

ANIMAL-ASSISTED INTERVENTION (AAI) IN A RECOVERY-ORIENTED PSYCHIATRIC REHABILITATION PROGRAM

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SUMMARY

Introduction: Previous animal-assisted interventions (AAI) studies have documented that human-animal interaction can reduce anxiety levels and improve social skills and quality of life. In recent decades there was a growing evidence on the benefits achievable through human-animal relationship in different categories of people, such as children with autism spectrum disorder, elderly patients affected by dementia, patients with psychiatric disorders and alcohol/drug addiction.

Methods: In the present study ten patients from psychiatric residential facilities belonging to the EPASSS Foundation were approached to participate in this study. Patients followed a rehabilitation project named "Animal-Mente". This project originated from the collaboration of the psychiatric residential facilities belonging to the EPASSS Foundation with "La coda di Ulisse", a Third Sector Organization (ETS) which represents the Apulian reference centre for AAI. Outcome assessments were conducted at recruitment (time 0) and after animal-assisted intervention (time 1).

Results: Significant improvements were found for symptomatology as emerged from the BPRS scale's results. Aspects of recovery with a special focus on hope and determination were assessed by the RAS scale, which showed a significant difference between before and post intervention.

Conclusions: Our data highlighted the feasibility of Animal-Assisted Interventions (AAI) in community mental health services. Our study underlined the opportunity of AAI in an integrative recovery oriented psychiatric rehabilitation program involving mental health department, psychiatric residential facilities and third sector organizations in a network activity.

Key words: animal-assisted interventions - psychosocial rehabilitation - psychotic

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INTRODUCTION

The human-animal relationship moved from very ancient roots up to today. The large number of animals mentioned in mythology and the numerous paintings of animal domestication represented the human-animal interaction that has always existed underlying psychological and emotional implications.

The American psychotherapist Levinson first introduced the term pet-therapy, hypothesizing the benefits of the animal company and applying them in the treatment of his patients.

Since the publication of the article 'The dog as a co-therapist' (Levinson 1962), in recent decades there was a growing evidence on the benefits achievable through human-animal relationship in different categories of people, such as children with autism spectrum disorder, elderly patients affected by dementia, patients with psychiatric disorders and alcohol/drug addiction (De Santis et al. 2018). With the aim to regulate and structure animal assisted interventions specific guidelines were developed by associations, such as the White Paper of the International Association of Human-Animal Interaction

Organizations (IAHAIO 2014) or the Animal-Assisted Interventions Code of Practice for the UK (SCAS 2013).

In Italy the State-Regions Conference approved the agreement and guidelines on AAI which established minimum standards for their implementation in homogeneous manner across all Italian regions. According to these guidelines pets can play an important role as mediators in educational and therapeutic-rehabilitative processes (Italian National Guidelines for Animal Assisted Interventions 2015).

The relationship with the pet performed important functions both as a support against loneliness and isolation (Shoda et al. 2011) and as social support, an aspect considered in psychosomatic psychology to be an important protective factor against psychophysical problems and disorders because it is able to stimulate the functions of the immune system (Solano 2013). Physical contact with the animal appears, on the basis of the latest research, acts as a powerful calming factor on heart rate and breathing (Nose et al. 2022). Moreover, taking care of an animal stimulates a sense of responsibility and promotes empathy and kindness (Walsh et al. 2009).

Studies have suggested that animals may serve as “social catalysators” involving feelings of safety and facilitation of interpersonal interactions. These effects are related to biophilia hypothesis which describes the affinity of humans to other living species (Tyssedal et al. 2023).

This article intended to shed light on the positive value of the use of animals for therapeutic purposes in a recovery-oriented psychosocial rehabilitation program.

Our project aimed to assess effectiveness and feasibility of animal assisted intervention (AAI) in patients with psychotic spectrum disorders following a recovery-oriented psychiatric rehabilitation program.

METHODS

In the present study ten patients from psychiatric residential facilities belonging to the EPASSS Foundation were approached to participated in this study. Inclusion criteria included: diagnosis of psychotic spectrum disorders, currently followed by mental health services, age between 18 and 65 years, lower secondary school and capacity to offer informed consent.

