide subjects into the categories of medical and surgical or acute and chronic diagnoses. Two studies (Volcier & Bohannon, 1975; Cicirelli, 1987) found few differences between patients by diagnosis. Specifically, Volcier and Bohannon (1975) found no significant differences in the way medical and surgical patients ranked 45 events which may produce stress in hospitalized patients. In a study of locus of control and patient adjustment, Cicirelli (1987) found that among groups of patients with acute and chronic illnesses the Seriousness of Illness Rating Scale (Wyler, Masuda, & Holmes, 1968) had only a negligible effect on the outcome variable of adjustment. Cicirelli (1987) did not report specific diagnoses of patients, however, there were patients with both medical and surgical problems included in his study.

In contrast, several other studies reported differences in patients' adjustment by diagnosis. For example, Coser (1962) reported that fifty percent more patients on the medical ward believed a good patient would be submissive than did patients on a surgical ward. Similarly compared to surgical patients, medical ward

patients had fewer suggestions to make about improving patient care. These findings indicate that the medical patients were more passive than were the surgical patients (Coser, 1962).

Passivity has been identified as characteristic of the "good patient" role (Taylor, 1979). Although no distinction between medical and surgical patients was made, Tagliacozzo & Mauksch (1979) explored patients' views of patients' roles in a descriptive study of patients with cardio-vascular conditions and patients with gastro-intestinal disorders. Patients with the cardio-vascular disorders verbalized criticisms less frequently than other patients. Openly anxious and critical patients were more frequently within the gastro-intestinal diagnostic category (Tagliacozzo & Mauksch, 1979). This work indicates that patients may react to stress differently depending on diagnosis.

Similarly, in a descriptive work by Lorber (1975 & 1979) the seriousness of a surgical procedure and whether the patient was diagnosed with cancer as a result of the surgery, affected whether the patient exhibited primarily conforming or deviant behavior. The highest percentage of patients with conforming attitudes occurred among patients with cancer. The patients with very serious surgery but without cancer were among the more "deviant" patients (Lorber, 1975 & 1979).

In summary, medical diagnosis is an important factor in how patients are medically treated in the hospital. To date, however, no consistent relationship has been found between medical diagnoses and hospital patient adaptation or aspects of adaptation. Perhaps with more studies utilizing patients with a variety of illnesses, a clearer relationship between medical diagnosis and adaptation will emerge.

Patient Acuity Rating

No studies were found which relate patient acuity ratings on patient classification systems to hospitalized patient adaptation. Patient classification systems (PCS) were developed to measure the amount of nursing care required by each patient during a particular time interval (Barhyte & Glandon, 1988). Acuity ratings do not typically consider the patient's specific medical diagnosis or age. However, acuity ratings do contain measures which may logically reflect the patient's diagnosis or age. For example, elderly consume more medications than younger people (U.S. Department of Commerce, 1988). Certain medical treatments or diagnoses require more technical, physiological, psychological or educational support than others. These kinds of differences are indirectly considered in patient acuity ratings of PCS.

Characteristics which are linked to hospital adjustment have been described as: Cooperation with staff

(Cicirelli, 1987; Lorber, 1979; Strauss et al., 1982; Tagliacozzo & Mauksch, 1979); complications to recovery (Cicirelli, 1987); asking for the appropriate level of information or assistance (Tagliacozzo & Mauksch, 1979; Taylor, 1979). These characteristics are indirectly measured on patient acuity scales by such rating factors within eight categories including: Nourishment (feeds self; cut and assist with nourishment; total feed); Teaching/support (routine teaching and emotional support; special teaching/emotional support; disruptive behavior); Elimination (bathroom by self; assist to bathroom; incontinence every one to two hours). Logically, patient acuity ratings may affect patient-rated and nurse-rated patient adjustment scores. Because acuity scores measure the amount of work expended by a nurse to care for a given patient it is possible that the nurse or the patient may perceive that the amount of work is either too much or too little for this particular patient resulting in the patient believing or the nurse labeling the patient as a "good" or "bad" patient.

Demographic Characteristics

Studies of patient adaptation which examined demographic variables have yielded no clear relationships between such characteristics and adjustment to the patient role (Cicirelli, 1987; Coser, 1962; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979; Volcier, Isenberg, & Burns,

1977). Several demographic characteristics (age, gender, educational level, marital status, race) were assessed in the current study. Following is a review of previous literature relating each of the variables to adaptation and/or control.

Age

Coser's (1962) descriptive study of hospitalized patients clearly demonstrates differences in adaptive style by age. Of patients who were 60 years and older, 64 percent showed a passive orientation to the hospital while fewer patients under 60 were passive. In addition, 56 percent of those over 60 viewed a "good patient" as submissive while only 24 percent of patients between 20 and 60 viewed a "good patient" as passive (Coser, 1962). Despite the apparent age group differences, considerable variability existed within age groups. Coser (1962) found that among middle aged patients, both passive and more autonomous orientations to hospitalizations were identified. Similarly, Tagliacozzo & Mauksch (1979) interviewed patients between 40 and 60 years old and reported that these middle-aged subjects were not homogenous in terms of adaptation to the hospitalized patient role. Cicirelli (1987) agrees, stating that his study findings demonstrate a range of adaptive behavior in the elderly.

Thus a common stereotype of the elderly that they are rigid and unable to adapt to change (Kart, 1985), is not supported by the empirical evidence. Rather, the evidence may actually point toward the opposite view--that the elderly are very adaptable as they attempt to conform to the hospital's institutional demands (Coser, 1962; Tagliacozzo & Mauksch, 1979; Cicirelli, 1987).

The relationship of age and choice or control also is addressed in the literature. In one study, no relationship was found between age of patients and perceived control over their disease and overall adjustment for patients with rheumatoid arthritis between 20 and 65 years old (Affleck, Tennen, Pfeiffer, & Fifield, 1987). This lack of relationship may indicate that variability in perceived control exists in all age groups. In fact, variability in perceptions of control has been reported in studies of control with a variety of age groups (for example, Affleck et al., 1987; Cicirelli, 1987; Gergen & Gergen, 1986; Hulicka et al., 1975; Langer & Rodin, 1975).

Gergen and Gergen (1986) reported that in a group of elderly men and women, half of whom resided in a retirement facility, those who explained their actions in terms of their own desires or reasoning were more likely to remain active, less self-critical, and happier about their lives than those elderly who explained their actions in terms of their physical condition. In other words, perceptions of

control varied among the elderly and greater perceived control was associated with happier, more active elderly persons.

In an experimental study, Langer and Rodin (1976) examined the effects of choice and a sense of control on alertness, general well-being, and active participation among nursing home residents. The patients were all between 65 and 90 years of age. Half of the residents were given a talk by the home administrator about how the residents could and should be making a variety of daily activity decisions. The results indicate that the group of residents given a sense of control, via the talk, became more active, alert, and had a generally higher sense of well-being than the group given a dependency message. Age of subjects was not significantly different between the two groups. This indicates that the elderly experience a range of responses to perceived control.

In a discussion of learned helplessness, Teitelman and Priddy (1988) refute the common belief that elderly are less powerful or competent than younger patients, "any individual, regardless of age, exposed to uncontrollable circumstances will eventually learn that efforts to manipulate the environment are ineffective" (p. 299). In summary, it appears that considerable variability of perceptions of control exist among older persons and that environmental factors relate to this variability (Rodin,

1986). Therefore, this study examined age as a variable which is thought to be related to hospital adjustment and Latitude of Choice.

Gender

According to Cicirelli (1987), men and women are fairly similar in their adaptation to the hospitalized patient role. Descriptive research conducted by Lorber (1975 & 1979) also indicates that men and women show few differences in attitudes toward the hospitalized patient role. Further, gender was not associated with passiveness or submission in hospitalized patients (Coser, 1962).

These findings contrast with those of Tagliacozzo & Mauksch (1979) whose data indicated that women were more critical of nursing care and feared negative sanctions by nurses more than men. The women in this study also tended to be more concerned with efficiency and were more critical when a quick response was not forthcoming (Tagliacozzo & Mauksch, 1979).

While the findings of Tagliacozzo & Mauksch (1979) seem very different than findings of other studies regarding gender, this may primarily be a function of what was measured. Tagliacozzo & Mauksch (1979) interviewed subjects regarding their feelings of the hospitalized patient role. Patients may have felt free to express their actual feelings about hospitalization to the interviewer, while at the same time displaying behaviors which they

believed to be more acceptable in that setting. These actual behaviors may be very similar to those observed in other studies (for example, Cicirelli, 1987; Coser, 1962; Lorber 1975 & 1979).

The relationship of gender to choice or control has been assessed in a variety of studies. Affleck and colleagues (1987) reported no differences between males and females in control or predictability among patients with end stage renal disease. Hulicka et al. (1975) and Morganti et al. (1980) assessed women and men respectively for latitude of choice, but did not compare each gender to the other.

While several studies included both men and women, gender differences were not examined (Langer and Rodin 1976; Witenberg et al., 1983; Schulz, 1976; Schulz and Hanusa, 1978). Because of lack of examination of gender differences in these studies no conclusions regarding the relationship of gender to choice or control can be made. This study addressed the issue of gender related to both choice and adaptation to hospitalization.

Education

When younger patients are assessed for measures of choice or control, formal education is occasionally addressed (for example, Affleck et al., 1987; Hulicka et al., 1975), however, educational level is commonly not addressed in studies examining control or choice among the

elderly (for example, Gergen & Gergen, 1986; Langer & Rodin, 1976; Morgnati et al., 1980; Schulz, 1976). One study that did examine age was conducted by Lorber (1975 & 1979). She found that the interaction of age and education was related to attitudes toward the hospitalized patient role. "The younger and better educated the patient, the less likely he or she was to express very conforming attitudes. The highest percentage of patients with very conforming attitudes was found among elderly high school graduates. Very few of the less educated patients of any age expressed deviant attitudes. Among the college educated, those under 60 tended to express deviant attitudes, and those over 60 to be moderately conforming in their attitudes" (Lorber, 1979, p. 206).

In most studies, however, educational level is assessed but not related to the outcome variable. For example, while Boyd et al. (1973) indicate that educational level was assessed, they do not report findings related to that demographic characteristic. Other studies of hospitalized patient adjustment do not mention educational level as a variable (Cicirelli, 1987; Tagliacozzo & Mauksch, 1979; Coser, 1962).

Mean educational level of elderly women was assessed by Hulicka et al. (1975) but was not addressed when reporting the outcomes related to choice. Affleck et al. (1987) found a direct positive correlation between years of

formal education and global adjustment in men and women between 20 and 65 years old with end stage renal disease ($r = .31, p < .01$). However, no relationship between educational level and control over the disease was found. This study examined educational level of patients in order to determine possible effects on patient adjustment and Latitude of Choice.

Marital Status

Coser's (1962) descriptive work identified marital status as a factor affecting adjustment, with married patients less well adjusted than non-married patients. Lorber (1975 & 1979), Cicirelli (1987), and Witenberg et al. (1983) did not address marital status in their studies. Tagliacozzo and Mauksch (1979) interviewed only married subjects in their descriptive study of the patients' view of the hospitalized patients' role. Volcier and Bohannon (1975) reported no differences between married patients and all other patients' perceptions of what was very stressful or mildly stressful in the hospital setting. Because previous work has not addressed marital status or has reported no consistent relationships between marital status and patient adjustment or control, the current study examined the relationship of marital status to latitude of choice and patient adjustment.

