

REHABILITATION IN AUTISM SPECTRUM DISORDER: A THREE YEAR LONGITUDINAL STUDY

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INTRODUCTION

Autism Spectrum Disorder (ASD) includes a group of developmental disabilities characterized by patterns of delay and deviance in the development of social, communicative, cognitive skills and the presence of repetitive and stereotyped behaviors as well as restricted interests [1]. The Treatment and education of autistic and related communication handicapped children (TEACCH) [2] showed good results in motor skills, cognitive performances, social functioning and communication when compared to standard interventions [3]. To the best of our knowledge, no longitudinal observation study has been published regarding the efficacy of the TEACCH after a long period of treatment.

AIM OF THE STUDY

The aim of this study was to investigate the efficacy of a continuously intensive and personalized approach of the TEACCH intervention used by the "Il Cireneo" Foundation on daily living functional abilities of individuals with a diagnosis of ASD after three years of continuously rehabilitative intervention.

METHODS

Individuals with ASD were recruited at the "Il Cireneo" Foundation for autism in Vasto, Italy. Seventy-nine (n=79) patients (nineteen females [24.1%] and sixty males [75.9%], mean age=13.41; SD=6.93) underwent a personalized and intensive psychoeducational program based on TEACCH for three years. Patients were tested in two phases: before the treatment (T0) and after three years of the rehabilitative intervention (T1). The Vineland Adaptive Behavior Scale (VABS) [4] were used for the clinical assessment before and after the rehabilitation treatment. Every six months, patients were newly tested to better personalize the rehabilitative intervention depending on the progress made. The Statistical Package for Social Sciences (SPSS, version 13) program [5] was used for the statistical analysis. Pared Samples T-Test was performed to verify the mean differences of the scores between the two phases of the study.

SUMMARY

After three years of personalized and intensive rehabilitative intervention, "Communication" $t(-2.750)$, "Daily Living Skills" $t(-6.52)$ and "Motor Skills" $t(-3.524)$ subscales of VABS showed a statistically significant improvement ($p<.05$). On the other hand, "Socialization" subscale of VABS was also improved, but without a statistically significant effect $t(0.443;p>.05)$.

	Pre-treatment		Post-treatment		T-Student	P
	M	SD	M	SD		
Communication	91,16	38,153	107,62	72,947	-2.750	p<.05
Daily Living Skills	111,16	47,844	156,52	74,143	-6.526	p<.05
Socialization	91,39	25,686	89,99	44,423	.443	p>.05
Motor Skills	105,23	16,943	112,91	25,777	-3.524	p<.05

DISCUSSION

Even if communication is a core symptoms of autism, and for this reason, it is very difficult to modify, with the rehabilitation intervention, autism people showed a better communication of needs and requirements. In author's opinion, improvements in daily living skills represent the most important target for rehabilitation in autism spectrum disorder. Motor alterations are not a core symptom of autism, but a number of study highlighted frequent problems in fine and gross motor skills. With the intensive rehabilitation, patients were less clumsy and more precise in motor tasks.

CONCLUSIONS

The authors want to highlight that people with ASD can reach, with a global, intensive and personalized rehabilitation treatment sufficient daily living skills, very important in reaching an independent life. Socialization didn't show a statistically significant effect maybe because it is a core symptoms of ASD, and for this reason very difficult to modify. Moreover, individuals we enrolled in the study had some comorbidities (seizures and/or genetic syndromes) that might alter final scores. No one person with a diagnosis of ASD can reach a complete recovery from this pathology, but affected people can become more independent individuals.

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