Organized Activity and the Adaptive Status of Nursing Home Residents

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This study examined one aspect of the hypothesis that the environment influences the adaptive status of elderly people. Specifically, it looked at the relationship between the amount of organized activities offered in three nursing homes and 44 residents' perceptions of their roles in the present and future and their future time perspective. No relationship was found between future time perspective and the amount of activity offered; however, positive relationships existed between present and future roles and the amount of activity. The study supports the premise that when activity is available, individuals are likely to form and maintain images of themselves as actively engaging with their environment.

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The model of human occupation describes people as open systems interacting with their environments (Kielhofner & Burke, 1985). The environment influences the adaptive status of individuals by providing expectations and opportunities for action that are consistent with the values, interests, and skills of people within particular settings (Barris, 1982). This notion, that behavior is a function of both the person and the environment, is consistent with the view of many environmental and gerontological theorists (Carp & Carp, 1984; Kahana, 1975; Lawton, 1980; Lewin, 1951; Pergin, 1968). These theorists also suggest that elderly people may be particularly vulnerable to environmental influences, since the loss of some skills may prevent them from overcoming or modifying environmental obstacles or from even choosing the environments with which they wish to interact (Lawton, 1980). Elderly people who are unable to engage in successful interactions with the environment may eventually cease to have positive expectations for further interactions with the environment. This study examined the relationship between one aspect of the environment—opportunities to participate in organized activity—and the institutionalized elderly person's self-perception as an active person in the present and future.

Review of Literature

Activity and Aging

Two contradictory views of the importance of activity can be found in gerontological literature. Cummings and Henry (1961) proposed the classic disengagement theory, which suggested that with increasing age, individuals withdraw from participation in activity and that this withdrawal represents a realistic adaptation to aging. The opposite point of view is that continued engagement in activity is not only characteristic of aging but is also important to successful adaptation and high morale (Cavan, Burgess, Havighurst, & Goldhamer, 1949; Havighurst, Neugarten, & Tobin, 1968; Lemon, Bengston, & Peterson, 1972; Maddox, 1963). However, the activity style, or the nature of selected activities, may change with age (Spence, 1967). Thus, in some cases, observation or spectator activities may replace more physically demanding activities, in others, new leisure hobbies may take the place of former work-related interests.

A variety of studies support the importance of providing opportunities for participation in activities in environments for elderly people and the relationship between activity and adaptive behavior. Havens (1968), for example, in a study of 88 relocated elderly people, found that those individuals who were able to maintain the most continuity in their overall activity patterns showed the highest levels of life satisfaction after their move. Spence (1967) examined the quali-
ties of the activity style of individuals and found that when the scope of activity involvement was limited (i.e., the individual engaged in a limited variety of activities), then the usefulness of activities operated as a mediating, positive influence on satisfaction. He also found that challenging or novel activities were positively related to life satisfaction in elderly people who were younger than 75, but such activities were negatively related to satisfaction in those older than 75 years of age. Thus, the type of activities available appears to be as important as the mere presence or absence of opportunities for participation.

Other studies have suggested that when more activities are available in the environment, elderly people will be more likely to take advantage of these opportunities to participate. A comparison of residents living in a home for the aged and residents attending a recreation center found no difference in the expressed leisure interests of the two groups (Chalfen, 1956); however, the level of active participation in their areas of interest was higher in the recreation center members. This type of study, however, does not account for the possibility of different skill levels in the two groups. A longitudinal study by Carp (1978–79) controlled for skill differences by examining the effects of moving from substandard housing to an improved housing project for the elderly. Carp found that those people who moved to the new project showed greater increases in their activity level and greater levels of life satisfaction than did those people who had applied for the new housing but had not moved into it. Other research has found that regardless of the individual’s actual level of participation, nursing home residents preferred living in environments that were socially and actively stimulating (Kahana, Liang, & Felton, 1980) and that, of a variety of environmental variables, resources for activity participation had the most significant impact on residents’ satisfaction (Pincus & Wood, 1970).