Patients followed a rehabilitation project named "Animal-Mente" and originated from the collaboration of the psychiatric residential facilities belonging to the EPASSS Foundation with "La coda di Ulisse", a Third Sector Organization (ETS) which represents the Apulian reference centre for AAI.

All subjects involved gave their written informed consent for administering evaluation scales.

An observational study design was followed in which the new intervention based on AAI was added to treatment as usual (usual rehabilitation intervention and/or psychopharmacological treatment).

According to the AAI National Guidelines and the Puglia Regional Law (n.24 of 18 October 2016) “Animals involved in IAA belong only to domestic species capable of establishing social relationships with humans (in particular: dog, horse, donkey, cat, rabbit) and are specially trained and subjected to a health and behavioral assessment in accordance with the same.”

All sessions were performed following the Italian National Guidelines for animal assisted interventions and required a multidisciplinary team capable of managing the complexity of the human-animal relationship.

All members of the team had specific training and certification of suitability according to Italian National Guidelines for Animal Assisted Interventions (2015).

The professional figures and operators involved were: a veterinary doctor expert in IAA, an animal handler, an operator leading the animal assisted intervention and the psychotherapist who followed patients in psychiatric residential facilities.

The veterinary doctor collaborated with the project manager in choosing the animal species and the as-

sistant-animal pair, evaluated the health requirements and behavior of the animal used and directed the correct management of the same by assuming its responsibility.

The animal handler managed the animal during all sessions. In these phases he took responsibility of the correct management of the animal for the purposes of interaction and monitored its health and safety well-being, according to the criteria established by the veterinary doctor to whom he reports any symptoms of illness or behavioral disorders. The animal handler had proven experience in management of animal species used in AAI. The operator leading the intervention took charge of the person during the session in order to achieve the project's objectives. The psychotherapist had also specific training and expertise on dog assisted interventions.

The program consisted of ten sessions lasting fifty minutes in which the group of ten patients have approached a dog, in the last sessions two dogs. The structure of the session was the following. The session began with a group greeting. The participants were arranged in a circle and socialized with the dog. The first phase was dedicated to consolidating previous session and discussing experiences relating to it. Next phase included grooming, i.e. dog's care and brushing. Subsequently, the topic of the day related to the world of pets in relation to that of patients was discussed. Some sessions were dedicated to psychomotor skills with walks and activities with structured routes.

Outcome assessments were conducted at recruitment (time 0) and after animal-assisted intervention (time 1). They included : Personal and Social Functioning Scale (FPS of the V.A.D.O.), Brief Rating Psychiatric Scale (BPRS), Recovery Evaluation Scale (RAS), Quality of Life Index (Q-Index), S.T.A.I.-Y questionnaire.

Study exclusion criteria include: intellectual disability, comorbidity with substance use and the presence of acute psychotic symptoms.

Data analysis

Statistical description for demographic variables was performed using means, median, interquartile range (IQR) and standard deviation (SD). In order to compare scores at different times (T0 and T1), we create some box-plots and used Exact Wilcoxon signed rank test. All statistical analysis were performed using R version 2024.04.2.

RESULTS

Characteristics of the participants are presented in Table 1.

The sample included ten patients, of which five resident in residential psychiatric facilities and five attending the Psychiatric Day Center, both psychiatric residential facilities located in the Grottaglie area (province of Taranto) belonging to EPASSS Foundation.

Participants who completed the program had a mean age of 45.10 ± 14.9 . Six of them were male (60%). The mean of years of education was $9.8 \text{ years} \pm 3.9$ and all patients were single. All participants had a DSM 5- TR diagnosis belonging to psychotic spectrum disorders: four of them schizophrenia, four of them schizoaffective disorder and two of them bipolar disorder with

psychotic symptoms. Age of first visit to a psychiatrist was 23.2 ± 3.8 .

All patients followed a psychosocial rehabilitation intervention and all but one had psychopharmacological treatment in the last six months.

