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# New horizons in Greece

**SCAS member Evangelos Diamantakos shares findings from his recent research study, looking at how dog interaction affects the psychological status of female children in care institutions in Greece.**

**Diamantakos, E. 2009. *Dog interaction affects the psychological status of female children, aged between 7 and 11 years old, who live in an institution providing protection*, unpublished MSc dissertation, University of Southampton (UK), School of Psychology, Animal Behaviour Programme. For a full copy of the study, please contact the SCAS office.**



## Abstract

This study investigated the psychological status of female children living in a care institution in Greece. A within-participant design was used with 17 participants aged between 7 and 11 years old. The independent variables (IV) were the dog presence and the age of the child. The dependent variables (DV) were the children's psychological status as measured through standardised questionnaires, the children's demographics and their previous experience and attitudes to dogs. There were three conditions: baseline; immediately post animal-assisted activities (AAA) programme (time 1); one month post AAA programme (time 2).

The children were grouped into two teams of eight and nine each for the ages between 7–9 and 10–11 respectively. Both groups attended 10 AAA sessions with a female six-month-old dog and performed various tasks with the help of the researcher. Due to the sensitive nature of conducting research on children in care, ethical issues were explicitly considered in the design.

The participants showed increased scores of psychological status immediately after time 1 (group 1: mean: 3.3, st.dev: 0.70; group 2: mean: 2.99, st.dev: 0.80) relative to these exhibited at Baseline (group 1: mean: 2.9, st.dev: 0.89; group 2: mean: 2.72, st.dev: 0.89). The psychological status scores decreased at time 2, relative to time 1, (group 1: mean: 3.1, st.dev: 0.79; group 2: mean: 2.84, st.dev: 0.88) but remained higher to those achieved at Baseline, suggesting an increase in psychological health over time.

The dataset did not fit the requirements for parametric analysis. Non-parametric Spearman's correlations were conducted and no significant associations were found. Friedman's tests of difference were used as appropriate and significant changes across time were found for both overall psychological status and for each of the psychological subscales. The data did not suggest any association with any of the children's attitudes, nor demographic characteristics, nor experience with dogs. With regard to qualitative analysis, some interpretation of the data, based on the researcher's observations during the sessions and discussions with social workers of the institution, were provided.

## Introduction

The beneficial contribution of animals to human psychological health was well known in ancient times (Dale-Green, 1966). Since the early 1960s, there has been increasing academic interest in their potential role in the psychological uplift of children (McNicholas *et al.*, 2005).

Child development is an important process for both the body and the mind, with the period between 7 and 11 years old playing a catalytic role for the socialisation with the-out-of-family environment of children (Erikson, 1995). During this developmental process the loss of one or both parents may have unpredictable negative effects on the psychological development and state of children (Hetherington and Stanley-Hagan, 1999).

Morrow (1998) argued that child–pet interaction may not only provide emotional assistance but also increase the child's perception about the notions of affection and companionship. In the last three decades there have been various animal-assisted activity (AAA) and animal-assisted therapy (AAT) programmes operating in many western countries. These programmes are considered to provide children with a focus for their interest and attention, and may assist children to feel empathy, comfort, acceptance and relaxation, which aids the overall attempt to deal with and manage/cure physical or psychological problems (Therapy Dogs International, 2008).

Child protection institutions try to create an ideal environment to ensure the psychological health of the child and facilitate its development, through the support of psychologists. In an attempt to further improve the welfare of children living in such institutions this study aimed to explore the potential role of dogs through an

AAA programme. The hypothesis was whether interaction with a dog affects the psychological status of female children, aged between 7 and 11 years old, who live in an institution providing protection. The study took place in Greece where to the researcher's knowledge no AAA or AAT programmes were operating currently.

## Method

### Design

A within-participant design was used. The independent variables (IV) were the dog presence and the age of the child. The dependent variables (DV) were the children's psychological status as measured using the Pictorial Scale for Perceived Competence and Social Acceptance for Young Children (Harter and Pike, 1983), the Self-Perception Profile for Children (Harter, 1985), the children's demographics and their previous experience and attitudes to dogs. There were three conditions: baseline; immediately post AAA programme (time 1); one month post AAA programme (time 2).

### Location

The location was the Hatzikyriakio Institute of Children Protection, Piraeus, Greece (Hatzikyriakio). Hatzikyriakio is an all-girl institution, hosting children from families who are political refugees or facing various economic and/or social problems.

### Research tools

Questionnaire 1 – The Scale for Perceived Competence and Social Acceptance (Harter and Pike, 1983), in its Greek translated version (Makri-Botsari, 2001a), was used for children aged 7 to 9 years attending the 1st, 2nd and 3rd elementary classes.

Questionnaire 2 – The Self-Perception Profile for Young Children (Harter, 1985), in its Greek translated version (Makri-Botsari, 2001b), was used for children aged 10 to 11 years attending the 4th, 5th, and 6th elementary classes.