Race

Race is a demographic characteristic which is rarely addressed in patient adaptation literature (for example, Cicirelli, 1987; Boyd et al., 1973). Tagliacozzo and Mauksch (1979) interviewed all Caucasian subjects to study patient perceptions of the hospital patient's role. Lorber (1975 & 1979) and Coser (1962) studies included patients who were Caucasian but were also described by ethnicity as primarily Jewish.

The lack of significant findings related to race in patient adaptation studies may be because the studies used homogenous groups composed mostly of White subjects. Studies which include a variety of racial and ethnic groups differences may yield differences between these groups. Adequate numbers of participants of races or ethnic groups other than White/Anglo were not obtained in this study sample. Therefore, this demographic characteristic was assessed, using the category in terms of White and non-White, for its relationship to both Latitude of Choice and patient adaptation.

Summary

The literature on the elderly and hospital adjustment is primarily descriptive in nature. A few controlled experimental studies exist which examine choice or control in the elderly nursing or retirement home resident. These studies indicate that choice or control can impact adjustment of the elderly. The literature also indicates that the perception of choice or control can have an impact on adjustment. The relationship of demographic characteristics such as age, gender, marital status, race, and educational level are often not reported or the findings of relationships to choice and adjustment are inconsistent. Likewise, health characteristics such as number of prior hospitalizations, length of time since last hospitalization, and medical versus surgical reason for admission, whether the patient has a diagnosis of cancer and acuity rating are often not reported. When such health characteristics are reported their association with hospital adaptation are inconsistent across studies. All previous studies (except Coser, 1962) have utilized nurse or physician ratings of hospital patient adjustment. In this study, nurses ratings were compared to patient ratings. Predictors of both ratings included demographic (age, gender, educational level, marital status, race) and health characteristics (medical versus surgical reason for admission, whether a diagnosis of cancer exists, number of

prior hospital admissions, length of time since last hospital admission, whether a patient was in ICU during the current admission, and acuity rating). For patients, latitude of choice also served as a predictor of patient adaptation.

The specific research questions for this study were:

1. How do the elderly perceive their adjustment to the role of hospital patient?
2. How do nurses perceive their patients' adjustment to the role of hospital patient?
3. Is there a significant difference between the patients' ratings of hospital adjustment and the nurses' ratings of the patients' adjustment?
4. How do patients perceive the level of constraint experienced in their hospitalization?
5. Do health and demographic characteristics predict patients' Latitude of Choice Scores?
6. Are patients' perceptions of their hospital adjustment predicted by latitude of choice, demographic and health characteristics?
7. Are nurses' perceptions of patient adjustment predicted by the patients' demographic and health characteristics?
8. Is there a difference in nurse-rated patient adjustment scores among nurses?

METHOD

This study investigated factors thought to influence adjustment of acutely ill elderly patients. Specifically, it examined how the elderly perceive their adjustment to the patient role, how nurses perceive the elderly's adjustment to the patient role and whether the adjustment ratings differ between nurse and patient. This study also examined elderly patients' perception of the level of constraint, as measured by The Latitude of Choice Scale, in the hospital setting. Lastly, this study examined whether patient perceptions of self-adjustment can be predicted by Latitude of Choice, demographic and health characteristics, or if nurses' ratings of patient adaptation can be predicted by patient health or demographic characteristics.

Subjects

Subjects were patients 65 years or older admitted on an inpatient status to an acute care medical or surgical bed (not intensive care for more than 24 hours, extended care, or geriatric care) of a large metropolitan hospital. The sample was drawn from the Oregon Health Sciences University, University Hospital.

The hospital nursing staff which cared for the patient during his/her stay was also asked to participate. The nursing staff was the patient's primary or associate nurse.

Procedure

Permission was obtained from administrators of the Oregon Health Sciences University Hospital to conduct this study. Permission and informed consent were obtained from patients, who met the study criteria, and from their nurses. The Human Subjects Committee of Oregon State University and of The Oregon Health Sciences University reviewed the study prior to data collection (Appendices A & B). One physician requested that all attending physicians who had patients entered into the study be notified of the patient's participation. A letter was drafted to comply with the request (Appendix C).

Subjects were randomly selected from patients who met the following criteria:

- a. Admitting medical diagnosis was acute medical or surgical. Patients who were in extended care or geriatric care were not included in the sample.
- b. 65 years or older.
- c. Could not have been a patient in an intensive care unit for more than 24 hours during the current admission.
- d. Judged to be mentally alert and oriented by the nurse.
- e. At the time of the interview, the primary or associate nurse judged the patient to be physically able to complete the data collection.

Sampling

Subjects were randomly selected using a random number table. All patients admitted to the hospital and who met

the study criteria, during the data collection period were considered potential participants. Subjects were selected from all patients who were in the hospital and who met the study criteria, on the first day of data collection. On subsequent days, the pool from which subjects were drawn included all patients admitted and who met the study criteria, since the last date. Samples were drawn so that no more than 25% of subjects drawn on any particular day had a diagnosis of cancer. Data was collected after the patient had been hospitalized at least 2 days. Data collection occurred so that all days of the week were used for interviewing.

The primary or associate nurse assigned to care for the patient on the day of data collection was approached by the researcher. The researcher asked the nurse to determine the patient's cognitive alertness and physical ability to answer questions. The researcher then requested the patient's nurse to inform the patient that the researcher would like to discuss the study and invite him/her to participate. If the patient was willing to talk with the researcher, the researcher then approached the patient, explained the study, and invited him/her to participate. Informed consent was obtained at this time (Appendix D). The patient was asked to respond to questions designed to measure the study variables. Participants were asked whether they preferred to complete

the revised Latitude of Choice Scale in a written or verbal manner. For participants who chose to complete the questionnaire in an interview format, one 5x7 card with possible responses to the Latitude of Choice tool written on it in large lettering was used as a visual cue to diminish the need to recall responses. The nurse was then asked to fill out a patient adjustment questionnaire after informed consent had been obtained (Appendix E). The questionnaire which the nurse completed had the patient's name in order to facilitate the nurse's completion of the instrument. Immediately after the nurse completed the questionnaire, the researcher blackened the patient's name with a marking pen and replaced it with the patient's identification code.

Independent Variables

The independent variables examined in this study are:

1. Demographic Characteristics
 - a. age in years
 - b. gender
 - c. educational level
 - d. marital status
 - e. race
2. Health Characteristics
 - a. medical versus surgical reason for admission
 - b. number of prior hospital admissions
 - c. length of time since last hospital admission
 - d. admitting medical diagnosis
 - e. whether admitted to an ICU during this hospital stay
 - f. patient acuity rating
3. Patient's Perception of Situational Constraint.

Measurement of Independent Variables

Demographic and Health Characteristics

Demographic and health characteristics were assessed with individual items on an interview tool (Appendix F). Reason for hospital admission, gender, and whether admitted to an ICU, and the hospital's patient acuity rating category (Appendix G) were obtained by the researcher from the participant's medical record. The other variables (number of prior hospital admissions, length of time since last admission, marital status, educational level, race, and age) were obtained from the participants in an interview with the researcher.

Situational Constraint

The Perceived Latitude of Choice Scale (LOC) was developed by Hulicka et al. (1975) to measure personal autonomy or freedom of choice in the elderly with respect to activities of daily living. Lack of freedom of choice can be perceived as situational constraint.

The LOC consists of 37 statements which pertain to the timing or selection of activities and selection of surroundings or associates. The items were rated by respondents for personal importance as well as the degree of personal choice available. Responses for importance

were scored as: unimportant = 1; somewhat important= 2; very important= 3. Responses for choice were scored as: no choice= -3; some choice= 2; free choice= 3. The scores were cross multiplied to derive the latitude of choice score. For each item, "the latitude of choice item score was high and positive (+9) for free choice on an important activity and low and negative (-9) for no choice for an important activity, with intermediate values for choice and importance combinations" (Hulicka et al., 1975, p.29). The original scale was administered to more than 100 non-hospitalized persons of various ages and socioeconomic status. Items were changed, added, or deleted based on this pretesting, to produce the 37 item scale (Appendix H) Total latitude of choice scores for the 37 item scale ranged from -333 to +333.

Test-retest reliability for importance, locus and range of activities was obtained by administering the scale to 36 undergraduate students and readministering it one week later. Hulicka et al. (1975) reported product moment correlations of 0.66 for importance, 0.78 for choice, and 0.84 for latitude of choice.

Initial validity was demonstrated in two ways by Hulicka et al. (1975). Divergent construct validity was demonstrated by administering the scale to 10 young men in the military and 20 men who were similar to the military group in educational level and age. The 20 men were either

students or employed. The military group of participants received significantly (p not reported) lower LOC scores than the non-military group. The scale was later administered to 25 institutionalized elderly women and 25 non-institutionalized elderly women. Hulicka et al. (1975) reported a mean latitude of choice score three times higher for the non-institutionalized than the institutionalized women ($p < 0.01$).

In the same study of elderly females Hulicka et al. (1975) found significant correlations of 0.62 between the LOC and a self-concept scale ($p < 0.01$) and between the LOC and a life satisfaction scale (Neugarten et al., 1961 in Hulicka et al., 1975) ($r = 0.42$, $p < 0.01$). These results indicate some degree of criterion related validity for the LOC scale and other measures commonly used in studies of the aged.

A subsequent study by Elias, Philips, & Wright (1980) to demonstrate validity of the LOC scale compared the LOC with Lawton's Philadelphia Geriatric Center Morale Scale. Seventeen women between 62 and 91 years old with a mean educational level of 9.4 years and who had lived at least one year in a nursing home were given the two scales. The results did not yield significant correlation of the two scales when measured as a whole. When the scales were broken down into their component parts, the perception of choice correlated with Factor I (agitation) and Factor II

(attitude toward own aging) on Lawton's scale ($r = +.475$ & $+.66$ respectively, $p < .05$). Elias and colleagues (1980) hypothesize that the low correlations of the two scales when measured as a whole and Lawton's morale scale were a result of a restriction of range of scores on the importance of choice ratings by the respondents. Almost all respondents rated most items as very important. The small sample size was also thought to be a contributing factor to the non-significant correlations.

Morganti, Nehrke, & Hulicka (1980) also demonstrated validity of the tool. Ninety-nine elderly males institutionalized in a V.A. domiciliary completed the LOC tool along with the same measures of self-concept and life-satisfaction used by Hulicka et al. (1975). The relationships between the three scales were somewhat lower for the men in the domiciliary than for the females studied by Hulicka et al. (1975). The LOC scale accounted for 30% of the variance in the self-concept scores and 31% of the variance in the life satisfaction scores of the male domiciliary residents.

