A Pet Therapy Intervention With Geriatric Psychiatry Inpatients

Marc H. Zisselman, Barry W. Rovner, Yochi Shmuely, Patricia Ferrie

Key Words: hospitals • human–pet attachment

Objective. The purpose of this study was to evaluate the effects of pet therapy on geriatric psychiatry inpatients. A demonstrable impact could lead to more widespread or targeted use of animal companionship programs for hospitalized older persons.

Method. The study design was a randomized, parallel-group control treatment trial with pretreatment and posttreatment measures. Fifty-eight subjects with chronic age-related disabilities who were patients of the Wills Eye Hospital Geriatric Psychiatry Unit were assigned to a pet therapy intervention group or an exercise control group for 1 hr a day for 5 consecutive days. Every subject was blindly evaluated with the Multidimensional Observation Scale for Elderly Subjects (MOSES) before and after the intervention week.

Results. No significant differences in MOSES scores were found between or within groups before and after the interventions. There was a nonsignificant tendency for subjects who received the pet intervention to have less irritable behavior after treatment. However, women with dementia who received either pet therapy or exercise intervention had improved irritable behavior scores after treatment.

Conclusion. This pilot study demonstrates the need for further research on animal-assisted interventions with hospitalized elderly persons. Differential improvement in women with dementia also requires further investigation.

Research reports have shown that pet ownership reduces blood pressure and other risk factors for heart disease and improves social and psychological functioning (Baun, Bergstrom, Langston, & Thoma, 1984; Friedmann, Katcher, Lynch, & Thomas, 1980; Harris & Gellin, 1992; Katcher, Friedmann, Beck, & Lynch, 1981). On the basis of these findings, residential care facilities often incorporate pets into their therapy programs for older persons. To our knowledge, however, no research exists that evaluates the impact of pet therapy programs on hospitalized geriatric psychiatry patients (Wilson & Netting, 1987). A demonstrable impact could lead to more widespread or targeted use of animal companionship programs for hospitalized elderly persons. To evaluate the efficacy of such a program and to identify whether particular subgroups of elderly persons respond differently to pet therapy treatments, we conducted a pilot study consisting of a randomized, parallel-group, controlled clinical trial of pet therapy and exercise on 58 hospitalized geriatric psychiatry patients.

Method

Setting and Subjects

This study was conducted on the 26-bed Wills Eye Hospi-
tal Geriatric Psychiatry Unit in Philadelphia. Elderly persons with chronic age-related psychiatric, medical, and neurologic conditions such as depression, dementia, Parkinson's disease, stroke, and accompanying medical disorders are treated on this unit. All patients hospitalized on the unit between February 1994 and May 1994 (N = 58) were randomly assigned to receive the pet therapy intervention (n = 33) or an exercise intervention (n = 25), which is the unit's usual activity programming.

**Intervention**

Intervention was provided for 5 consecutive days for each group. The intervention for the experimental group consisted of a 1-hr visit with dogs. The subjects had contact with and fed the visiting dogs, were encouraged to reminisce about their own experiences with pets and other animals, and heard a brief talk about the dogs. The control group exercised for 1 hr a day while the experimental group was visiting with the dogs. Adherence to both treatments was evaluated with daily attendance records. The rest of the subjects' daily schedule remained the same. Additionally, all subjects continued receiving their psychotropic medications and individual and group psychotherapy sessions.

**Measurement and Procedure**

Mini-Mental State Examinations (Folstein, Folstein, & McHugh, 1975) were completed at the time of hospital admission. The Multidimensional Observation Scale for Elderly Subjects (MOSES) (Helmes, Casro, & Shorr, 1987) was used to assess the subjects' functioning and response to treatment. This 40-item observation scale consisted of five subscales: (a) self-care functioning, (b) disoriented behavior, (c) depressed or anxious mood, (d) irritable behavior, and (e) withdrawn behavior. Scores range from 8 to 32, with higher scores indicating increased levels of impairment. The MOSES has demonstrated reliability and validity (Helmes et al., 1987).

