UNIVERSITY OF CAMBRIDGE

Greek Society for the Protection of Autistic People

A case study of the use of structured teaching & the principles of TEACCH method in adults with autism in a residential home in Greece

Panagiotis Siaperas[1], Julie Beadle-Brown[2], Stephen Higgins[3] & Pantelis Proios[4]

University of Cambridge[1], University of Kent[2], Institute of Psychiatry, London[3], UK

Greek Society for the Protection of Autistic People[4] , Greece

Correspondence to:
panagiotis.siaperas@gmail.com

Introduction

The Greek Society for the Protection of Autistic People (G.S.P.A.P.) established the first residential home for people with Autism in Greece, which used a training programme, based on structured teaching and the principles of TEACCH method.

Hypotheses

- Investigate the effectiveness of TEACCH in specific areas of functioning (Personal Independence, Social Abilities & Functional Communication).
- Verify the effectiveness of TEACCH on people with autism in Greece who had never previously received any kind of intervention.
- Investigate the frequency of behavioural problems of the residents in 3 different time periods: **1)**during the first month in the residence *(Time I)* , **2)** after 12 months (*Time II),* **3)** after 18 months (Time III), following the training in the residence.
- Future establishment of residences in Greece.

Methods

Design

The design was a repeated measures design looking in changes over time of following structured teaching and the use of other elements of the TEACCH method.

The training programme

Basic elements of TEACCH and structure teaching were used with each individual – the exact nature of the programme was determined by the history and the level of functioning of the individual. The programme was kept simple because the residents were transferred from home or mental health institutional settings and they did not have any previous experience of training in a structured environment. Basic aspects of structured teaching and the principles of TEACCH that were used in the residence were:

1. Strong cooperation between the staff-team and the parents: Parents were educated to use structured teaching and TEACCH principles at home.
2. All the areas were physically arranged so that the residents had continual visual cues in order to understand what was expected from them. Different areas were designated for each activity.
3. Daily visual schedules based on each person's ability were used: a schedule of work and play was displayed.
4. Strong work rules such as **"**first work and then play**"** were used. Each activity was designed to positively reinforce the residents.
5. A transition area is a special area where schedules were displayed and where each person could replace a symbol from a completed activity with one for the next activity.
6. Structured activities: all the activities were structured whether they were work based activities, personal care, outdoor activities or meal times.
7. Visual prompts were employed in order to maximise success in the daily activities.
8. The programme tried to enhance skills, accept deficits, and some routines that sometimes were distracting were tried to be used in a positive way and transform in something productive (Schopler, Mesibov, & Hearsey, 1995).

Participants

There were 12 participants in the study (*M*-age 21.3, Range 16-30, men = 8, women = 4): all were diagnosed with autism according to the criteria of both the Childhood Autism Rating Scale (CARS), (Mesibov, et.al, 1989) and the DSM- IV (American Psychiatric Association, 1994). All the participants also had intellectual disabilities ranging from mild to severe. None of them had previously experienced the TEACCH approach. They had lived in the parental home or in psychiatric hospitals before moving to this residence.

Materials

Questionnaire: A questionnaire was used to interview the trainers of the residents. It was based on the Vineland Adaptive Behaviour Scale (Sparrow, et.al, 1984) with Likert-type questions and modified in order to access ***Personal Independence, Social Abilities*** & ***Functional Communication*** only.

Observation checklist: In addition to the questionnaire, participants were observed during their daily activities. The observation check–list had columns denoting the two different categories of behaviours that where observed *("Activity" & "Social Behaviour")* and their subcategories and rows denoting successive sample intervals of one minute (Martin & Bateson, 1993).

Frequency sheet of behavioural problems: A check-sheet was designed to summarize the frequency of behavioural problems over a month for Time I, II & II, which was available at the ABC record of each participant (Emerson, 1995; Desrochers,et al, 1997; Martin, & Baterson, 1993). Behavioural problems were categorised in six clusters of behaviours: 1) *Self-stimulation*, 2) *Self-injury*, 3) *Aggression to others*, 4) *Damage to property* 5) *Inappropriate vocalisation* 6) *Other* (any other inappropriate behaviour).