A more recent use of the Latitude of Choice scale by Morganti, Nehrke, & Hulicka (in press) was undertaken to determine whether Latitude of Choice scores differ across living arrangements, gender, or age. Five hundred sixty-six elderly males and females age 60 years and older, who resided in four different environmental settings (health-

related institutional, adult foster care, dependent home setting, and independent home setting), completed the LOC scale along with a self-concept scale and life satisfaction scale used in prior research by Hulicka et al. (1975). Scoring of the LOC continued to use a nonlinear cross-multiplication of the importance and the choice components of the scale. However, negative numbers were eliminated and the total potential scores ranged from 40 to 360 for the 40 item scale. The relationships between the three scales were consistent with the previous findings of studies using LOC and these indices of psychological well being (Hulicka et al., 1975; Morganti et al., 1980). This further demonstration of tool validity found the LOC and the self concept scale were correlated as were LOC and the life satisfaction index ($r = +.331$ & $+.353$ respectively, $p < .01$).

The present study used a slightly modified version of the LOC (Appendix I). The scale content was revised to reflect events and activities that are typical in an acute care setting. Content validity was addressed by a group of experts judging the appropriateness of the changes. The experts examined the scale for clarity and for relevance to a hospitalized patient. Based on a pilot of the tool with a small number of hospitalized patients, participants were allowed to choose an interview method or written method of completing the tool. At the request of administration in

the hospital where data collection occurred, two items were deleted from the tool and the revised tool utilized for data collection contained 33 items (Appendix J). Internal consistency of the revised scale was assessed by use of Cronbach's alpha ($\alpha = .85$). The scale was scored as a whole, rather than by its two component parts. It was not anticipated that a limited range of scores on the importance of choice component would occur when utilizing an adequate sample size. Thus, total scores on the 33 item modified LOC could range from a potential low of 33 to a potential high of 279.

MEASUREMENT OF DEPENDENT VARIABLE

Patient adjustment has been conceptualized in a variety of ways (Cicirelli, 1987; Coser, 1962; Karuza et al., 1982; Lorber, 1979; Tagliacozzo & Mauksch, 1979; Taylor, 1979). Patient adjustment has been used as a dependent variable without attempts to define it (for example, Boyd et al., 1973). Adjustment is almost always referred to in a non-dichotomous manner. That is, a patient is "better adjusted" or "more poorly adjusted", or "moderately well adjusted".

The construct of patient adjustment was measured by an eight item scale developed by Cicirelli (1987) (Appendix K). The tool is based on the combined prior descriptions and measures of others (Taylor, 1979; Tagliacozzo & Mauksch, 1979; Gatchel & Baum, 1983). Using a 5-point

scale, nurses were asked to rate the patient relative to other patients with a similar condition on each of the eight items. Two nurses rated each patient and the scores were averaged by Cicirelli (1987) since interrater reliability scores were good. The eight items used by Cicirelli (1987) were: complications to recovery; morale; desire to get well; resistance to treatment; cooperativeness; complaints of pain; adherence to treatment; and being a "good patient." The eight items were derived from a factor analysis in a larger study measuring adaptation to hospitalization (Cicirelli, 1985 cited in Cicirelli, 1987) and were called hospital adjustment. Item numbers 2, 3, 5, and 8 were reverse scored (personal communication Cicirelli, 1989). A factor score was constructed for hospital adjustment ($\alpha = .90$). The average score of the eight item scale was used as an overall measure of patient hospital adjustment. The average score was also utilized as a measure of hospital adjustment in this study.

The present study utilized this tool to measure nurse's perceptions of patient adaptation to hospitalization. A slightly modified version was used for patients to rate their adjustment. Specifically, the questions have been reworded to the first person and the word "adhere" has been changed to "follow." After a pilot study with a small sample of patients, the phrase "Compared

to other patients with a similar condition" was changed to read "During this hospital stay". The words "complain of" were clarified to each patient as meaning "tell the staff about" (Appendix L).

Data Analysis

Coefficient alpha was utilized to evaluate the homogeneity of the instruments in this study. The more homogeneous, or internally consistent, the instrument's items are, the greater the instrument's reliability (Kerlinger, 1973; Chronbach, 1984; Polit & Hungler, 1978). The instruments were: a modified version of the Latitude of Choice scale; the nurse-rated patient adaptation scale; and a version of the adaptation scale modified for patients. The CRUNCH statistical package was used to analyze all data.

Data analysis was conducted to determine the relationship between the dependent variables (nurse-rated patient adjustment and patient-rated patient adjustment) and the following independent variables: Environmental control, as measured by the modified perceived Latitude of Choice Scale (Hulicka et al., 1975); Health characteristics (medical versus surgical reason for admission, whether or not a diagnosis of cancer was present, number of prior hospitalizations, length of time since the last hospitalization, whether admitted to an ICU during this

hospital stay, and acuity rating); Demographic characteristics (age, gender, educational level, marital status, and race).

Specifically each of the research questions were analyzed as follows:

Research Questions 1 and 2

How do the elderly perceive their adjustment to the role of hospital patient?

How do nurses perceive their patients' adjustment to the role of hospital patient?

These research questions were answered by utilizing descriptive statistics. Statistics included mean, median, standard deviation, frequency, range and percent.

Research Question 3

Is there a significant difference between the patients' ratings of hospital adjustment and the nurses' rating of the patients' adjustment?

This research question was answered using a paired t-test. The paired t-test assumes that the frequency of distribution of the population is approximately normal and that the paired differences are randomly selected (Sinich, 1985). The paired t-test tests for significant differences on measures of paired subjects (Polit & Hungler, 1978).

The t-statistic for paired measures is calculated mathematically by dividing the mean difference between the paired scores by the square root of the result of dividing

the sum of the squared deviation scores by the product of the number of pairs minus one and the number of pairs (Polit & Hungler, 1978). If the derived t-score is larger than a table t-score, a statistically significant difference between patient and nurse adjustment scores will be found.

Research Question 4

How do patients perceive the level of constraint of their hospitalization?

This question was also addressed by utilizing descriptive statistical techniques. Statistics included mean, median, standard deviation, frequency, range and percent.

Research Question 5

Do demographic and health characteristics predict patients' Latitude of Choice scores?

This research question was answered by multiple regression analysis. "Multiple regression analysis is a method for studying the effects and the magnitudes of the effects of more than one independent variable on one dependent variable..." (Kerlinger, 1973).

Although theoretically the number of variables which can be entered into a regression analysis is unlimited, practicality limits the number of independent variables which can be entered into a linear regression equation (Kerlinger, 1973). A set of independent variables needs to

be selected which will answer the study question. Selection is made by attempting to utilize those variables which will account for a large percentage of the variance in the dependent variable. The weights or regression coefficients of each independent variable are computed and reflect the contribution of each independent variable toward explaining the dependent variable (Fink & Kosecoff, 1978).

One common method of determining a "good" subset of independent variables predicting the dependent variable is the all-possible-regression selection procedure. Values of the independent variables can be entered into the computer. The computer then calculates combinations of independent variables. It is difficult to then evaluate all of the regression models fitted by the computer because large numbers of models are fitted with more than just three or four independent variables (Netter, Wasserman, & Kutner, 1983).

An alternate method of developing a "good" subset of variables is through the stepwise regression procedure in which an automatic search procedure sequentially develops the subset of independent variables to be included in the regression model (Netter et al., 1983). In this method, the computer develops a sequence of regression models, at each step adding or deleting an independent variable based on error sum of squares reduction (F-statistic) (Netter et

al., 1983). A third method of developing an appropriate subset of variables is by utilizing a hierarchical regression procedure. In this method the investigator enters a variable, or group of variables, based on a logical fit with the research design. The computer then performs a sequence of regression equations as each group of variables is entered. A combination of a hierarchical method and a stepwise method of regression was utilized to determine which of the independent variables in this study significantly predicted latitude of choice scores.

Research Question 6

Are patients' perceptions of their hospital adjustment predicted by latitude of choice, demographic and health characteristics?

This research question was addressed with a hierarchical multiple regression analysis procedure relating the independent variables (demographic characteristics, health characteristics and Latitude of Choice) to patients' perceptions of hospital adjustment.

Research Question 7

Are nurses' ratings of patient adjustment predicted by the patients' demographic and health characteristics?

This research question was also answered by the multiple regression analysis using the hierarchical procedure to predict nurse's perceptions of patient adjustment to hospitalization.

Research Question 8

Is there a difference in nurse-rated patient adjustment scores between nurses?

This question was answered using a random-effects analysis of variance (ANOVA). The random-effects ANOVA is also referred to as the intraclass correlation coefficient (Hays, 1973). This statistic tests whether observations in the same category are related or tend to be more alike than observations in different categories (Hays, 1973).

Mathematically, Hays (1973) describes the random-effects ANOVA as "...the ratio of the expected squared difference between two (or more) observations in the same class to that of two (or more) observations from different classes" (p.535). The random-effects ANOVA differs from the more common fixed-effects ANOVA in the hypotheses tested, the nature of the F test, and the inferences drawn from the test (Shavelson, 1988).

In the current study, each nurse constituted a "treatment" given to a different sample of patients. The random-effects ANOVA allows inferences from the study's "treatment" (nurse) effects to the effects found in the population (of nurses) (Shavelson, 1988). The manner in which the random-effects ANOVA is computed is the same as the fixed-effects ANOVA. But, the inferences drawn from the random-effects ANOVA are to the population and the

inferences from the fixed-effect ANOVA are to the study sample only (Shavelson, 1988).

In this particular study, the F statistic measures the proportion of variance in nurse-rated patient adjustment accounted for by the nurse doing the measuring. This determines whether each nurse rates his/her patients with a similar adjustment rating to any other nurse. The more similar the observations of each nurse, the larger the F value.

Restatement of Purpose

This study examined three groups of variables hypothesized to affect the elderly's adjustment to the role of hospitalized patient. The variables included: (1) demographic characteristics; (2) health characteristics; (3) the patient's perception of situational constraint. It also examined the variables from the patient's perspective and compared nurse-rated and patient-rated adjustment.

RESULTS

The names of 355 patients, who were at least 65 years old and admitted to a medical-surgical unit, were randomly selected from alphabetized lists of the daily hospital census between 3 January 1990 and 10 May 1990. Of the 355 randomized, potential participants, 88 (25%) were dropped because they did not meet all study criteria. That is, ten had been in ICU for longer than 24 hours; 42 were judged to have an altered mental status; 14 were judged to be too physically ill to participate; four had been a prior participant; and 18 were dropped for a variety of other reasons.

Of the 262 patients who met the study criteria, 52 were discharged before interview was possible and 39 refused participation. The final sample consisted of 176 patients who met selection criteria, were randomized into the study and who completed the study questions. Thus the response rate calculated on the number of patients who could have participated was 83%. The patients who refused to participate and those who were dropped from the study were similar in demographic characteristics to the study sample.

Description of the Sample

The sample was fairly equal in terms of gender, with males representing 52.3% and females representing 47.7% of

the 176 participants. The mean age of the sample was 73.2 years with a standard deviation of 6.43 years. Ages ranged from 65 to 98 years with a median age of 72. Sixty percent of the sample was between 65 and 74 years old.

Participants between 75 and 84 years of age represented 35% of the sample and those over 84 years old comprised 5% of the total sample.