Box-plots were performed for each scale at two times. Figure 1 display all results.

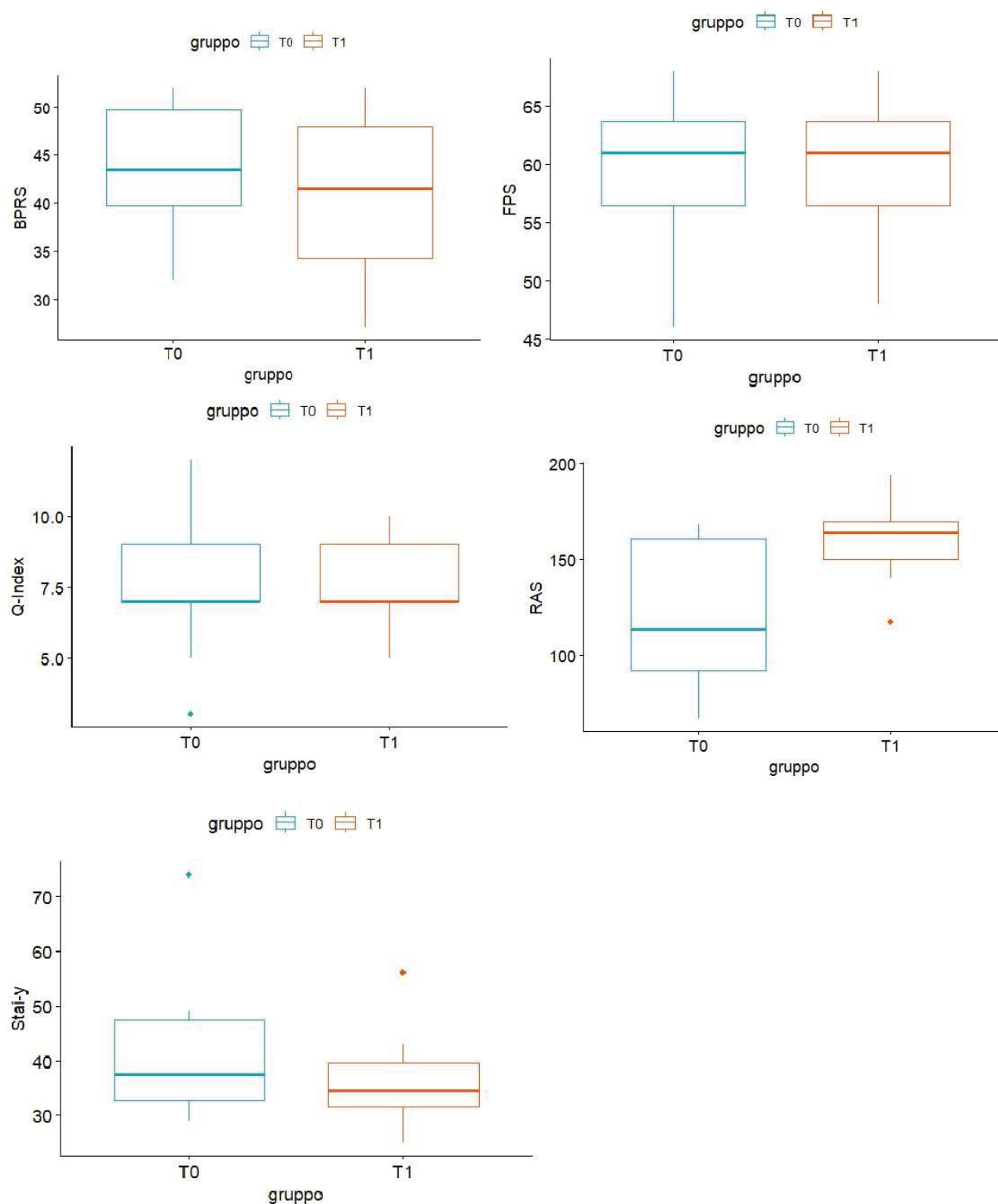


Figure 1. Box-plots of BPRS, FPS, Q-Index, RAS and STA-Y scores

Table 1. Characteristics of participants completing the Animal-assisted Intervention (AAI) (N=10)

