

AutismPro<sup>®</sup>

# Research Abstracts



# Introduction

This document is a summary of four research projects around the world studying the application of AutismPro to programs for children with autism. The majority of the research to-date has focused on use of the program by parents, all of which has found positive results for children with autism, and the need for autism specialists to be involved with the implementation and ongoing use of the program.

The latest research has been looking at use of AutismPro in the school system by regular education teachers and teacher assistants. This research has found that the wealth of educational material and easy-to-apply resources area a valuable help. Again, there was judged to be a need for autism specialists to be involved with the implementation and ongoing use of the program.

The following lists the research projects summarized in this document:

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## Abstract 1

# AutismPro in Regular Schools

**José Snijders**

Special Education Masters, Fontys University, Tilburg, Netherlands, June, 2008

**Question:** How can an autism specialist support teachers in regular primary schools with AutismPro?

**Background:** The version AutismPro Professional of the program was made to help parents work at home with their children with autism. The idea of the research was to find out if it was realistic and possible to use this version of the program at school, and to what degree of independence from autism specialists.

**Design:** A survey study with post-use measures.

**Setting:** A regular primary school in Baarle Nassau, Netherlands.

**Participants:** 3 teachers, each working with one child with autism, the parents of these children, and each child's teacher assistant.

**Intervention:** Parents received a training session with AutismPro. The teacher and examiner collectively made up profiles in the system for each child. Teachers then began working with the activities recommended by the program and logged progress. The examiner was available for help and information when necessary.

**Measures:** The teachers and parents were surveyed after 3-4 months of working with the program. Questions addressed their opinion of the program, the profile, the activities, strategies, supports, necessary help and child progress.

**Results:** Participants had positive experiences with working with the program. The profile and recommended objectives was judged to be useful for making up the next step in education. The content was useful in seeing progress in the child's skills and behaviors. The following of special strategies and arranging new activities as the program progressed needed more special knowledge and experience, especially due to lack of mastery of the English language.

**Conclusion:** To make up a profile and work continually with the program it's necessary that an autism specialist helps the teacher. Support, control, and encouragement by such a specialist will help ensure successful use of the program. When people feel the positive effect of AutismPro on student skills and behaviors, they like to work with it. However the teacher will need help balancing its use with other demands to teach the standard curriculum.

## Abstract 2

# A Pilot Study of a Web-Based, Interactive Learning Software Program for Parents of Children with Autism Spectrum Disorders

Jennifer S. Nachsen, Nathalie Garcin

Presented at IASSID, Cape Town, 2008

**Question:** Is it possible for parents to use software (i.e., AutismPro) to conduct a home program and improve child outcomes?

**Background:** Children diagnosed with ASD benefit from intensive behavioral interventions early in life (Canadian Pediatric Society, 2004). However, due to waiting lists and limited hours of services, families have difficulty accessing timely services after an ASD diagnosis. Programs that can help fill the service gap after screening or diagnosis could have a positive impact for families and the community.

**Design:** A pilot study of Autism Pro with pre- and post-intervention measures.

**Setting:** Home settings in Quebec.

**Participants:** 20 children aged 21 to 114 months (mean age of 54 months) on the waiting list for Abe Gold Learning & Research Center in Montreal were invited to participate, 10 families completed both pre-and post-measures.

**Intervention:** Parents received a 3-hour training session with AutismPro representatives and were entitled to one monthly 2-hour home visit, telephone and email consultation, and monthly parent support meetings for a period of 4-5 months.

**Measures:** The children were assessed at the beginning and end of the study using the Pervasive Developmental disorder Behavior Inventory (PDDBI; Cohen & Sudhalter, 2005), the Parenting Stress Index (PSI; Abidin, 1995), the Family Empowerment Scale (FES; Koren, DeChillo, & Friesen, 1992), and the AutismPro Review Questionnaire (Virtual Expert Clinics, 2006) measuring consumer satisfaction. An outside observer rated levels of commitment and analyzed causes of attrition.

**Main Results:** The sample size was too small to provide adequate power to detect statistical significance, therefore, effect sizes were calculated. Positive changes were associated with the intervention, as revealed by small to medium effect sizes for many of the subscales of the PDDBI and a statistically significant decrease in Autism Composite Score. Although changes in parenting stress and parent empowerment were not statistically significant, differences were generally in the expected direction. Medium effect sizes were found for decreases in

parent stress related to the child's distractability or hyperactivity, and experiencing the child as a source of reinforcement. A small effect size was found for a decrease in stress related to the parent's feeling of attachment to the child. The only unexpected change was a small increase in stress related to the parent's relationship to his or her spouse; however, increases in marital strain are not unusual at the beginning stages of an intervention. Parents reported being satisfied with the program. Attrition was perceived to be linked to parental time constraints, unfamiliarity with computers, preferring alternate services or obtaining services outside the home.