**Adaptation and the Elderly**

Research on the elderly generally uses life satisfaction and morale as measures of positive adaptation. Because the model of human occupation describes the person as an open system, positive adaptation is based on adequate functioning during each stage of the system cycle (Kielhofner & Burke, 1985). Therefore, adaptation is reflected in output (actual work and play behavior), the feedback loop (both personal and environmental satisfaction with these behaviors), and in the “throughput” stage of the open system cycle. Throughput, in the model, reflects the organization of and interaction among components of three subsystems: volition, habituation, and performance (Kielhofner & Burke, 1985). The performance subsystem includes the individual’s skills. When there are disruptions or reductions in skills, the two higher sub-systems must adjust for those limitations in order for the person to adapt (Kielhofner, 1985). With institutionalized elderly people, performance deficits are often prevalent (Blau, 1973; Dooley, 1941; Fink, 1957; Spence, 1968; Strauss, Aldrich, & Lipman, 1976; Zibbell, 1971). Therefore, adaptation in these individuals should be reflected in the status of the volition and habituation subsystems. In this study, the component of future time perspective was chosen as an index of the status of volitional organization; roles were used as an index of habituation status.

**Future time perspective.** The volition subsystem in the model of human occupation consists of personal causation, interests, and values (Kielhofner & Burke, 1985). Values related to occupation include temporal orientation—that is, one’s attribution of importance to the past, present, and future—along with convictions about how time should be used (Kielhofner & Burke, 1985). The adaptive value of future orientation has been an equivocal issue in gerontological literature. While some writers have suggested that a decrease in future orientation and an increasing focus on the present and past enables the elderly person to cope with approaching death (Cummings & Henry, 1961; Dooley, 1941), others have found a significant relationship between future orientation and life satisfaction (Fink, 1957; Spence, 1968; Zibbell, 1971). In fact, the degree to which the elderly person focuses on the past may be a function of the environment; as the individual’s activity space becomes restricted, the past, through reminiscence, may become the source of environmental experiences (Strauss, Aldrich, & Lipman, 1976). Therefore, in this study we hypothesized that future orientation, as an aspect of positive adaptation, would reflect the number of opportunities available in the institutional setting for participating in activities.

**Roles.** Roles and habits are the components of habituation (Kielhofner & Burke, 1985). In later adulthood, role loss often leaves the elderly person with vaguely defined routines and expectations for behavior (Blau, 1973; Strauss, Aldrich, & Lipman, 1976). Roles that once were critical to self-identity are frequently given up or replaced, leaving the person with few sources of self esteem. Further, some of the roles that remain available to the elderly person, such as the leisure role, are not viewed as productive or valuable by society or by the elderly person (Strauss, Aldrich, & Lipman, 1976). Maddox (1963), however, found a positive relationship between remaining active and engaged in a variety of social roles and morale and life satisfaction. Similarly, Riopel (1982) and Gregory (1983) found a correlation between life satisfaction and the elderly person’s daily performance of occupational activities (which would occur within the context of roles), while Elliott (1984) found a positive relationship between life...
satisfaction and level of involvement in personally valued roles. Because the performance of roles by elderly people frequently occurs in the context of organized activities, we hypothesized in this study that a positive relationship would exist between the level of activity in the environment and the number of present roles identified by the elderly person.

Methodology

This study examined the relationship between two indices of the adaptive status of institutionalized elderly people and opportunities for participating in activities available in the institutional environment. The study hypothesized that there would be positive relationships between future time perspective, present roles, and the activity environment, or the degree of organized activity available within the institution.

Sample

Three nursing homes were selected as sample sites for this study. All were similar in size and types of services offered, but one had a greater percentage of discharges, reflecting its rehabilitation (as opposed to maintenance) approach. To be eligible for the study, residents had to have been living at the facility for at least 1 month prior to data collection, be at least 60 years of age, and be capable of understanding and consenting to participate in the study. Fourteen residents in one facility and 15 in each of the other two met these requirements and completed the study. Of these 44 subjects, 33 were female and 11 were male. Subjects’ ages ranged from 62 to 99 years, with an overall mean of 77.5 years (SD = 9.5). There were no significant differences in the mean ages for subjects in the three settings.

