



What changes in preschoolers with ADHD symptoms after a 14 week Parental Intervention: Preliminary results

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INTRODUCTION

With the increase of preschoolers diagnosed with ADHD, and the cautious recommended in the use of pharmacological treatment in young children (1), psychosocial interventions that include parent training hold promise as a treatment tool for this age (2). The Webster-Stratton *Incredible Years Basic Parenting Programme* (IY) has been delivered in different countries for the past 30 years and is widely recommended as an evidence-based programme (2). Research indicates that the IY is effective in reducing both symptoms of Attention Deficit/Hyperactivity Disorder (ADHD) and Oppositional Defiant Disorder (ODD), helping to counteract the parent and family risk factors by teaching parents about positive, non-violent discipline methods and supportive parenting approaches (3, 4, 5, 6, 7).

GOALS

The purpose of this paper is to report the analysis of preliminary data on the efficacy of the IY in a sample of Portuguese preschoolers with ADHD symptoms: results concern the pre-post comparison in core symptoms of ADHD and overall difficulties of children, as reported by mothers.

METHODS

SUBJECTS

50 participants between 3-6 years of age scoring above the borderline or clinical cut-off points of the *Strengths and Difficulties Questionnaire* (SDQ - Total of difficulties used as screening), and ADHD markers of the *Werry-Weiss-Peters Activity Scale* (WWP) or the *Parental Account of Child's Symptoms - ADHD Scale*. None of these children are under any kind of pharmacological or psychological intervention. Subjects were randomly allocated to either an IY intervention group (IG; n=27) or a waiting-list control group (CG; n=23).

Table 1 – Socio-demographic characteristics of the sample

	IG (N=27)	CG (N=23)	p
Children			
	Age	M=4.2 SD=.9	M=4.4 SD=.8
Sex			
		30% F 70% M	22% F 78% M
Mothers			
	Age	M=36.7 SD=6.0 (27 - 57)	M=34.7 SD=6.8 (24 - 44)
Years of Education			
		M=14.2 SD=4.3 (4 - 19)	M=13.4 SD=3.0 (9 - 17)
Marital Status			
		85% (married) 15% (divor/sep/parate)	77% (married) 23% (divor/sep/parate)
Socioeconomic status			
		15% (higher) 52% (medium) 33% (low)	0% (higher) 57% (medium) 43% (low)

MEASURES

All the mothers in the screening phase filled in the **SDQ** (8), a 25-item parent rating scale, which provides different results (total score of difficulties; hyperactivity-inattention, conduct, emotional, peer problems and prosocial subscales). In a second stage, mothers filled in the **WWP** (9), a 27-item parent rating scale, which provides a single overall rating of hyperactivity symptoms. In the broader research of which this study is a part of, subjects were also assessed using a range of other measures of primary and secondary outcomes (psychological tests, interviews to parents, rating scales administered to parents and teachers, and an observation coding system of child-parent interaction) at baseline (**pre-intervention**), 6 (**post-intervention**), 12 and 18 months after baseline. In the present study all the analysis were performed using non-parametric tests.

INTERVENTION

Incredible Years Basic Parent Training Program was delivered in groups of parents (8-12 parents) through 14 weekly sessions, by two group leaders (either certified or under supervision for certification). Groups were run in the University building in the evenings (from 6 to 8 pm) during approximately 2 hours sessions. Child care and snacks were provided. The **main goals of the programme** are: to strengthen parent-child relationship and encourage child cooperation; to increase parents' nurturing and positive parenting skills; to encourage effective limit setting; and to promote the use of non-violent discipline strategies. **Issues** like play, descriptive comments, praise and rewards, household rules and routines, clear commands, ignore, time-out, consequences and problem solving are addressed (Figure 1). **Sessions** are run in an atmosphere of collaborative learning and problem-solving. In each session leaders review the previous session and parents home activities; develop a new topic; present video vignettes illustrating parenting skills; promote group discussion and the practice of new strategies.

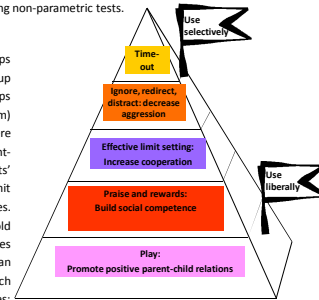


Figure 1. Incredible Years Pyramid

RESULTS

- IG:** Results from the pre-post comparison indicate **significant differences in the level of parent-reported overall difficulties** ($M_{pre}=17.88$ $M_{post}=14.52$; $p=0.006$) (Figure 2) and **ADHD behaviours [WWP]** ($M_{pre}=34.08$ $M_{post}=24.70$; $p=0.000$); **Hyperactivity subscale of SDQ** ($M_{pre}=8.20$ $M_{post}=7.16$; $p=0.005$) (Figures 3, 4).
- CG:** There are no significant differences in the pre-post comparison.
- IG vs CG:** Results from the post comparison between groups show a **significant difference in the level of parent-reported overall difficulties** ($M_{IG}=14.52$ $M_{CG}=17.60$; $p=0.013$) (Figure 2). There were no significant differences between groups with regard to ADHD behaviours in the post test. However, when comparing the groups according to the **amount of change that occurred from pre to post test**, results indicate a significant difference in WWP ($M_{IG}=-9.37$ $M_{CG}=2.47$; $p=0.010$) only in the intervention group (Figure 3).

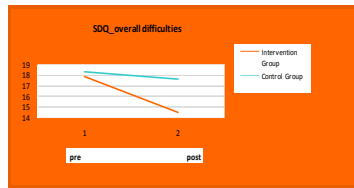


Figure 2: Mean differences of SDQ overall difficulties in pre-post moments (mothers' perceptions)

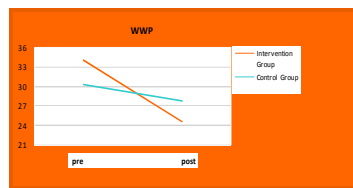


Figure 3: Mean differences of WWP in pre-post moments (mothers' perceptions)

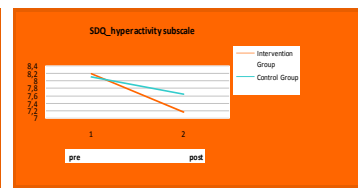


Figure 4: Mean differences of SDQ hyperactivity subscale in pre-post moments (mothers' perceptions)

DISCUSSION



Figure 5. Portuguese version of the Incredible Years Book

- Results must be carefully interpreted taking into account the small sample size. Nevertheless, preliminary results suggest that in the **short term (6 months), intervention is associated with more positive outcomes for children** (a reduction of hyperactivity symptoms and global difficulties), as reported by mothers, **suggesting that this could be an effective intervention for preschoolers with ADHD symptoms**.
- To clarify the intervention impact in Portuguese preschoolers with clinical risk for ADHD, **future studies must include:** larger randomized samples; different informants; secondary outcome measures (parenting skills; parent-child interaction) and extension of the follow up to a broader period of time (12 and 18 months after baseline).

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