Animal-Assisted Therapy for Elderly Schizophrenic Patients

A One-Year Controlled Trial

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Animal-assisted therapy (AAT) has been used as a therapeutic tool in various psychiatric populations, but there have been no published studies with elderly schizophrenic patients. The authors evaluated, in a blinded, controlled manner, the effects of AAT in a closed psychogeriatric ward over 12 months. Subjects were 10 elderly schizophrenic patients and 10 matched patients (mean age: 79.1 ± 6.7 years). The outcome measure was the Scale for Social Adaptive Functioning Evaluation (SAFE). AAT was conducted in weekly 4-hour sessions. Treatment encouraged mobility, interpersonal contact, and communication and reinforced activities of daily living (ADLs), including personal hygiene and independent self-care, through the use of cats and dogs as “modeling companions.” The SAFE scores at termination showed significant improvement compared with baseline scores and were significantly more positive for the AAT group on both Total SAFE score and on the Social Functions subscale. AAT proved a successful tool for enhancing socialization, ADLs, and general well-being. (Am J Geriatr Psychiatry 2001; 9:439–442)

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favorable outcome is associated with a deficit in social functioning. Coupled with the reduction in communication and social functioning that is reported in aging, geriatric schizophrenic patients are a subgroup that suffers from severe impairment in social functioning. An additional variable adversely affecting this population is long-term hospitalization in state hospitals wherein stimuli and demands for social interaction are minimal.

The aim of the present study was to evaluate the effects of AAT on long-stay geriatric schizophrenic patients in a controlled 1-year study.

METHODS

Subjects

Subjects in the study were 20 chronic schizophrenic patients, who were long-stay residents at the Abarbanel Mental Health Center, Bat Yam, Israel. The center is a tertiary-care, university-affiliated hospital providing services to an urban catchment area of 800,000 patients. The psychogeriatric division is composed of three wards, with 34 beds each. One of the wards, in which this study was conducted, provides services to elderly patients suffering from schizophrenia. Patients are all long-stay residents (mean duration of current hospitalization: 27±7.1 years), very similar to the “very-difficult-to-place” elderly schizophrenia patients retained in state hospitals in the United States, as described by White et al.

Inclusion criteria for participation were the following: 1) DSM-IV diagnosis of schizophrenia according to the Structured Clinical Interview (SCID–Hebrew Version); 2) age: ≥65 years; 3) current hospitalization: ≥10 years; and 4) informed consent. Informed consent was obtained after detailed explanation of the study aims, after approval of this study by the hospital’s ethics committee.

Exclusion criteria were the following: 1) severe cognitive impairment; 2) allergic reactions to dogs or cats; 3) physical illness exacerbated in the presence of furry animals (e.g., asthma); and 4) planned discharge within a 1-year period.

Patients were randomly selected for either the Animal Assisted Treatment group (AAT) or the Control group. Average age was 79.1±7.4 years. In both groups, there were seven women and three men.

Assessment

The primary outcome measure for the present study was a change in the Social-Adaptive Functioning Evaluation (SAFE) scores. The SAFE was developed by Harvey et al. with established psychometric and predictive properties. The instrument consists of 17 items, each rated on a 5-point scale (0=no impairment; 4=maximal impairment). The items in the scale measure social–interpersonal, instrumental, and life-skills functioning and are designed to be rated by observation and interaction with the subject. Patients were rated on the SAFE before the study, after 6 months of treatment, and upon completion (at 12 months).

Ratings were conducted by a clinical psychologist blinded to the patients’ status (i.e., treatment [AAT] or control).

Procedure

AAT was undertaken once weekly on the same day. The therapists and assisting animals came to the ward at 10:30 A.M., and the group session lasted 3 hours. Three AAT counselors from the PET (Pet Enrichment Therapy) program at Kibbutz Givat Haim Ichud, Israel, were regularly accompanied by a psychiatric nurse, providing a ratio of 1:2.5 caretakers to patients. Each patient was provided with his own dog or cat, according to personal preference.

Sessions included “ADL modeling activities” such as petting, feeding, grooming, bathing, and teaching the animals to walk on a lead for greater mobility.

Another major component of the treatment plan was to increase mobility and socialization through walking the animals outside the hospital grounds. These excursions facilitated interaction with people of all ages outside, who were inevitably drawn to these very special animals. Each session was concluded in the ward with a summation of the day’s activities and a special time allocated for a “parting between friends”—between the patients, PET staff members, and their animal assistants.