Fifty three percent of the sample had been admitted for a surgical problem while 47% of participants had a medical reason for admission to the hospital. Of the patients in the sample, only ten percent had been admitted to an intensive care unit during this hospitalization. Twenty seven percent of all participants in the study had a medical diagnosis of some form of cancer. Specific admitting diagnoses of the participants were represented as follows:

Cardiovascular	22.5%
Ophthalmologic	16.2%
Musculoskeletal	12.1%
Respiratory	9.8%
Genitourinary	6.4%
Gastrointestinal	5.8%
Endocrine	4.1%
Neurological	3.5%
Renal	2.0%

Multiple Diagnoses	3.5%
All other	15.0%

The participants were admitted to a variety of adult units in the hospital as follows:

Cardiology/Medicine	22%
Oncology/Medicine	17%
Ophthalmology/Surgical Oncology	17%
General Surgery	15%
Neurology/Head & Neck Surgery	13%
Orthopedic/General Surgery	9%
Renal/Transplant Surgery	8%

The participants had between zero and 40 prior hospital admissions. Two participants had no prior admissions and two estimated that they had been a patient at least 40 times previously. Four was the modal number of previous inpatient admissions. The average number of admissions was 8.6 with a standard deviation of 7.1. The median number of prior hospital admissions was 7.

The range of time since the participants' last hospital admission ranged from less than one month to 120 months or more. Fifteen percent of participants reported that less than one month had elapsed since their last inpatient admission, while 22% reported at least 10 years had passed since their last admission. The average length of time since last hospital admission was 43.1 months with

a standard deviation of 48.9 months. The median number of months since last hospital admission was 14.

Participants were interviewed between two and 13 days from the time of admission. Seventy two percent of the interviews took place on the second or third hospital day. The mean number of days between admission and interview was 3.24. The median was 3.0. All days of the week were used for data collection.

White/Anglo was the race identity of 94% of participants. Most participants (55%) were married or cohabiting, while 30% were widowed, and 9% divorced. Three percent were single and 2% listed separated as their marital status.

The educational level of the participants ranged from 2 years to 23 years of formal education. The years of formal education of the participants are as follows: Eighth grade or less 16%; 9 - 11 years 14%; 12 years 32%; 13 - 16 years 28%; 17 or more years 11%. The average number of years of formal education was 12.2 with a standard deviation of 3.56 years. The median was 12 years of formal education. Twenty nine percent of participants had no degree, 44% had a high school diploma or GED. Of the 27% of participants who had more than a high school education, 11% had some college, 7% had a nonmedical college degree, 3% had a college degree in a medical field. One percent had some graduate level education, 4% of the

participants held a nonmedical graduate degree, and 1% held a graduate degree in a medical field.

Research Question 1

How do the elderly perceive their adjustment to the role of hospital patient?

This research question was answered by utilizing descriptive statistics. Patient adjustment scores ranged from a low of 3.0 to a high of 5.0 on a five-point scale (1 to 5). The mean patient adjustment score was 4.34 with a standard deviation of 0.37 and a median score of 4.38. The modified patient-rated adjustment tool was evaluated for internal consistency using Cronbach's alpha ($\alpha = .51$).

The mean patient-rated adjustment scores were also compared by individual demographic and health characteristics (Table 1). The White participants rated their adjustment with a mean score of 4.34 (S.D. = 0.38) while non-White participants' mean score was 4.41 (S.D. = 0.30). Females rated their adjustment similarly to males (4.36, S.D. = 0.38; 4.33, S.D. = 0.36, respectively). The married patient-rated adjustment mean score was 4.38 (S.D. = 0.36) while single participants' mean patient-rated adjustment score was 4.30 (S.D. = 0.39). The 169 participants with no post high school medical training mean patient adjustment score was 4.34 (S.D. = 0.38). The seven with some post high school medical training had an average

adjustment score of 4.46 (S.D. =0.22). The mean scores of patients who had been in an ICU for one day or less during this hospitalization was slightly higher than those who had not (4.41, S.D. = 0.38; 4.34, S.D. = 0.37, respectively). Surgical participants' patient adjustment scores were slightly higher than those of medical patients (4.36, S.D. = 0.36; 4.32, S.D. = 0.39, respectively). Those patients with a medical diagnosis of cancer had an average score of 4.36 (S.D. = 0.34) on the patient-rated hospital adjustment scale and those with no medical diagnosis of cancer had a mean score of 4.34 (S.D. = 0.38).

Table 1
Patient Perceptions of Adjustment

Variable	Mean Adj. Score	Variable	Mean Adj. Score
White	4.34	Nonwhite	4.41
Male	4.33	Female	4.36
Married	4.38	Single	4.30
Medical Training	4.46	No medical Training	4.34
ICU	4.41	No ICU	4.34
Surgical Dx	4.36	Medical Dx	4.32
Cancer	4.36	No cancer	4.34
Range	3.0-5.0		
Mean	4.34		
Median	4.38		

Research Question 2

How do nurses perceive their patients' adjustment to the role of hospital patient?

This question was also answered by means of descriptive statistics. The mean nurse-rated patient adjustment score was 4.24 (S.D. = 0.52). The range of nurse-rated adjustment scores was between 2.5 and 5.0 with a median adjustment score of 4.38. The nurse-rated patient adaptation scale, developed by Cicirelli (1987), was tested for internal consistency in the current study with Cronbach's alpha ($\alpha = .77$).

Mean scores of nurse-rated patient adjustment were also examined by demographic and health characteristics (Table 2). Nurses rated non-White participants with a mean score of 4.15 (S.D. = 0.59) and White participants with a mean score of 4.24 (S.D. = 0.51). Nurses rated male and female adjustment very closely (4.23, S.D. = 0.55; 4.24, S.D. = 0.48, respectively). Single participants had a mean score of 4.17 (S.D. = 0.53) on the nurse-rated patient adjustment scale. Married participants had a mean score of 4.29 (S.D. = 0.51). The seven participants who had post high school medical training had a mean score of 4.52 (S.D. = 0.28) while the 168 without medical training had a mean score of 4.22 (S.D. = 0.52). Only a small difference in mean scores of patients who had been in the ICU for one day or less and those who had not was found in nurse-rated

adjustment scores (4.23, S.D. = 0.40; 4.24, S.D. = 0.53, respectively). The mean nurse-rated patient adjustment score for patients with a medical reason for admission was 4.13 (S.D. = 0.55) while 4.32 (S.D. = 0.47) was the mean nurse-rated patient adjustment score for those with a surgical reason for admission. Nurse-rated mean adjustment scores for participants with a diagnosis of cancer was 4.23 (S.D. = 0.55) and 4.24 (S.D. = 0.51) for those with no diagnosis of cancer.

Twenty five nurses rated three or more participant patients' adjustment to hospitalization. Fifteen nurses rated three participant patients, six nurses rated four patients, two nurses rated five patients, one nurse each rated six and seven patients. The nurse-rated patient adjustment scores for the 25 nurses are summarized in Table 3. The range of the adjustment scores given by individual nurses was from .25 points to 1.625 on the 4 point scale; the mean range was .772 (s.d. = .378). This demonstrates that there was variability in how each nurse rated his/her patients.

Table 2
Nurse Perceptions of Patient Adjustment

<u>Patient Variable</u>	<u>Mean Adj. Score</u>	<u>Patient Variable</u>	<u>Mean Adj. Score</u>
White	4.24	Nonwhite	4.15
Male	4.23	Female	4.24
Married	4.29	Single	4.17
Medical Training	4.52	No medical Training	4.22
ICU	4.23	No ICU	4.24
Surgical Dx	4.32	Medical Dx	4.13
Cancer	4.23	No cancer	4.24
Range	2.5-5.0		
Mean	4.24		
Median	4.38		

Table 3

Nurse-rated Patient Adjustment Scores for Nurses with Three or More Participant Patients

Mean Patient Adjustment Scores								Score
Nurse	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Range
1	4.5	3.625	4.375	3.75	4.375	4.0	4.875	1.250
2	4.0	4.0	4.25	4.5	3.875	3.25		1.250
3	4.5	3.875	4.875	4.625	3.625			1.250
4	4.5	4.5	3.75	4.125	4.75			1.000
5	4.75	4.25	4.625	4.125				0.625
6	4.125	4.125	4.5	4.75				0.500
7	4.25	3.75	4.25	4.125				0.500
8	4.5	3.875	4.125	4.625				0.750
9	4.625	4.5	4.375	3.0				1.625
10	4.5	4.0	4.5	4.875				0.875
11	3.125	4.5	4.125					1.375
12	4.25	3.75	4.375					0.625
13	4.75	4.25	4.75					0.500
14	4.375	3.75	4.25					0.625
15	4.0	4.5	4.75					0.750

Table 3 continued

Mean Patient Adjustment Scores								Score
Nurse	Pt.1	Pt.2	Pt.3	Pt.4	Pt.5	Pt.6	Pt.7	Range
16	4.375	4.625	4.375					0.250
17	4.5	4.75	4.5					0.250
18	4.625	4.0	4.625					0.625
19	4.25	3.75	4.25					0.500
20	4.625	3.625	4.625					1.000
21	4.375	4.875	4.375					0.500
22	4.0	4.625	4.25					0.625
23	4.375	4.375	4.625					0.250
24	3.5	4.25	4.75					1.250
25	4.5	5.0	4.5					0.500

n = 25

mean patient adjustment score range = .772

standard deviation = .378

Research Question 3

Is there a significant difference between the patients' rating of hospital adjustment and the nurses' rating of patients' adjustment?

This research question was answered using a paired t-test. That is, the mean dependent variable scores (hospitalized patient adjustment) were compared by matching the patients' rating of themselves and the patients' nurses' ratings of the patients. The paired t-test determines equality of two paired means using a t-value. When the t-value is significant, it indicates that there is a difference in the paired mean scores.

A significant t-value ($t = 2.753$, $df = 173$, $p = 0.0065$) was found between the patient-rated mean patient hospital adjustment score and the nurse-rated mean patient hospital adjustment score (Table 4). The paired t-test showed that patients rated themselves significantly better adjusted to hospitalization than did their nurses. Both patients and nurses, however, rated patient adjustment positively. That is, the mean adjustment scores were greater than 4 on a 5 point scale.

Table 4

Means Standard Deviations, and Paired t-test Comparing Patients' and Nurses' Ratings of Hospitalized Patient Adjustment

Patient Adjustment Score	Means	S.D.	t-value
Patient-rated	4.341	0.373	2.753*
Nurse-rated	4.235	0.518	

n = 175 patient/nurse pairs

* p = 0.0065

Research Question 4

How do patients perceive the level of constraint experienced in their hospitalization?

For this research question constraint was measured by the 33 item Latitude of Choice (LOC) tool. Scores on the LOC ranged from a low of 60.0 to a high of 248.0 on a potential scale of 33 to 297. The mean LOC score was 127.49 with a standard deviation of 32.245 and a median score of 124.0. Internal consistency of the modified version of the Latitude of Choice Scale used in this study was evaluated by Cronbach's alpha ($\alpha = .85$).