Questionnaire 3 – A questionnaire was designed to elicit basic demographic data and information about each child's individual previous experience of dogs, dog ownership and attitudes to dogs. The questionnaire comprised closed, open and Lickert type questions.

### Participants

The children were grouped into two teams according to age/class; Group one (7–9 years, n=8) and Group two

(10–11 years, n=9). The experiment was run with minimal disturbance to their normal daily routines.

### The researcher and the dog

The researcher acted as handler of the dog. He is a military dog trainer and animal behaviourist. The dog was a six-month female mix-breed called Carla, owned and trained by the researcher, using positive reinforcement methods. Carla was well socialized to people, including children and well socially referenced (McCune, McPherson and Bradshaw, 1995).

### Procedure

Day one: All participants answered the standardised questionnaires 1 or 2 appropriate to their age.

Day four: All children completed the customised questionnaire 3. They were then invited by the director of social services (DSS) of Hatzikyriakio to participate in an activity where they would interact with a trained dog. All girls participated voluntarily and none of them was familiar with the hypothesis being tested.

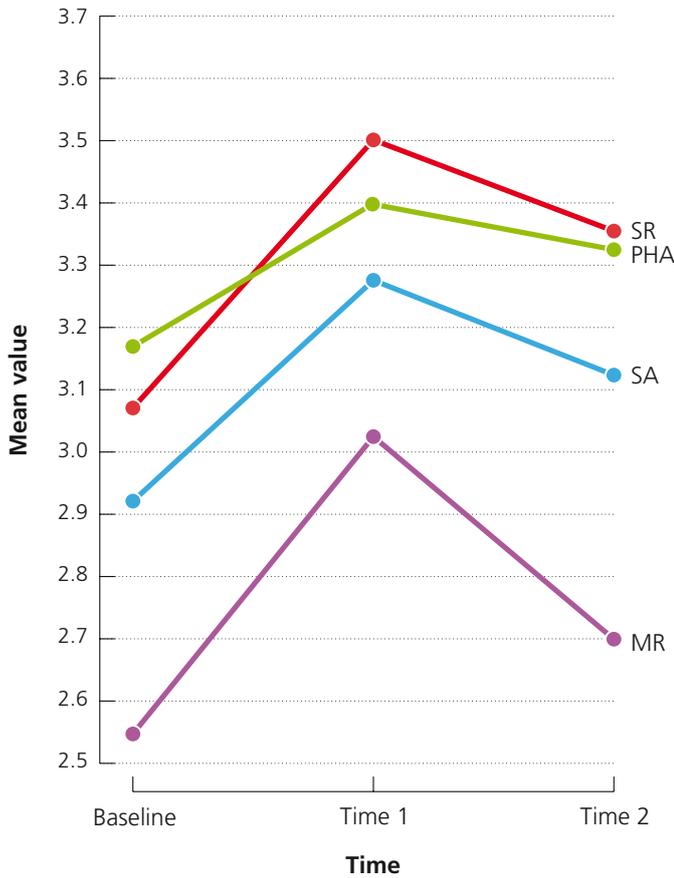
Day eight: First AAA session. Each group attended 10 sessions total with the dog and researcher. These sessions were conducted two or three times a week over four weeks.

Day thirty-one: Immediately at the end of the last session, the participants completed the standardised questionnaires 1 or 2 (time 1).

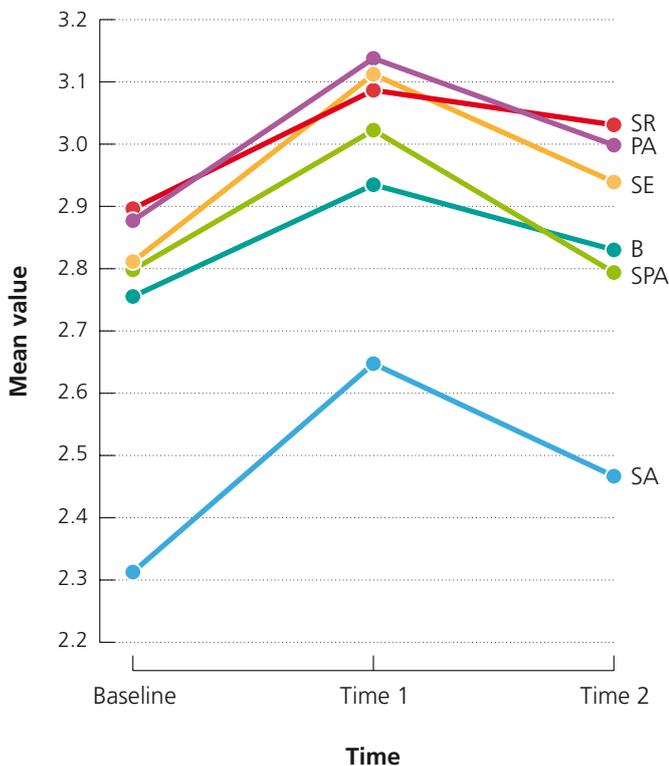
Day sixty-one: One month after the last session with the dog, the children completed again the standardised questionnaire 1 or 2 (time 2).