Variables and Instrumentation

Activity units was used as a measure of the environment. This variable referred to the number of opportunities for participation in organized activity, such as exercise groups, arts and crafts groups, movies, and others. This variable was computed by determining the number of hours scheduled during the week for organized activity. (If two or more activities were scheduled simultaneously, each activity contributed to the total number of hours.) However, since an institution with a larger number of residents might have to offer more activities simply to accommodate these individuals, the number of hours set aside for activity was divided by the number of residents in the setting. In this way, we derived a comparable measure of opportunities for participation in organized activities in relation to the number of people in the institution.

Two measures of future time perspective were used. An attitudinal measure, the Future Time Perspective Inventory (FTPI) (Heimberg, 1963), consisting of 25 items, was revised for this study. To make the scale clearer and more appropriate to an elderly population, three items were deleted and the 7-point Likert-type format was changed to a 3-point format: agree, disagree, or neutral. The revised FTPI was pilot tested with 10 subjects on two occasions and yielded a median percent agreement of 88%.

The second measure used for future time perspective was part one of the Role Checklist (Oakley, Kielhofner, & Barris, in press). Subjects indicate past and present participation and anticipation of future participation in 10 listed roles. The number of future roles checked by each subject was used as an index of future time perspective. In a study of 124 adults, test-retest reliability of the Role Checklist was substantial (overall kappa was .64). The instrument has face and content validity and has previously been used in research with elderly subjects (Elliott, 1984). The number of roles checked for the present on the Role Checklist was used to measure which roles the subjects perceived themselves as occupying at present.

In addition, a measure of skill impairment was used to determine whether or not subjects in the three facilities greatly differed in terms of skill deficits. This measure involved rating the subjects on nine items describing mobility, vision, hearing, communication, and sensation. In a pilot test, the percent agreement between two nurses who rated 15 subjects was 75%. Finally, other information, not reported in this study, was also collected on the environment.

Data Collection

The principal investigator and two graduate student assistants administered to each subject a survey packet consisting of:

- Information describing the purpose of the study, the consent form, and demographic questions;
- The Future Time Perspective Inventory;
- Part one of the Role Checklist; and
- Other environmental questions.

The letter and consent form were read aloud to each subject, who then gave verbal or written consent. After the interviewer had established some initial rapport with the subject, the forms were completed in an interview format.

Nurses at each facility completed the rating of skill impairment for participating subjects. The activity coordinator in each setting provided information on weekly scheduled activities and calendars of events.

Data Analysis

Analysis of variance was used to determine if the average level of skill impairment and the average age of residents at the three facilities differed significantly. Pearson product-moment correlations were computed to examine associations between activity units and the three measures of adaptive status.
Results

The average level of skill impairment was moderately low overall; the mean score was 5.29 (SD = 3.07) out of a possible high of 18. The mean level of skill impairment was similar in the three settings and did not differ significantly among them. (Thus, although partial correlations controlling for differences in impairment were performed, they will not be reported since they contributed little new information.)

The ratios of hours allotted for organized activity to number of people in each facility were .23, .17, and .13. Table 1 contains descriptive statistics for the three settings and total population.

A significant positive relationship (p < .001) was found between the environmental measure of activity units and future roles (.51) and between activity units and present roles (.56). No relationship was found between the FTPI score and activity units (-.01).

Discussion

The study had several limitations. First, it did not use a random sampling procedure. As a result, subjects tended to be those individuals in each setting who were more active physically, mentally, and socially and, therefore, least likely to be unduly vulnerable to the environment. Second, it is not clear to what extent responses to present and future roles on the Role Checklist are truly independent. Therefore, the relationship between future roles and activity units may be confounded by the relationship between present roles and activity units. More critical than these limitations, however, is the statistical violation of the assumption of independence of ratings for the measure of activity units. Since the same measure of activity units was used for each resident at a given nursing home, these values were serially dependent. Serial dependency increases the likelihood of a Type I error by reducing the amount of variance attributable to error (Barslow & Hersen, 1984). The only way to compensate for this problem in this study was to use a stringent alpha level (.001).