In addition, mean scores on LOC were compared by demographic and health characteristics (Table 5). Non-White participants mean LOC score was 119.2 (S.D. = 33.1), while White participants mean score was 128.1 (S.D. = 32.1). Males' mean LOC score was 126.2 (S.D. = 33.3) and females' mean score LOC score was 126.9 (S.D. = 31.3). The mean LOC score for single participants was 122.9 (S.D. = 26.9) while married participants' average score was 131.2 (S.D. = 35.7). The 169 participants with no post high school medical training had a mean LOC score of 127.9 (S.D. = 32.1) while those with post high school medical training had a mean of 118.6 (S.D. = 36.2). The 17 participants who had been in an ICU, for less than one day during the current hospital stay, had an average LOC score of 129.1

(S.D. = 28.9). The other 159 participants had a mean LOC of 127.3 (S.D. = 32.7). Surgical patients scored slightly higher than medical patients on the LOC (130.7, S.D. = 34.4; 123.7, S.D. = 29.5, respectively). Those patients with a diagnosis of cancer had a mean LOC score higher than those without a diagnosis of cancer (132.6, S.D. = 38.1; 125.6, S.D. = 29.8, respectively).

Table 5
Patient Perception of Choice/Constraint

Variable	Mean LOC	Variable	Mean LOC
White	128.1	Nonwhite	119.2
Male	126.2	Female	126.9
Married	131.2	Single	122.9
Medical		No medical	
Training	118.6	Training	127.9
ICU	129.1	No ICU	127.3
Surgical Dx	130.7	Medical Dx	123.7
Cancer	132.6	No Cancer	125.6

Range 60-248 (33-297 Potential)
 Mean 127.49
 Median 124.0

Research Question 5

Do demographic and health characteristics predict patients' Latitude of Choice scores?

A series of multiple regression analyses was used to answer this question. A hierarchical entry method was used to enter the predictor variables by category. A stepwise procedure was used within each category, except category 1. That is, the independent variables were grouped into 5 categories which were entered into the equation sequentially. At the first step, the group of variables comprising Category 1 (age, gender, race) was entered in a forced manner. All three variables were treated as one. As each subsequent category was entered, the computer used a stepwise procedure to select whether or not an individual variable entered the equation and the entry order of each individual variable within the category. The categories were as follows:

- | | |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Category 1 | Age, gender, race
(white/nonwhite). |
| Category 2 | Marital status (married/single),
Years of education,
Medhlth (whether post- high
school education included medical
training). |

- Category 3 ICU (whether a patient in ICU during this hospitalization or not),
Admit (reason for current admission--medical or surgical),
Cancer (whether the patient had cancer or did not).
- Category 4 Prior (the number of previous hospitalizations),
Length (number of months since last hospitalization).
- Category 5 Acuity (a measure of the amount of nursing care required by the patient on a four point scale).

One variable category (age, gender, race) and three other variables (marital status, admit, length of time since last hospitalization) entered into the final equation. Altogether these accounted for eight percent of the total variance in Latitude of Choice (Table 6). The independent variable "length of time since last hospitalization", which accounted for two percent of the variance, was the only statistically significant predictor of LOC ($p = 0.04$). As length of time since last hospitalization increased, LOC scores decreased.

Table 6
 Hierarchical Regression for Latitude of Choice

Category	Variable Entry Sequence	B	Category R-Square	Category F	Category df	Category P-Value
1	Age, Gender, Race	-0.05122	0.0308	1.790	3	0.1497
2	Marital status	9.44890	0.0401	2.123	4	0.0795
3	Admit	7.19767	0.0569	2.014	5	0.0785
4	Length	-0.09240	0.0754	2.255	6	0.0402

n = 173

Research Question 6

Are patients' perceptions of their hospital adjustment predicted by Latitude of Choice, demographic, and health characteristics?

This research question was also answered with a combined hierarchical and stepwise multiple regression series. The independent variables were grouped into the same five categories used in question 5. In addition, Latitude of Choice was an independent variable, forming its own category. These six categories were examined in relationship to patient adjustment scores. Patient acuity ratings ranged from 1 to 3 on a 4-point scale. The mean and median score was 2.0 with a standard deviation of 0.57.

The independent variable Admit (reason for current admission) was removed by the computer from the regression equation after step four. One category (age, gender, race) and three variables (Marital status, Length of time since last hospitalization, Acuity) entered the regression model. Altogether these variables accounted for 10% of the total variance in patient-rated adjustment scores (Table 7). The independent variable acuity was a statistically significant predictor of patient-rated adjustment scores ($p = 0.0054$). As the acuity increased (the patient required more nursing

care) patient-rated adjustment scores decreased. Latitude of choice scores did not enter into the regression equation indicating that LOC did not predict patient adjustment.

Table 7
 Hierarchical Regression for Patient-rated Adjustment Scores

Category	Variable Entry Sequence	B	Category R-square	Category F	Category df	Category P-value
1	Age	-0.00132				
	Gender	-0.09842				
	Race	-0.13223	0.0094	0.537	3	0.6608
2	Marital status	0.10057	0.0309	1.340	4	0.2555
3	Length	0.00145	0.0695	2.068	5	0.0592
4	Acuity	-0.12762	0.1034	3.190	6	0.0054

n = 173

Research Question 7

Are nurses' perceptions of patient adjustment predicted by the patients' demographic and health characteristics?

This question was also answered by a combined hierarchical and stepwise multiple regression method. Analysis done on the dependent variable, nurse-rated adjustment was used to answer this study question. The five independent variable categories used in the previous research question (five) were used to answer this question. Latitude of Choice was not used. The variable "marital status" was removed by the computer after the independent variable "acuity" was entered. Removal of this variables did not allow further predictor variables to enter the equation.

Altogether the five categories (age, gender, race, Health training, Admit, Prior number of hospital admissions, Acuity) in the regression model accounted for 12% of the total variance in nurse-rated patient adjustment scores (Table 8). The independent variables "prior number of hospitalizations" and "acuity" were statistically significant predictors of nurse-rated patient adjustment scores ($p = 0.0494, 0.0053$, respectively). The greater the number of prior hospitalizations of the patient the lower the current hospital adjustment rating by the nurse.

Acuity ratings of patients were also negatively related to nurse-rated adjustment. That is, as acuity increased and the patient required more nursing care, the nurse-rated patient adjustment scores decreased.

Table 8
 Hierarchical Regression for Nurse-rated Patient Adjustment Scores

Variable Category	Entry Sequence	Category B	Category R-square	Category F	Category df	Category P-value
1	Age	-0.00497				
	Gender	-0.06162				
	Race	-0.01826	0.0051	0.287	3	0.8360
2	Health training	0.37362	0.03334	1.147	5	0.3348
3	Reason for current admission	0.21542	0.0664	1.955	6	0.0744
4	Prior	-0.01320	0.0811	2.067	7	0.0494
5	Acuity	-0.19658	0.1230	2.857	8	0.0053

n = 172

Research Question 8

Is there a difference in nurse-rated patient adjustment scores between nurses?

This research question was answered by use of a random-effects Analysis of Variance. That is, the dependent variables (nurse-rated patient adjustment scores) were examined by nurse. Only adjustment scores of nurses with three or more participant patients were tested. The random-effects ANOVA tests equality of means, using an F value. When the F value is significant, the means are different. This lack of difference between means would indicate that nurses tend to rate patients' level of adjustment similarly. A significant F was not found by nurse (Table 9) indicating no differences between nurses on how they rated their patients. Thus the patient adjustment scores are reliable to the degree that nurses rate patients similarly using this instrument. Mean scores and standard deviations of adjustment scores by nurses with three or more participant patients are shown in Table 10.

Table 9

Random-Effects ANOVA for Nurse-rated Patient Adjustment Scores

Effects of Nurse

Source	df	SS	MSS	F	P
Nurse	24	0.7165			
Patients per Nurse	4	0.1080	0.0270	0.887	0.4932

n = 25 (nurses with 3 or more patients)

Table 10

Mean Nurse-rated Patient Adjustment Scores for Nurses with Three or More Participant Patients

Number of Patients	Number of Nurses	Mean Adjustment Score	S.D.
3	15	4.3861	0.1721
4	6	4.3177	0.1910
5	2	4.3750	0.1061
6	1	4.1000	
7	1	4.2143	

n = 25

DISCUSSION

This study utilized a random sample of 176 hospitalized elderly patients and the patients' registered nurses to examine the relationships among demographic and health characteristics, latitude of choice and elderly hospitalized patient adjustment. The study used an adaptation of the Latitude of Choice scale developed by Hulicka and colleagues, a nurse-rated hospitalized patient adjustment scale developed by Cicirelli, and an adaptation of the adjustment scale for patients' self-assessment. A discussion of the results, recommendations for future research and implications for practice are presented.

Characteristics Related to Environmental Control in Hospitalized Elderly

Demographic characteristics and health characteristics were investigated in relationship to the amount of environmental control perceived by elderly hospitalized patients. The specific variables examined were: Demographic characteristics (age, gender, race, marital status, educational level, whether post high school education included any medical training); Health characteristics (medical versus surgical reason for

admission, whether or not a diagnosis of cancer was present, whether admitted to an ICU during this hospital stay, number of prior hospitalizations, length of time since last hospitalization, and acuity rating).

Results indicate that, taken as a group, neither demographic nor health characteristics predict environmental control as measured by Latitude of Choice (LOC). However, one individual health characteristic variable was a predictor of LOC. Length of time since last hospitalization negatively predicted LOC. Although a relatively small percentage (2%) of the variance was accounted for by this variable, this finding has theoretical support. Specifically, this finding was consistent with George's (1980) explanation of socialization to role transitions. George (1980) states that the timing of similar role experiences may affect the adjustment to role transitions that an individual experiences at a later time in life. In other words, rehearsal for a role with very similar circumstances or experiencing a role temporarily will better prepare a person for a future role transition especially if the rehearsal is close in time to the actual event. In this case, the longer ago the last hospital admission, the more difficult adjustment may be for an individual.

The average length of time since last hospitalization in this study was 43.1 months, or just over three and a

half years. Many technological and administrative changes in hospitals have occurred in the past few years (Moore & Lassiat, 1989; Simon & Cohn, 1989). Patients who have not been hospitalized recently may not be aware of these changes. This could promote a lack of socialization experience to the typical, current hospitalized patient role. The potential result is a patient who perceives less control over the environment because s/he is basing control expectations on outdated socialization experiences.

Characteristics Related to Patients' and Nurses'
Perceptions of Hospital Adjustment

Patient-rated and nurse-rated hospital adjustment scores were examined in relationship to demographic characteristics (age, gender, race, marital status, educational level, whether post high school education included medical training), and health characteristics (number of prior hospitalizations, length of time since last hospitalization, whether a patient in ICU during the current admission, medical or surgical reason for admission, whether a diagnosis of cancer exists). Latitude of Choice (as a measure of environmental constraint) was also examined as a predictor variable of patient-rated adjustment. As a group none of the variable categories yielded a significant relationship. This study did find

the individual variable, "acuity", within the category health characteristics to negatively predict both nurse-rated and patient-rated adjustment scores. The total amount of variance explained by acuity rating in patient-rated adjustment was three percent and in nurse-rated adjustment it was four percent.