Procedure

Questionnaire: The questionnaire was completed by a trainer and an assistant trainer. As such 24 questionnaires were collected, two on each participant. The two sets of data were used to check inter-informant reliability. The staff-team completed the same questionnaire after 6 months.

Observation: The observation was structured by observing each participant in three 10-minute sessions during the day. Specific scoring criteria were developed for looking at certain actions and speech patterns that occurred in the two behavioural categories. Category definitions were as used in Beasley, et. Al., (1993). An one-zero sampling was used with a time interval of 1 minute. This procedure was repeated after six months.

Frequency sheet of behavioural problems: According to the ABC records for each participant for Time I, II, & III the frequency of behavioural problems was summarised at the frequency check-sheet. (Carr, 1994).

Results

Inter-informant reliability

The average Kappa value for each category of behaviour and each time point was calculated. Average Kappa values are acceptable (over 0.6) for all categories and time points apart from Social abilities in Time I where the average fell just below 0.6.

Results on Personal Independence, Social Abilities & Functional Communication.

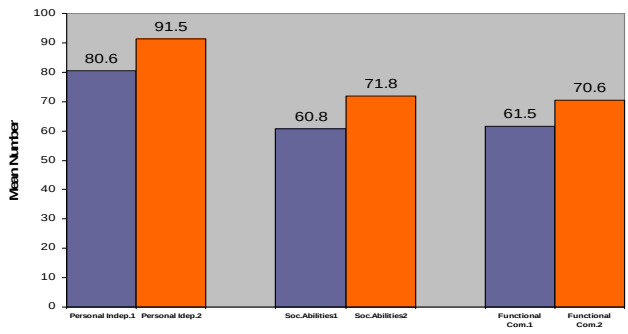
The comparison of responses of the trainers between Time I and Time II, indicated significant improvement in the three domains that were investigated **(Figure I):**
Personal Independence: $z = 3.062$, $N = 12$, $p = < 0.01$,
Social Abilities: $z = 3.063$, $N = 12$, $p < 0.01$,
Functional Communication: $z = 3.062$, $N = 12$, $p < 0.01$.

In observation, people spent more time engaged in *"Activity"* and in *"Social Behaviour"* at Time II compared to Time I: ($z = 3.074$, $N = 12$, $p < 0.01$, $z = 2.956$, $N = 12$, $p < 0.01$, **Figure II**).

Results on the Frequency of behavioural problems

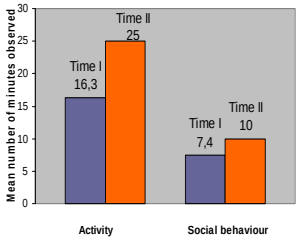
All the clusters of behavioural problems presented significant decline in their frequency across the three time periods that were measured: $p<0.01$ **(Figure III)**.

Figure I: Level of Performance in Time I and Time II



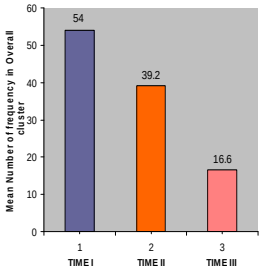
significant at $p < 0.01$

Figure II: Minutes spent in each behaviour



significant at $p < 0.01$

Figure III: Frequency of behavioural problems



significant at $p < 0.01$

Conclusions

- TEACCH approach program is quite beneficial for adults and adolescents with autism in Greece. It observed overall significant improvement in the skills that were explored.
- Data from the observation give evidence of the effectiveness of the TEACCH approach programme.
- There is a significant reduction of behavioural problems.
- The current small-scale case study is the first ever done in Greece.
- This is a small scale study with limitations such as: limited period of time, small sample, absence of a control group and staff-team did not have official TEACCH training. However, it gives valuable information for the development of services for people with Autism in Greece.

Acknowledgments

We are very grateful to the staff-team of the residence, the residents who participated and their parents. Also we would like gratefully to acknowledge the Executive Committee of the Greek Society for the Protection of Autistic People for their help and cooperation in the study.