A research assistant who was blind to the group assignments completed the MOSES for each subject by interviewing the nursing staff member most familiar with that subject. The nursing staff member was also blind to group assignments.

**Statistical Analysis**

Statistical procedures were performed with the Statistical Package for the Social Sciences (1990), version 4.0. Student's paired t tests and analysis of variance (ANOVA) were used for continuous measures, and chi-square was used for categorical variables. The primary statistical hypothesis was that subjects receiving the pet therapy would show greater improvement after intervention than exercise. A sample probability of less than .05 was established as the level for significant differences.

**Results**

There were no major differences in demographic or clinical characteristics or adherence to the treatment protocol between the groups (see Table 1). Additionally, no significant differences existed between or within the groups in MOSES subscale scores before or after treatment, but subjects who received the pet therapy intervention tended to show less irritable behavior after the intervention (p < .07) (see Tables 2 and 3). The majority of subjects in both groups showed increased or stable scores on three of the MOSES subscales: self-care functioning, irritable behavior, and withdrawn behavior (see Table 4).

Because subjects in the experimental group tended to exhibit less irritable behavior after treatment, an ANOVA was completed for the irritable behavior subscale. No relationship was revealed between experimental or control group membership and change in irritability score (F = 10, p < .76). Women who received either intervention had improved (decreased) irritable behavior scores after treatment (12.11 vs. 10.82, p < .02). When we examined the five subjects whose irritable behavior scores decreased more than 2 standard deviations from the mean, four were found to be women who had received the exercise intervention and had a dementing condition.

**Discussion**

The results failed to detect a significant treatment difference between pet therapy and exercise over the 5-day intervention period.
Table 2
Comparison of Subjects by Treatment Group

<table>
<thead>
<tr>
<th>Treatment Group</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
</tr>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Pet therapy&lt;sup&gt;a&lt;/sup&gt;</td>
<td>25</td>
</tr>
<tr>
<td>Exercise therapy&lt;sup&gt;b&lt;/sup&gt;</td>
<td>21</td>
</tr>
</tbody>
</table>

Note. All values are nonsignificant.

MMSE = Mini-Mental State Examinations.

<sup>a</sup>N = 35
<sup>b</sup>N = 25

study period. Although a majority of subjects showed improvements in self-care functioning, irritable behavior, and withdrawn behavior, none were significant. The improvement in irritable behavior score for subjects in the experimental group came closest to significance. Women with dementia, whether in the experimental or control group, appeared to constitute a subgroup whose irritable behavior scores preferentially improved compared with men and subjects with depression. Companion animals have been described as serving multiple functions. They can become objects of empathy and communication and serve as a focal point for communication with others (Granger & Carter, 1991; Milligan, 1986; Mugford & Coimbsky, 1986). Correspondingly, companion animals are described as making nursing home volunteers' experience more satisfying and as having the therapeutic ability to reduce nursing home residents' need for medication (Hoffman, 1991; Rynearson, 1978). Other research reports have demonstrated increased social behaviors and verbal interactions among nursing home residents in the presence of a dog (Fick, 1993; Korygabile, Buckwalter, & Stalley, 1989).

However, not all older persons appear to benefit

Table 3
MOSES Subscale Scores Before and After Treatment

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Pet Therapy&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Exercise Therapy&lt;sup&gt;b&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>Self-care functioning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>16.7 (7.2)</td>
<td>14.8 (7.5)</td>
</tr>
<tr>
<td>After</td>
<td>15.9 (8.5)</td>
<td>15.5 (7.9)</td>
</tr>
<tr>
<td>Disoriented behavior</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>20.6 (6.0)</td>
<td>21.3 (6.5)</td>
</tr>
<tr>
<td>After</td>
<td>12.0 (5.3)</td>
<td>14.5 (6.0)</td>
</tr>
<tr>
<td>Depressed or anxious mood</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>19.8 (6.2)</td>
<td>21.0 (6.8)</td>
</tr>
</tbody>
</table>

Note. All values are nonsignificant.

MOSES = Multidimensional Observation Scale for Elderly Subjects.