This finding is consistent with those obtained by several researchers on a variety of variables which contribute to a patient's acuity rating. Coser (1962) found that medical patients were more passive than surgical patients. Passiveness has been identified as a characteristic which is typical of the "good" or well adjusted patient (Taylor, 1979). Surgical patients often require more nursing care time because they typically have more technical equipment, such as IVs, drains, tubes, and treatments than do medical patients. They may also be in greater pain and have limited mobility. Both pain and diminished mobility would require greater nursing support. A greater volume of technical equipment and wound care requirements would increase a patient's acuity rating.

Although age itself was not found to relate to patient adaptation in this or other studies (Cicirelli, 1987; Tagliacozzo & Mauksch, 1979; Coser, 1962), age may be related to acuity level. That is, the elderly, as a whole, consume more medications than younger people and since the number of medications a patient takes is part of the acuity

rating, older patients may have a higher acuity rating. Elderly patients may also have more limitations in mobility and have multiple diagnoses which increased the complexity of nursing care.

Patients frequently comment that they do not want to "bother" the staff and that the nurses "work so hard". These statements by patients may reflect the findings of this study. That is, the more time it takes for a nurse to care for a patient (the higher the acuity rating), the less adjusted the patient and nurse perceive the patient to be. The characteristics of a "good" patient described by others (Coser, 1962; Gatchel & Baum, 1983; Lorber, 1975 & 1979; Tagliacozzo & Mauksch, 1979; Karuza et al., 1982; Lorber, 1979; Strauss et al., 1982; Cicirelli, 1987; and Parsons, 1951) maybe describing low acuity levels or less nursing time. That is, patients with lower acuity ratings may be perceived by themselves and their nurses as "good" patients or better adjusted.

An additional significant negative predictor for nurse-rated adjustment scores was the individual variable "prior number of hospitalizations". The total variance on nurse-rated patient adjustment explained by "prior number of hospitalizations" was small (1%). This finding is in contrast to George's (1980) explanation of socialization to role transitions. George (1980) states that rehearsal for a role may positively affect role transition. In other

words, the more frequently a person experiences a role or circumstances similar to a role the more likely s/he is to be successful in that role. Since "numbers of prior hospitalizations" has not previously been studied in relationship to patient adjustment, no other empirical data exist to support or contradict the current finding or George's theory when applied to patient hospital adjustment.

One possible explanation for this finding may be that nurses who take care of a particular patient during several admissions may perceive that the patient is not compliant with the medical regimen at home. Thus, the patient lacks some of the dimensions of hospital adjustment. Specifically, those dimensions are cooperation with staff (Cicirelli, 1987; Lorber, 1979; Strauss et al., 1982; Tagliacozzo & Mauksch, 1979) and motivation or desire to get well (Cicirelli, 1987; Parsons, 1951). Data was not collected on the hospital/s in which patients prior admissions occurred or whether the current hospitalization was for a medical problem related to the ones of past admissions.

Nurses rated patients as significantly less well adjusted than patients rated themselves ($p = 0.0065$). The mean adjustment score rated by the nurses was 4.235 while the patients' mean adjustment score was 4.341. While this is statistically significant, caution must be used when

interpreting this result in a clinical setting. The patient adjustment scales were five-point scales using whole numbers. The difference in the two overall means was much less than one. This indicates that clinically both nurses and patients perceived patients to be well adjusted to their current hospital stay.

One non-significant finding is also clinically important. The nurses who had three or more participant patients tended to rate patient adjustment the same. That is, the mean nurse-rated patient adjustment scores between the nurses did not vary. This indicates that any given nurse scores patient adjustment in a similar manner to any other particular nurse.

Two descriptive trends are also clinically important. Nurse-rated adjustment scores of patients with a surgical reason for admission were somewhat higher than for those patients with a medical reason for admission. This finding is in contrast with those of Coser (1962) who found patients on a medical ward more submissive. Coser (1962) attributed the difference in submissiveness to the patient.

An additional explanation of this finding may be related to the characteristics of the nurses. That is, nurses who care for surgical patients may be different from nurses who care for medical patients. This difference may be reflected, at least in part, by how the nurses rate patient adjustment to hospitalization.

The second descriptive trend of clinical importance is the variability of the nurse-rated patient adjustment scores in those nurses with three or more participant patients. The adjustment scores for each nurse ranged from .25 to 1.625 on the 4 point scale (1 - 5); all scores were above 3.00 and the highest score was 4.625. These scores indicate that while the nurses view their patients as generally average to well adjusted they do not stereotype all their patients as having the same level of adjustment to hospitalization. That is, a particular nurse does not rate all his/her patients as "poorly" adjusted or "highly" adjusted. Rather, s/he perceives individual patient differences in the level of adjustment to hospitalization.

Limitations of the Present Study

Two strengths of this study are its use of a random sample and its high response rate. Nevertheless, caution should be used in interpretation of the results. Generalization to the general population of elderly patients hospitalized in private, non-teaching hospitals or in other parts of the country or world must be done carefully.

Because of the low number of non-White participants, the findings of this study can not be said to reflect adjustment or LOC findings in a non-White sample. Further, hospital populations may differ from those in the current study. Patient classification systems in almost every hospital contain slightly different categories for ratings and different weights within categories. Therefore, acuity ratings in the hospital used for this study may vary from those used in other hospitals. Also, sample criteria did not include patients with mental status alterations, who were too ill to participate, or who spent more than 24 hours in an intensive care unit. Therefore, results from this study cannot be generalized to these patients.

Any findings which used the patient-rated adjustment scale must be very cautiously interpreted because of the low coefficient alpha of the tool ($\alpha = .51$). The total amount of variance accounted for by the variables under

study was small. This indicates that factors other than those studied account for results of both nurse-rated and patient-rated hospital adjustment scores as well as for LOC scores. Lastly, cause and effect relationships are not represented by this cross-sectional study.

Recommendations For Future Research

Several suggestions can be made for improving the measurement of the variables in this study. First, the adaptation of Cicirelli's (1987) patient adjustment scale for use by patients needs to be reworded. In the last question of the adapted tool "complains of" should be changed to "tells the staff about". Even though the investigator verbally explained the medical usage of the term, patients may have thought of the word "complains" in a negative sense and ratings may have been affected. Further psychometric testing of the patient-rated adjustment scale is needed.

Although a pilot of Hulicka et al.'s (1975) revised LOC scale was conducted with a small sample, this was the first time it has been used in an acutely ill population. The reliability of the tool was fairly high ($\alpha = .85$) but testing of the tool should occur with other acutely ill patient populations. Several patients commented that the tool was too long and many patients commented that some of the questions seemed the same. Because the questions about food and meals are similar and patients often responded almost exactly the same to each of them, it may be possible to combine the five questions into one or two. Perhaps the time required of each ill patient could be reduced without affecting the reliability of the revised tool.

Acuity was entered as a single variable into the regression equation in this study. Since patient classification systems vary widely between hospitals, and because acuity ratings did contribute to some of the variance in adjustment scores, future studies may want to examine the individual category variables that make up acuity scores. This would allow assessment of the predictive ability of each acuity category in relation to patient adjustment. In addition, the sampling procedure used in the current study eliminated the patients with the highest acuity ratings. Patient adjustment scores by both nurses and patients may be different among patients with higher acuity ratings. Future work may choose to examine adjustment among patients with higher acuity ratings.

The patient-rated and nurse-rated adjustment scores were statistically different but were judged not to be clinically different. Future studies should examine the similarity of patient versus nurse ratings of patient adjustment among other populations. If it appears there are few differences in patient and nurse ratings of adjustment, then, future studies may choose to use only nurse-rated patient adjustment scores. This would save acutely ill patients' energy and prevent unnecessarily tiring them. Further, the relatively high ($\alpha = .77$) nurse-rated patient adjustment coefficient alpha compared

to the patient-rated adjustment score ($\alpha = .51$) argues for using the nurse-rated patient adjustment instrument rather than the patient-rated adjustment score.

Implications for Clinical Practice

Application of findings generated by this study must be made cautiously. Because such a small amount of variance was accounted for by the variables examined in this study, application to the clinical setting is premature. The finding that both nurses and patients perceive acutely ill elderly patients as well adjusted to hospitalization is applicable to the clinical arena. The perception of "good" adjustment to hospitalization most likely facilitates routinization of the staff's work. However, no assumption can be made concerning the impact of being "well adjusted" on recovery rates, emotional or physical well-being.

Summary

This study examined the relationship between Latitude of Choice, demographic and health characteristics and elderly patient adjustment to hospitalization. Results indicated that nurse-rated adjustment scores were significantly lower than patient-rated adjustment scores. The finding was judged to be clinically unimportant because the magnitude of the difference in mean patient versus nurse ratings was only two tenths of a point on a one to five point scale.

Patient acuity rating was a significant, negative predictor of both patient-rated and nurse-rated adjustment among hospitalized patients. That is, the more nursing care a patient required, the lower both the patient and the nurse rated the patient's adjustment to the hospital role. The magnitude of this relationship was small although this may have been influenced by the sampling criteria which eliminated patients in the highest acuity category. Additionally, the number of prior hospitalizations was a significant negative predictor of nurse-rated patient adjustment. That is, patients with more prior hospital admissions were rated as less well adjusted to the current hospitalization by their nurses.

Based upon this study, it is concluded that the elderly's adjustment to the role of hospitalized patient is accounted for in large part by factors other than those

examined in this study. Although latitude of choice was one of the variables examined it did not explain any of the variance predictive of elderly patient adjustment to hospitalization.

Beyond this study, it is hypothesized that people entering the hospital either expect to have no environmental control and therefore become passive or that people willingly transfer that control to those people they believe will best serve their interest. That is, patients generally have little knowledge of the medical field and willingly trust their well-being to the hospital staff. The patient believes the staff has a large degree of medical knowledge and will make better decisions about the patient's medical care than the patient can. It is expected that in the future, if a consumerism attitude on the part of patients becomes more universal, expectations about environmental control may change. Either the patients will demand more control or hospital staff will encourage patients to take more environmental control.

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APPENDICES

Appendix A
Human Subjects OSU



OREGON
HEALTH SCIENCES UNIVERSITY

3181 S.W. Sam Jackson Park Road, L106, Portland, Oregon 97201-3098 (503) 279-7784/7887

Research Services

DATE: March 28, 1990

TO: Rebecca Boehne
Redacted

FROM: Nancy White, Admin. Asst. for privacy
Committee on Human Research

SUBJECT: Project Title: Relationships Among Personal and Demographic Characteristics, Latitude of Choice, and Elderly Hospitalized Patient Adjustment.

The above-entitled study falls under category 3 and is considered to be exempt from review by the Committee on Human Research.

This study has been put into our exempt files, and you will receive no further communication from the Committee concerning this study. If possible, please notify the Committee when this project has been completed. If the involvement of human subjects in this study changes, you should contact the Committee on Human Research to find out whether or not these changes should be reviewed.

If you have further questions regarding the status of this study, please call Nancy White at ext. 7887.