Given these limitations, the results suggest a relationship between future time perspective and opportunities for engaging in organized activity, and also a relationship between present roles and activity opportunities. The model of human occupation proposes that people prefer to become involved in interesting, arousing environments and that such environments, in turn, influence the development of habits, roles, and skills. Although this study did not examine individuals’ preferences for environmental settings, it did find a relationship between one characteristic of the environment—the amount of organized activity in the institution—and the role that elderly people perceived themselves as occupying in both the present and future. This finding supports the underlying hypothesis of this study: when activity is available, individuals are likely to form and maintain a perception of themselves as being actively engaged with the environment.

Literature regarding future time perspective in the elderly has been contradictory and inconclusive. Although prevailing views about time perspective propose that later life is accompanied by a reassessment of the meaning of time, researchers do not agree as to the effect of this reassessment. The discrepancy between the correlations for anticipated future roles and the FTPI in this study suggests that the elderly person may experience two dimensions of future time perspective. One, an abstract feeling state about time, may not be substantially influenced by the environment. However, a more concrete expectation for future role involvement may be affected by the environment. This possibility is consistent with Golant’s hypothesis (in Strauss, Aldrich, & Lipman, 1976) that a restriction in activity space may lead a person to dwell on the past. This more concrete aspect of time perspective may be an important factor in positive adaptation and suggests that many older people may continue to have positive expectations and goals for the immediate future.

That the availability of opportunities to participate in organized activity influences elderly people’s perception of the present and future roles they may occupy supports the importance of providing an activity program for the well-being of institutionalized elderly people. However, an issue not explored in this study but relevant to the development of activity programs concerns the degree to which such programs reflect the elderly person’s past interests, values, and goals. Because research on interests suggests substantial continuity of interests over the lifespan (Barris & Kielhofner, 1985), it would be valuable to know to what extent congruency between activity and

Table 1
Means and Standard Deviations for Total Sample and Three Settings

<table>
<thead>
<tr>
<th></th>
<th>Total Sample (n = 44)</th>
<th>Facility 1 (n = 14)</th>
<th>Facility 2 (n = 15)</th>
<th>Facility 3 (n = 15)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>FTPI</td>
<td>46.77 (7.29)</td>
<td>46.07 (5.87)</td>
<td>48.13 (7.25)</td>
<td>46.06 (8.69)</td>
</tr>
<tr>
<td>Future roles</td>
<td>3.07 (2.44)</td>
<td>4.36 (2.30)</td>
<td>3.80 (2.24)</td>
<td>1.13 (1.46)</td>
</tr>
<tr>
<td>Present roles</td>
<td>2.91 (1.85)</td>
<td>4.36 (1.98)</td>
<td>2.60 (1.12)</td>
<td>1.87 (1.50)</td>
</tr>
<tr>
<td>Level of impairment*</td>
<td>5.29 (3.07)</td>
<td>4.50 (2.05)</td>
<td>5.86 (3.72)</td>
<td>5.47 (3.18)</td>
</tr>
<tr>
<td>Age (range 62-99)</td>
<td>77.5 (9.5)</td>
<td>79.8 (10.6)</td>
<td>75.1 (8.3)</td>
<td>78.0 (8.5)</td>
</tr>
</tbody>
</table>

* A higher number = greater impairment.
the person's interests and values affects adaptation, as well as to what degree the person's interests can be changed by the types of activities available within the setting. Since this study used only throughput measures of adaptation, another question it suggests is how the availability of organized activity relates to output and feedback measures of adaptation. For example, does the presence of an activity program, or a certain type of activity program, influence life satisfaction and self-esteem? Do certain types of activity programs actually affect the daily productive behavior of residents? Because an increasing number of occupational therapists are working in settings for the elderly and assuming positions as directors of activity programs, research addressing these issues should contribute to the development of successful programming for aging populations.

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References