| | |
|---|------------|
| Age, years (mean, SD) | 45.10±14.9 |
| Sex (male/female) | 6/4 |
| DSM V-TR diagnosis (N) | |
| Schizophrenia | 4 |
| Schizoaffective disorder | 4 |
| Bipolar disorder with psychotic symptoms | 2 |
| Years of education (mean, SD) | 9.8±3.9 |
| Number of psychiatric hospitalizations (mean, SD) | 1.3±1.1 |
| Age of first psychiatric visit (mean, SD) | 23.2±3.8 |
| Marital status: single (%) | 100% |
| Work status (employed/unemployed) | 5/5 |
| Had psychopharmacological treatment in the last 6 months (yes/no) | 9/1 |

BPRS (p-value = 0.022) and RAS scale (p-value = 0.006) showed a significant variation at time 1 compared to time 0.

In other scales, we found score variations at two times but the sample size is very small, in this pilot study, so we didn't found any statistically difference; in any case, these results are very encouraging so we would like to extend the sample size in the next future.

DISCUSSION

The primary aim of the current study was to assess whether animal-assisted intervention (AAI) is an effective treatment able to promote psychological well-being and recovery in patients with psychotic spectrum disorders. Observed benefits on symptom management and social functioning highlighted the AAI's potential to complement pharmacotherapy and psychosocial rehabilitation. This integration could particularly benefit patients who exhibit negative symptoms such as lack of motivation, in line with Tyssedal et al. (2023).

A peculiarity of our study is the fact that it was conducted in patients affected by psychotic spectrum disorders resident in psychiatric facilities following a recovery oriented psychiatric rehabilitation program. Recovery, according to Anthony' definition (1993), is the development of new meaning and purpose in one's life as one grows beyond the catastrophic effects of mental illness. In our previous study we had explored the feasibility of another recovery-oriented psychiatric rehabilitation intervention based on mindfulness in Italian Community Mental Health Center finding encouraging results (Litta et al. 2023).

Significative improvements were found for symptomatology as emerged from the BPRS scale's results. Aspect of recovery with a special focus on hope and determination were assessed by the RAS scale, which showed a significative difference between before and post intervention.

Of note, we followed strict Italian guidelines that allowed the welfare of the animals to be guaranteed, following the One Health approach. Strong points of our study are the presence of certified operators and the strict definition of the responsibilities and competences of each professional involved in the multidisciplinary team, according to Italian National Guidelines for Animal Assisted Interventions (2015). Liguori et al. (2023) have recently highlighted the importance of the involvement of veterinarians in Animal Assisted Interventions both to ensure the well-being of participating animals and as experts in the prevention of the transmission of zoonotic diseases.

Findings from this study suggested that AAI can be a valuable adjunct to other psychosocial rehabilitation interventions due to fact that it can facilitate interpersonal interactions and stimulate determination. These aspects are priority to achieve recovery in a patient with psychiatric disorders.

As a consequence, AAI could have a role in increasing social interaction and potentially improve recovery. Further studies are needed to explore this interesting connection.

CONCLUSIONS

Our data highlighted the feasibility of Animal-Assisted Interventions (AAI) in community mental health services. Moreover, our study underlined the opportunity of AAI in an integrative recovery oriented psychiatric rehabilitation program involving mental health department, psychiatric residential facilities and third sector organizations in a network activity.

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Conflict of interest: None to declare.

Contribution of individual authors:

Antonella Litta: writing, to bibliographic research and revision of the manuscript.

Debora Benazzi: data acquisition, administration of tests, writing and to bibliographic research.

Piero Carbutti, Elisabetta Attolino & Patrizia Manigrasso: collection of data.

Antonella Vacca: writing.

Anna Maria Nannavecchia: statistical analyses.

Anna Morelli & Anna Maria Sisto: data acquisition.

Maria Nacci: supervision.

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