Schools:
Schools of Dentistry, Medicine, Nursing

Clinical Facilities:
University Hospital
Doernbecher Children's Hospital
Child Development and Rehabilitation Center
University Clinics

Special Research Divisions:
Vollum Institute for
Advanced Biomedical Research
Center for Occupational
Disease Research

Appendix B
Human Subjects OHSU

Vice President for
Research, Graduate Studies,
and International Programs



Administrative Services A312
Corvallis, OR 97331-2140

Telex: 5105960682 OSU.COVS
FAX: (503) 754-2400
(503) 754-3437

December 12, 1989

Principal Investigator:

It has been determined that the following project is exempt from review by Oregon State University's Committee for the Protection of Human Subjects under guidelines from the U.S. Department of Health and Human Services:

Principal Investigator: Clara C. Pratt

Student's Name (if any): Rebecca E. Boehne

Department: HDFS

Source of Funding: _____

Project Title: Relationships Among Personal and Demographic Characteristics, Latitude of Choice, and Elderly Hospitalized Patient Adjustment

Comments: _____

A copy of this information will be provided to the Chair of the Committee for the Protection of Human Subjects. If questions arise, you may be contacted further.

Redacted for privacy

Mary E. Perkins
Research Development Officer

cc: CPHS Chair
7-27

Appendix C
Letter to Attending Physicians

Dear

Some of the patients for whom you are the attending physician may be participating in my research project. The study is part of the requirements for the Ph.D degree at Oregon State University and is entitled "Relationships Among Personal and Demographic Characteristics, Latitude of Choice and Elderly Hospitalized Patient Adjustment."

This noninterventional, survey research should have a minimal impact on the patients who elect to participate. The patient's involvement will consist of answering a few demographic questions and responding to questionnaires designed to measure their perception of choice and adjustment to hospitalization. It takes no more than twenty five minutes to complete all of the questions. The patient's primary or associate nurse is also asked to measure the patient's adjustment to hospitalization.

The research has been reviewed and been found to be "category 3 exempt" by the Human Subjects Committee at both Oregon State University and the Oregon Health Sciences University. If you desire further information, I can be contacted at 227-6089 (eves.).

Sincerely,

Rebecca E. Boehne, M.S.N., R.N.

Appendix D
Patient Consent Form

Oregon Health Sciences University

Patient Consent Form

TITLE: I, _____, agree to participate in a study entitled "Relationships Among Personal and Demographic Characteristics, Latitude of Choice, and Elderly Hospitalized Patient Adjustment."

PRINCIPAL INVESTIGATOR: The study will be conducted by Rebecca E. Boehne, M.S.N., R.N., A doctoral candidate at Oregon State University, working under the direction of her faculty advisor Clara C. Pratt, Ph.D.

PURPOSE: The purpose of this research is to determine the effect of patient characteristics and choice on hospital adjustment among older patients.

PROCEDURES: I will be asked to answer several questions about myself regarding marital status, prior hospitalizations, education, military service and my race. These questions will take about five (5) minutes to complete. I will also be asked to complete one eight (8) item written questionnaire and one thirty five (35) item written questionnaire about my current hospital stay. The written questions will take about twenty (20) minutes to complete. Ms. Boehne will offer to read the written questionnaires to me and I may complete them in a verbal manner, if I desire. The written and verbal questions will be completed after I have been in the hospital a few days. Ms. Boehne will obtain, from my medical record, information

about my age, gender, and medical condition. My nurse will also be asked to complete a questionnaire like the eight (8) item written one I complete.

RISKS, DISCOMFORTS AND COSTS: The only expected risks are that I may feel some embarrassment that personal information is being obtained about me and that I may experience some slight fatigue or inconvenience when completing the questions. There are no financial costs to me from participating in this study.

LIABILITY: The Oregon Health Sciences University, as an agency of the State, is covered by the State Liability Fund. If I suffer any injury from the research project, compensation would be available to me only if I establish that the injury occurred through the fault of the University, its officers or employees. If I have further questions, I may call Dr. Michael Baird at (503) 279-8014.

CONFIDENTIALITY: All information obtained in connection with this study will be handled confidentially and will be reported anonymously in a verbal and written report. Reports of the study may also be published for scientific purposes. Neither my name nor my identity will be used for publication or publicity purposes. My name will not remain on the questionnaires, and my records will be identified only by a code number. At the conclusion of the study, all questionnaires will be destroyed.

BENEFITS: There will be no direct benefits to me from my participation in this study, but the information obtained may be used to help plan more effective care for future hospital patients.

OTHER: I may refuse to participate or withdraw from this study at any time, without affecting my relationship with or treatment at the Oregon Health Sciences University.

I acknowledge that all of my questions have been answered satisfactorily. If I have any other questions I may contact Ms. Boehne at 227-6089.

A copy of this consent has been provided to me. I have read or heard the preceding information and my signature indicates that I agree to participate in this study.

Participant's signature _____ date_____

Witness' signature _____ date_____

I have explained and defined in detail the study procedure in which the subject has consented to participate.

Investigator's signature _____ date_____

Appendix E
Nurse Consent Form

Oregon Health Sciences University

Nurse Consent Form

TITLE: I, _____, agree to participate in the study entitled "Relationships Among Personal and Demographic Characteristics, Latitude of Choice and Elderly Hospitalized Patient Adjustment."

PRINCIPAL INVESTIGATOR: This study will be conducted by Rebecca E. Boehne, M.S.N., R.N., a doctoral candidate at Oregon State University, working under the direction of her faculty advisor Clara C. Pratt, Ph.D.

PURPOSE AND PROCEDURES: The purpose of this research study is to determine the effect of selected patient characteristics and latitude of choice on patient-rated and nurse-rated hospital adjustment in the elderly. I will be asked to complete an eight (8) item pencil and paper questionnaire about the adjustment to hospitalization of one or more of my primary or associate patients during the course of the study. The questionnaire will take approximately five (5) minutes to complete. The questionnaire will be completed after my primary or associate patient has been hospitalized several days. I may be asked to complete the eight (8) item questionnaire on more than one patient during the course of the study.

RISKS AND DISCOMFORTS: The only expected risk is that the time needed to complete the questionnaire may inconvenience me. There is no financial cost to me.

LAIBILITY: The Oregon Health Sciences University, as an agency of the State, is covered by the State Liability Fund. If I suffer any injury from the research project, compensation would be available to me only if I establish that the injury occurred through the fault of the University, its officers or employees. If I have further questions, I may call Dr. Michael Baird at (503) 279-8014.

CONFIDENTIALITY: All information obtained in connection with this study will be handled confidentially and will be reported anonymously in written and oral reports of the study. Reports of the study may also be published for scientific purposes. Neither my name nor my identity will be used for publication or publicity purposes. My name will not be placed on the questionnaire, and my record will be identified only by a code number. At the conclusion of the study, the questionnaires will be destroyed.

BENEFITS: There will be no direct benefits to me from my participation in this study, but the information obtained may be used to help plan more effective care for future hospital patients.

OTHER: My participation in this study is voluntary. I may refuse to participate, or withdraw from this study at any time without affecting my relationship with the Oregon Health Sciences University. I acknowledge that all of my questions have been answered satisfactorily. If I have any other questions I may contact Ms. Boehne at 227-6089.

A copy of this consent has been provided to me. My signature below indicates I that I have read the foregoing information and agree to participate in this study.

Participant's Signature _____ Date_____

Witness' Signature _____ Date_____

I have explained and defined in detail the study procedure in which the nurse has consented to participate.

Investigator's Signature _____ Date_____

Appendix F
Data Collection Tool

Data Collection Tool

#1. Subject identification code _____

#2. Nurse identification code _____

3. Age in years _____

*4. Gender M F

5. Race White/Anglo Oriental/Asian White/Hispanic
 Black/AfroAmerican Other _____

*6. Medical Diagnosis

G.I. _____

Respiratory _____

Renal _____

Cardiovascular _____

G.U. _____

Musculoskeletal _____

Neuro _____

Endocrine _____

Other _____

7. Reason for Current Admission

Surgical Diagnosis _____ Medical Diagnosis _____

8. Number of prior hospital admissions _____
9. Length of time since last hospitalization (in months)

10. Marital status s m d w cohabiting
11. Number of years of education _____
- Highest education level completed
- | | | | | | | |
|--------------------|--------|----------------|---|---|---|---|
| _____grade | HS/GED | College | 1 | 2 | 3 | 4 |
| Grad (years) _____ | | Degree/s _____ | | | | |
12. Length of military service in years _____
13. Highest rank in military service
- non-officer _____
- officer _____
- *14. Patient Acuity Category 1 2 3 4

*items obtained from medical record
item assigned by researcher
others obtained from patient

Appendix G
OHSU Patient Acuity Rating System

If patient has an IV, mark Requires Partial Assist.

MEDICAL/SURGICAL UNIT: _____

MOODS / ACTIVITY	0	1	2	3	4	5	6
	Set Up For Activities		Requires Partial Assistance		Total Assistance (1 person)		>1 Person to Position/Transfer
NOURISHMENT	0 Feeds Self NPO	1	Cut and Assist	2	Tube Feeding/Force/Restrict Fluids	3	Total Feed
VITAL SIGNS	0 Q 8h	1	Q 4h	2	Q 2h VS	3	VS Q 1 hour \geq 6/24h
ELIMINATION	0 BRP by Self	1	Assist to BR Enema	2	Bedpan/Urinal/Bedside Commode I & O/Incontinence Multiple Enemas	3	Ostomy Care Frequent Assists With Excretion/Incontinence q 1-2h
NEEDS	0 PO or IM Total of 6 or < /8h	1	PO or IM Total of 7-10/8h IV Meds - 1 or 2/8h	2	PO or IM Total of 11-13/8h IV Meds 3/8h	3	PO or IM 14 or > /8h IV Meds 4 > /8h
IVs	0 ---	1	Heparin lock	2	Infusing IV	3	Multiple Blood Products 2 or more IVs
TEACHING / EMOTIONAL SUPPORT	1 Routine Teaching and Emotional Support With Normal Care Activities	2	Special Teaching/Emotional Support for Patient and/or Family	3	Extraordinary Factors: Major Lifestyle Change Teaching Language Barrier Sensory Deficit Terminal This Shift Confusion/Cognitive Impairment Isolation Moderate Suicide Precautions	4	Extra Factors: Disruptive Behavior Respirator Dependent (< 1 month) Major Suicide Precautions
INTERVENTIONS	1 Q 8h	2	Q 4h	3	Q 2h or more often	4	Q 1h

NAME: _____ DATE: _____ CATEGORY: _____ INITIAL: _____

Cat. 1 0 - 7
 11 8 - 17
 111 18 - 24
 IV 25 - 39
 Y CCC

UNIT 208 Rev. 7/89 4059-1226

EXAMPLES

Language Barrier

No English
 Little English
 New Trach
 Deaf

Suicide Precautions

See Nursing Procedure for Suicide Precautions

Interventions

Crossings Checks
 Dressing change except IV
 Neuro Checks
 CMS Checks
 (2 Q 4h Interventions
 may = Q 2h)
 CBB's
 Hourly Urines
 Check NG Tube
 Post-op TCDs/
 Incentive Spirometer
 Nurse Blood Draws
 Respiration Check
 (Epidural/PCA)

Disruptive Behavior

Yell/Scream < 15 min.
 Need consultant (Patient Advocate)

Sensory Deficit

Blind (functionally impaired)
 Deaf
 Mute

Confusion/Cognitive Impairment

Posey
 Sundowner
 Disorientation
 Cognitive Impairment

Major Lifestyle Change Teaching

Rev Ostomy
 Rev Laryngectomy
 Rev Transplants
 Rev Spinal Cord Injury
 Acute Leukemia
 No Diabetic

IV Medications

IV Push
 IV Piggyback

Appendix H
Original LOC Scale

ORIGINAL SCALE
PERCEIVED LATITUDE OF CHOICE
ACTIVITY LIST

Hulicka, I. Morgante, J. & Cataldo, J. (1975)

1. Who to sit with at meals.
2. What is served at meals.
3. What time to eat meals.
4. Who to have a snack or coffee with.
5. What time to go to bed.
6. What time to get up.
7. When to have a bath.
8. Where to see visitors or friends.
10. When to see visitors or friends.
11. When to watch TV.
12. What TV programs to watch.
13. Where to spend free time.
14. With whom to spend free time.
15. Who to have for friends.
16. What clothes to wear.
17. What type of haircut to get.
18. What name to be called (first name, last name, nick name).
19. What hobbies to have.
20. What to spend money on.