Control-group patients were assembled for reading and discussion of current news for a similar duration on the same days that AAT was undertaken. These sessions were conducted by three certified nurses so as to keep the ratio of staff to patients equal to that of the AAT group.
**Analysis**

Statistical analyses were performed by a medical statistician of Technostat Ltd., Israel. Within- and between-groups comparisons were tested by the paired/unpaired Student t-test (respectively). Where the assumption of normality was not met by distribution of scores, the Wilcoxon nonparametric test was performed. All tests were two-tailed, and P values ≤ 0.05 were considered statistically significant. Demographic and clinical variables are presented as mean ± standard deviation (SD).

**RESULTS**

All subjects completed the study. During the study, one patient in the AAT group and two patients in the Control group were hospitalized in a general-medical hospital because of intercurrent illness. All three patients returned within 3 weeks.

Table 1 presents the SAFE scale scores preceding the study (baseline), after 6 months, and at completion (12 months). Total score and the three factors found in analysis of the SAFE15 to reflect dimensions of adaptive functioning in chronic schizophrenia patients are shown in Table 1.

Statistical analysis (between-groups t-test) demonstrated that the AAT group’s SAFE total score improved significantly as compared with the Control group. Improvement was already significant by 6 months (P = 0.003) and was maintained until the end of the study (P = 0.001).

Regarding the three factors of the SAFE, (within-group tests): 1) impulse control (items include impulse control, respect for property, money management, and cooperation with treatment) did not change in either group; 2) instrumental and self-care (items include bathing and grooming, dressing, eating, neatness, and orientation) improved in both groups, but this change did not attain statistical significance; and 3) social functioning improved significantly in the AAT group (P = 0.001). The social functioning dimension of the SAFE scale consists of the following items: conversational skills, instrumental social skills, social appropriateness/politeness, social engagement, friendships, recreation/leisure, communication skills, and participation in hospital programs.

**DISCUSSION**

The present study demonstrates a significantly positive effect of AAT for elderly schizophrenic patients in long-term settings. The major effect noted was in the domain of social functioning. This effect was apparent by 6 months of treatment and held true by the end of the study, at 12 months. This is, to the best of our knowledge, the first controlled study of AAT in elderly schizophrenic patients. However, the encouraging results do not address the complex issue of how this change was brought about.

Fick, in 1993,18 demonstrated an increase in verbal social interactions among nursing home residents in the presence of a dog. Although, as early as 1980,9 a survey of case histories, anecdotal evidence, and pilot studies shows that pet animals facilitate rapport, no uniform conceptualization of AAT has been offered to date. Our patients were initially ambivalent toward the AAT program. The program enabled the patients to view animals, people, and inanimate objects, as one patient said, “like they once were.” Thus, the reintroduction of formerly stressful images was undertaken, with emphasis on group interaction. Patients were encouraged to share feelings of isolation and loneliness by first confiding in their animal companions and later with their group co-

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**TABLE 1. SAFE Scale Total and factor scores throughout the study**

<table>
<thead>
<tr>
<th></th>
<th>AAT Group</th>
<th>Control Group</th>
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<tbody>
<tr>
<td></td>
<td>Baseline</td>
<td>6 Months</td>
</tr>
<tr>
<td>Instrumental and Self-Care</td>
<td>31.1 ± 4.3</td>
<td>29.8 ± 3.8</td>
</tr>
<tr>
<td>Impulse Control</td>
<td>8.2 ± 1.2</td>
<td>8.3 ± 1.7</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>24.5 ± 3.1</td>
<td>18.3 ± 3.1**</td>
</tr>
<tr>
<td>Total</td>
<td>42.6 ± 6.6</td>
<td>31.1 ± 5.3*</td>
</tr>
</tbody>
</table>

Note: The SAFE Total score is not a summation of the subscale scores. Comparisons are between AAT group scores and the Control Group scores. AAT = animal-assisted therapy. *P<0.05; **P<0.01.
members. The cats and dogs also served as “role models” for self-care and personal hygiene as they were bathed, groomed, and fed by the patients, with emphasis on the differences among and unique needs of each pet.

One of the major impediments to socialization in schizophrenia is a deficit in adaptive life functioning.13,14 Because long-stay elderly schizophrenic patients spend many years in an impoverished environment, they may not have the opportunity to express available social skills.19 The introduction of pets in a supervised manner into this environment created a novel “cue” for transference. However, AAT presents a dynamic and constantly changing transitional object20 that reawakens both memories of a former “wholesome” life and a need to actively interact with the animals. This unique ability of AAT may be the mechanism through which social functioning has improved in the present study.

The use of AAT with elderly schizophrenic patients needs further study. The limitations of our program are the small sample size and relatively homogeneous population. However, the controlled design and quantified outcome measure used encourage future use of AAT with this needy group of patients.

References

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