The Hatzikyriakio Institution where the sessions took place and Carla, the dog used in the AAA sessions.



**Figure 1:** Mean change of the psychological subscale scores across time, Group 1



**Figure 2:** Mean change of the psychological subscale scores across time, Group 2

**Conduct of the sessions**

Each group of children attended the sessions separately. The children observed the researcher interacting and positively (food reward) train the dog for a total of three minutes. In parallel the researcher was demonstrating and briefing the participants about the task that they would perform. Then, each child was asked to participate in this process and individually interact with the dog with the help of the researcher, if necessary, for a total of three minutes. During each session the children were introduced to a new dog training task that was already known by the dog. Between the two groups of children the dog had a 30-minute rest period, when she was walked by the researcher, out of the view of the children, could drink water, play with her favourite ball or just rest.

**Results**

**Data analysis**

The statistical package for the social sciences (SPSS version 15) was used to analyse the data.

The dataset did not fit the requirements for parametric analysis and non-parametric Spearman’s correlations and Friedman’s test of difference were used as appropriate.

**Psychological scores**

Figures 1 and 2 (left) show the mean change of psychological subscale scores across time for Group 1 and Group 2. The subscales are: SA, School Ability; SR, Same Age Relationships; PHA, Physical ability; MR, Relationship with mother; SA, School ability; SR, Same-aged relationships; SPA, Sport ability; PA, Physical appearance; B, Behaviour; SE, Self esteem.

**Friedman’s test**

For both group 1 and 2, significant changes across time were found for both overall psychological status and for each subscale.

**Qualitative data analysis of individual cases**

Questionnaire 3 provided qualitative data for some of the individual cases.

Three girls (IDs: 1, 3 and 10) answered “No” they would not like to own a dog. The girl with ID 11 whilst answering that she would like to own a dog and help train a dog, did not wish to meet a trained dog.

The girls with IDs 14, 15, 17 stated that they had a previous accident/bad experience with dogs. The girl with ID 3 said that she was afraid “All the time” she was meeting a dog she did not know. The girls with IDs 1, 11, 14, 17, 2 and 12 answered that “Some of the time” they were feeling afraid when meeting a dog they do not know.

For all these cases mentioned above the researcher talked with the social worker who offered relevant information for each child. After their discussion both agreed to suggest to the children to be present at the first dog session and then decide whether they would like to stay or leave. Interestingly,

all girls (n=8) decided to be present and stay. Moreover, and despite some reserved behaviour they showed during the first session, they started feeling relaxed and acted comfortably during the following nine sessions. The fact that they were not forced to participate seemed to have let them come to their own decision, choose to actively participate in all 10 sessions and perform all tasks.

## Discussion

Theoretically speaking there are numerous factors/reasons that may potentially affect children's psychological condition. Keeping in mind this fact and without depreciating the possible existence of other factors/reasons, it could be argued that the participants' interaction with the dog seemed to have at least contributed positively to their psychological uplift (McNicholas *et al.*, 2005). Moreover this increase of their psychological status seemed to have some lasting positive effects for a one month period since the last session of the AAA programme.

In an attempt to look deeper into the possible effects that the whole procedure could have it is noticeable that all children exhibited an increased participation and interest about what was going on during the sessions. The dog's presence appeared to have attracted their attention and curiosity. The dog's physical appearance and friendly character/behaviour may have made children feel safe and at ease while being with her (Kidd and Kidd, 1985).

## Conclusions

The findings revealed that the AAA programme followed seemed to have played an important role in the psychological uplift of children. While the psychological tests did show the beneficial role of AAA, this progress cannot be seen as a panacea but rather as an additional part of a more integrated effort. Thus AAA may be designed to be introduced in existing methods already followed by institutions providing child protection.

For the one month period that the sessions took place, Carla had become the centre of interest for these 17 children. They were talking about her, they were comparing their



performances during the sessions and they were trying to monopolise Carla's attention and interest. For these reasons interactions with Carla had the effect of minimising or even negating previous negative feelings, bias or ideas about dogs among children who had a negative predisposition.

## Future directions

The researcher hopes that his present study may encourage and inspire further research in this area in Greece. The present findings may help future researchers and stand as a base for a more detailed investigation and analysis in an overall attempt to further improve the welfare of children living in institutions providing protection. Moreover, their possible combination and analysis with other results in the same area may shed light on different aspects and open new horizons for the introduction of AAA programmes in Greek institutions involved in child education, care and protection.

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## About the author

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