21. Where to shop.
23. Whether to associate with other people or not.
24. Whether to offer suggestions to other people about how things are done.
25. Who to complain to.
26. Whether to attend a religious service.
27. What papers or books to read.
28. How much personal privacy is available.
29. Whether to work.
30. Where to work.
31. What type work to do.
32. What personal possessions to have.
33. Who to live with.
34. Color of walls, pictures, etc., in living quarters.
35. Whether to have a private room.
36. When to go out (leave living quarters for a few hours).
37. Whether to participate in certain activities (games, sports, educational meetings, etc.).

Appendix I

35-item Modified Patient Choice Assessment (LOC)

Patient Choice Assessment

Please rate each activity listed by circling the comment under the importance list which best describes how important that activity is to you during your current hospital stay. Also rate each activity listed by circling the comment under the choice list which best describes how much choice you have in that activity during your current stay. Thank you.

Activity

1. Where to eat meals e.g. chair, bed.

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

2. What is served at meals

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

3. What time to eat meals

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

4. Who to have a snack or coffee with

Unimportant	Somewhat Important	Very Important
No choice	Some Choice	Free Choice

5. Where to have a snack or coffee

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free choice

6. What time to go to bed

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

7. What time to get up

Unimportant	Somewhat Important	Very Important
No choice	Some Choice	Free Choice

8. When to have a bath

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

9. Where to see visitors or friends

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

10. When to see visitors or friends

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

11. When to watch T.V.

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

12. What T.V. programs to watch

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

13. Where to spend free time

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

14. With whom to spend free time

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

15. Who to have for a nurse

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

16. What clothes to wear

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

17. Who to have for a doctor

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

18. What name to be called (first name, last name, nick name)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

19. What tests to have

Unimportant	Somewhat Important	Very important
No Choice	Some Choice	Free Choice

20. What therapy to have

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

21. What medicine to take

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

22. When to take a certain medicine or therapy

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

23. Whether to associate with other people or not
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
24. Whether to offer suggestions to other people about how things are done
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
25. Whether to attend a religious service
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
26. Who to complain to
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
27. What papers or books to read
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
28. How much personal privacy is available
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
29. What personal possessions to have in the hospital
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |
30. Who to share a room with
- | | | |
|-------------|--------------------|----------------|
| Unimportant | Somewhat Important | Very Important |
| No Choice | Some Choice | Free Choice |

31. Whether to have a private room

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

32. Whether to stay in the same room or go to another room

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

33. Whether to go out (leave the room for a brief time)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

34. When to go out (leave room for a brief time)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

35. Whether to participate in certain activities (games, educational meetings, etc.)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

Patient I.D. _____

Appendix J
Patient Choice Assessment (LOC)

Patient Choice Assessment

Please rate each activity listed by circling the comment under the importance list which best describes how important that activity is to you during your current hospital stay. Also rate each activity listed by circling the comment under the choice list which best describes how much choice you have in that activity during your current stay. Thank you.

Activity

1. Where to eat meals e.g. chair, bed.

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

2. What is served at meals

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

3. What time to eat meals

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

4. Who to have a snack or coffee with

Unimportant	Somewhat Important	Very Important
No choice	Some Choice	Free Choice

5. Where to have a snack or coffee

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free choice

6. What time to go to bed

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

7. What time to get up

Unimportant	Somewhat Important	Very Important
No choice	Some Choice	Free Choice

8. When to have a bath

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

9. Where to see visitors or friends

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

10. When to see visitors or friends

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

11. When to watch T.V.

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

12. What T.V. programs to watch

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

13. Where to spend free time

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

14. With whom to spend free time

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

15. Who to have for a nurse

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

16. What clothes to wear

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

17. Who to have for a doctor

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

18. What name to be called (first name, last name, nick name)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

19. What tests to have

Unimportant	Somewhat Important	Very important
No Choice	Some Choice	Free Choice

20. What therapy to have

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

21. What medicine to take

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

22. When to take a certain medicine or therapy

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

23. Whether to associate with other people or not

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

24. Whether to offer suggestions to other people about how things are done

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

25. Who to complain to

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

26. What papers or books to read

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

27. How much personal privacy is available

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

28. What personal possessions to have in the hospital

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

29. Who to share a room with

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

30. Whether to have a private room

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

31. Whether to stay in the same room or go to another room

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

32. Whether to go out (leave the room for a brief time)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

33. When to go out (leave room for a brief time)

Unimportant	Somewhat Important	Very Important
No Choice	Some Choice	Free Choice

THANK YOU

Patient I.D. _____

Appendix K
Nurse Perception of Hospital Adjustment

NURSE PERCEPTION OF PATIENT HOSPITAL ADJUSTMENT

To the best of your ability, please rate patient _____
on the following characteristics.

1. Compared to other patients with a similar condition,
this patient has had:

- _____ 1. Very many complications.
_____ 2. Many complications.
_____ 3. About the average number of complications.
_____ 4. A few complications.
_____ 5. No complications.

2. Compared to other patients with a similar condition,
this patient's morale is:

- _____ 1. Very high.
_____ 2. High.
_____ 3. Average.
_____ 4. Low.
_____ 5. Very low.

3. Compared to other patients with a similar condition,
this patient has:

- _____ 1. A very strong desire to get well.
_____ 2. A strong desire to get well.
_____ 3. About an average desire to get well.
_____ 4. A somewhat weak desire to get well.
_____ 5. A very weak desire to get well.

4. Compared to other patients with a similar condition,
this patient:

- _____ 1. Continuously resists treatment.
_____ 2. Frequently resists treatment.
_____ 3. Periodically resists treatment.
_____ 4. Only rarely resists treatment.
_____ 5. Never resists treatment.

(Please go to next page)

5. Compared to other patients with a similar condition, this patient is usually:

- _____ 1. Very cooperative.
- _____ 2. Somewhat cooperative.
- _____ 3. Barely cooperative.
- _____ 4. Somewhat uncooperative.
- _____ 5. Very uncooperative.

6. Compared to other patients with a similar condition, this patient:

- _____ 1. Constantly complains about pain.
- _____ 2. Frequently complains about pain.
- _____ 3. Complains about pain the average amount.
- _____ 4. Rarely complains about pain.
- _____ 5. Never complains about pain.

7. Compared to other patients with a similar condition, this patient:

- _____ 1. Does not follow treatment at all.
- _____ 2. Has a great deal of difficulty following treatment.
- _____ 3. Has some difficulty following treatment.
- _____ 4. Has occasional difficulty following treatment.
- _____ 5. Always follows treatment.

8. Compared to other patients with a similar condition, overall this patient is:

- _____ 1. A very good patient.
- _____ 2. A good patient.
- _____ 3. An average patient.
- _____ 4. A poor patient.
- _____ 5. A very poor patient.

Patient I.D. _____

Nurse I.D. _____

Appendix L
Patient Perception of Hospital Adjustment

PATIENT PERCEPTION OF HOSPITAL ADJUSTMENT

To the best of your ability, please rate yourself on the following items.

1. During this hospital stay, I have had:
 - _____ 1. VERY MANY COMPLICATIONS
 - _____ 2. MANY COMPLICATIONS
 - _____ 3. ABOUT THE AVERAGE NUMBER OF COMPLICATIONS
 - _____ 4. A FEW COMPLICATIONS
 - _____ 5. NO COMPLICATIONS

2. During this hospital stay, my morale is:
 - _____ 1. VERY HIGH
 - _____ 2. HIGH
 - _____ 3. AVERAGE
 - _____ 4. LOW
 - _____ 5. VERY LOW

3. During this hospital stay, I have:
 - _____ 1. A VERY STRONG DESIRE TO GET WELL
 - _____ 2. A STRONG DESIRE TO GET WELL
 - _____ 3. ABOUT AN AVERAGE DESIRE TO GET WELL
 - _____ 4. A SOMEWHAT WEAK DESIRE TO GET WELL
 - _____ 5. A VERY WEAK DESIRE TO GET WELL

4. During this hospital stay, I:
 - _____ 1. CONTINUOUSLY RESIST TREATMENT
 - _____ 2. FREQUENTLY RESIST TREATMENT
 - _____ 3. PERIODICALLY RESIST TREATMENT
 - _____ 4. ONLY RARELY RESIST TREATMENT
 - _____ 5. NEVER RESIST TREATMENT

5. During this hospital stay, I am usually:
 - _____ 1. VERY COOPERATIVE
 - _____ 2. SOMEWHAT COOPERATIVE
 - _____ 3. BARELY COOPERATIVE
 - _____ 4. SOMEWHAT UNCOOPERATIVE
 - _____ 5. VERY UNCOOPERATIVE

6. During this hospital stay, I:
 - _____ 1. CONSTANTLY COMPLAIN ABOUT PAIN
 - _____ 2. FREQUENTLY COMPLAIN ABOUT PAIN
 - _____ 3. COMPLAIN ABOUT PAIN THE AVERAGE AMOUNT
 - _____ 4. RARELY COMPLAIN ABOUT PAIN
 - _____ 5. NEVER COMPLAIN ABOUT PAIN

(Please go to next page)

7. During this hospital stay, I:

- _____ 1. DO NOT FOLLOW TREATMENT AT ALL
- _____ 2. HAVE A GREAT DEAL OF DIFFICULTY FOLLOWING TREATMENT
- _____ 3. HAVE SOME DIFFICULTY FOLLOWING TREATMENT
- _____ 4. HAVE OCCASIONAL DIFFICULTY FOLLOWING TREATMENT
- _____ 5. ALWAYS FOLLOW TREATMENT

8. During this hospital stay, overall I am:

- _____ 1. A VERY GOOD PATIENT
- _____ 2. A GOOD PATIENT
- _____ 3. AN AVERAGE PATIENT
- _____ 4. A POOR PATIENT
- _____ 5. A VERY POOR PATIENT

Patient I.D. Code _____