<sup>a</sup>N = 35
<sup>b</sup>N = 25

from pet companionship. The quality of the human-animal bond and the older persons' predilection toward pets and current social circumstances (e.g., limited contact with family and friends) may play a role in their degree of responsibility (Boldt & Dellman-Jenkins, 1992; Verderber, 1991). Likewise, the potential health hazards of companion animals are often underplayed (e.g., a fall with hip fracture) (Venske, Mayhew, & Burris, 1990).

This pilot study had a number of limitations. First, a 5-day intervention period may have been insufficient to detect significant results in this sample of patients with severe physical and psychiatric conditions. More immediate results may have occurred in an outpatient population with fewer impairments, or different results might emerge after a longer treatment period. Studies of nursing home residents and older persons living in a community setting have examined pet therapy interventions for longer treatment periods and have shown beneficial effects (Harris, Rinchart, & Gerstman, 1993).

Second, the MOSES subscales were designed to reflect the patients' behavior at the conclusion of the study week. This outcome measure may have been insensitive to the occurrence of positive effects after each intervention. A measure that captures immediate posttreatment change may have revealed differences between the groups and may have been more sensitive to the beneficial effects of pet therapy that nursing staff members observed.

Third, no accepted standard exists for administering a pet therapy program. Future research needs to elaborate on the length and frequency of the sessions, group sizes, kinds of patients, and types of animals used in the intervention. In pet therapy intervention, the effect of the combined presence of pets and staff members (e.g., licensed occupational therapists and certified recreation therapists) may have been more therapeutic than either element alone (Savishinsky, 1992). Future studies need to explore these relationships.

Fourth, it was difficult to evaluate the effects of the multiple ongoing formal and informal interventions taking place on the Geriatric Psychiatry Unit. We are unaware of the impact of medication on response to treatment as well as the effect of treatment on the need for medication.
Fifth, the mechanism by which animal companionship improves self-care functioning requires clarification. It may be that the incentive to join a group secondarily encouraged improved self-care. Why women with dementia preferentially had reduced irritability scores requires further investigation.

Finally, more robust results might have been obtained if our intervention was paired with a more passive activity than was used in this study or if no structured activity was used as the control condition. The benefits of exercise in older persons have been well documented (Borst, Millard, & Lowenthal, 1994; Cononie, Goldberg, Rognes, & Hagberg, 1994; Sheldahl, Tristani, Hasting, Wenzler, & Levandaski, 1993).

Because our study was only a pilot, further research on animal-assisted interventions with hospitalized elderly persons is needed. On the basis of our observations, we believe that pet therapy programs are desirable components of the multidisciplinary treatment that geriatric psychiatry inpatients receive and possibly should be incorporated in inpatient activity programs. In particular, we believe that activity programs such as pet therapy are essential to increase socialization, activity, and sense of mastery. ▲

Acknowledgments
We thank the staff members of the Wills Eye Hospital Geriatric Psychiatry Unit and Judith Willis for their assistance. This study was supported in part by a grant from Sandoz/Jeffer’s Companion Animal Center.

References
Sheldahl, L. M., Tristani, F. E., Hasting, J. E., Wenzler, R. B., & Levandaski, S. G. (1993). Comparisons of adaptations and Table 4
Direction of Change in MOSES Subscale Scores

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Improvement</th>
<th>No Change</th>
<th>Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pet Therapy</td>
<td>Exercise</td>
<td>Pet Therapy</td>
</tr>
<tr>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Self-care functioning</td>
<td>16 (48.5)</td>
<td>13 (52.0)</td>
<td>9 (27.3)</td>
</tr>
<tr>
<td>Depression or anxious mood</td>
<td>13 (39.4)</td>
<td>12 (48.0)</td>
<td>6 (18.2)</td>
</tr>
<tr>
<td>Irritable behavior</td>
<td>15 (45.5)</td>
<td>13 (52.0)</td>
<td>2 (6.1)</td>
</tr>
<tr>
<td>Withdrawn behavior</td>
<td>12 (36.4)</td>
<td>13 (52.0)</td>
<td>11 (33.3)</td>
</tr>
</tbody>
</table>

\(^{a}N=33\)
\(^{b}N=25\)