**Conclusion:** For those who completed the program, the AutismPro intervention had a positive effect on the skills and behavior of children with ASD. Attrition may be reduced if AutismPro was used in a service context rather than a parent-run home program, and/or if parents fit a specific profile (e.g, computer-savvy, highly motivated). Parents may also require additional hours of training and support to motivate ongoing and continuous use of the program.

### Abstract 3

## Internet Tool as a Support in Autism Therapy: Efficacy of Consultative Model of Autism Treatment with Use of the AutismPro System

Ewa Pisula, Anna Waligórska, Michał Waligórski, & Maciej Letachowicz

Unpublished, Warsaw, 2008

**Question:** Is AutismPro effective in creating better child outcomes?

**Background:** Acquiring the knowledge necessary to choose the proper form of autism therapy is a major challenge for parents. Parents use the Internet to understand autism and seek advice, however, this information is typically weakly related to the process of child's therapy. This research examined a more consistent form of Internet support for parents – an interactive web-based software tool (AutismPro), combined with a consultative therapy model.

**Design:** A randomized experimental trial with pre- and post-intervention measures.

**Setting:** Observations and consultations took place in the SOTIS Therapy Center and in the Masovian Center of Psychiatry and Rehabilitation for Children and Adolescents (Warsaw, Poland) and were supplemented by activities at home by the parents.

**Participants:** 10 families of children with ASD meeting the diagnostic and age criteria were enrolled. Nine families who completed both pre- and post- intervention assessment were included in the study. All of the children had a diagnosis of autism or PDD-NOS and exhibited autistic traits of behavior, confirmed by specialists. Age of children ranged from 3 to 7 years in age (M=4.84).

**Intervention:** After formulating the program on the basis of assessment of the child, parents were trained in techniques of conducting activities and in using the AutismPro program. During consultations (2.5 hrs/month), the program was adapted to current progress according to behavioral assessment, real life observation and video recordings of activities completed at home. Between consultations, parents conducted activities with their child at least 10 hrs a week, using their AutismPro account for support.

**Measures:** The developmental level of children was measured with the Psychoeducational Profile – Revised (PEP-R) pre- and post-intervention. An AutismPro survey measured parental opinion.

**Main Results:** Children demonstrated significant improvement on the total post-test PEP-R score, as well as on the Fine Motor, Gross Motor, Cognitive Performance, Eye-hand Integration,

and Cognitive Verbal subtests. Results indicated an average of 9 months of developmental progress after 6 months of AutismPro. Parents strongly favored the program.

**Conclusion:** These results suggest that the AutismPro consultative model was highly effective in improving the cognitive and developmental skills of children with autism. Unequivocally positive participants' opinions on the usefulness of the naturalistic and integrative approach applied in the AutismPro program supported the application of AutismPro in partnership with parents.

## Abstract 4

# Parent Participation in Early Intervention with Software-Assisted Guidance from AutismPro

**Cynthia Howroyd, Theo Peeters**

*The Good Autism Practice Journal*, Oct 2007, University of Birmingham

**Question:** Is it possible for parents to use software (i.e., AutismPro) to receive guidance for their child with autism?

**Background:** Children diagnosed with ASD benefit from intensive behavioral interventions early in life. However, due to waiting lists and limited hours of services, families have difficulty accessing timely services after an ASD diagnosis. Programs that can help fill the service gap after screening or diagnosis could have a positive impact for families and the community.

**Design:** A survey study.

**Setting:** Computer lab and home settings in Ontario.

**Participants:** A total of 46 families with 52 children aged 2 to 9 years were randomly recruited from parent-list invitations through autism organizations in Ontario. Of those who had received a subscription to the tool, 28 families (57%) completed the survey.

**Intervention:** Parents received a one-day training session at a computer lab with AutismPro representatives and were entitled to a free subscription to AutismPro for a period of 4 months to use in their homes.

**Measures:** A survey was designed to measure the usability, usefulness, and perceived value of AutismPro by parents. The survey was sent and returned by the internet and was in a digitized, multiple choice format.

**Main Results:** All users agreed that the software was user-friendly, its content easy to understand. Most agreed that the software was useful in guiding or managing intervention with their child. All agreed that the tool was valuable, and that they would recommend it to other parents. The majority reported that a sense of empowerment and control was the greatest value from using AutismPro.

**Conclusion:** Parents appeared very receptive to use of AutismPro as a support for them following a diagnosis of autism for their child.