

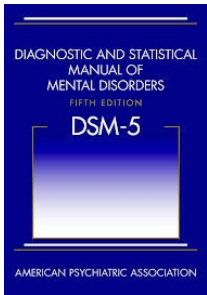


IRCCS FONDAZIONE  
**STELLA MARIS**



**Il disturbo dello Spettro  
Autistico:  
dall'epidemiologia al  
trattamento research  
based**

**Antonio Narzisi, *Ph.D.***



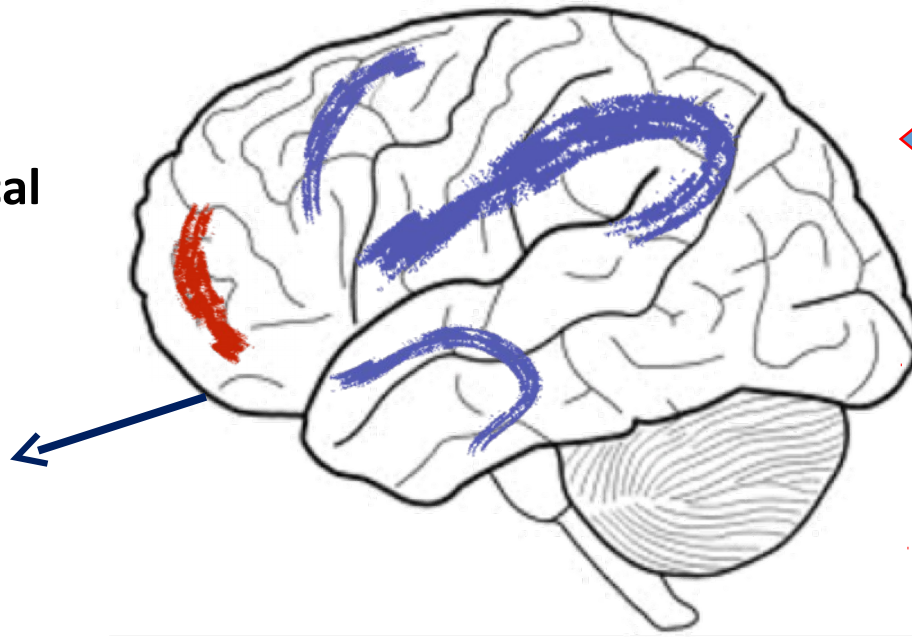
**A.** Persistent deficits in social communication and social interaction

**B.** Restricted, repetitive patterns of behavior, interests, or activities

Genes X Environnement

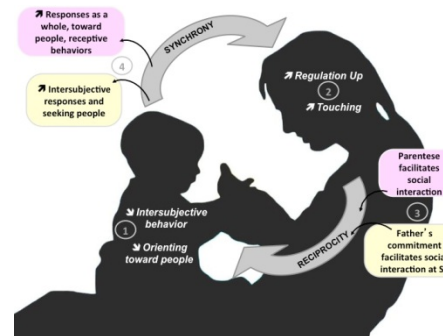
## Neuropsychological Functions

- Theory of Mind (ToM)
- Empathy
- Central Coherence Theory
- Memory
- Attention
- Language
- Perception
- Executive Functioning



**Treatment**

Social and not social behaviour



## **1. Perché studiare l'epidemiologia ?**



**Epidemiologia**

```
graph LR; A[Epidemiologia] --> B[Prevalenza - Quanti casi?]; A --> C[Fattori di rischio - Eziologia]; A --> D[Prevenzione - Sviluppo di programmi]; A --> E[Suggerire interventi riabilitativi - EBM]; A --> F[Valutare gli effetti economici - analizzare il rapporto costi/efficacia];
```

**Prevalenza – *Quanti casi ?***

**Fattori di rischio – *Eziologia***

**Prevenzione – *Sviluppo di programmi***

**Suggerire interventi riabilitativi - *EBM***

**Valutare gli effetti economici - analizzare il rapporto costi/efficacia**

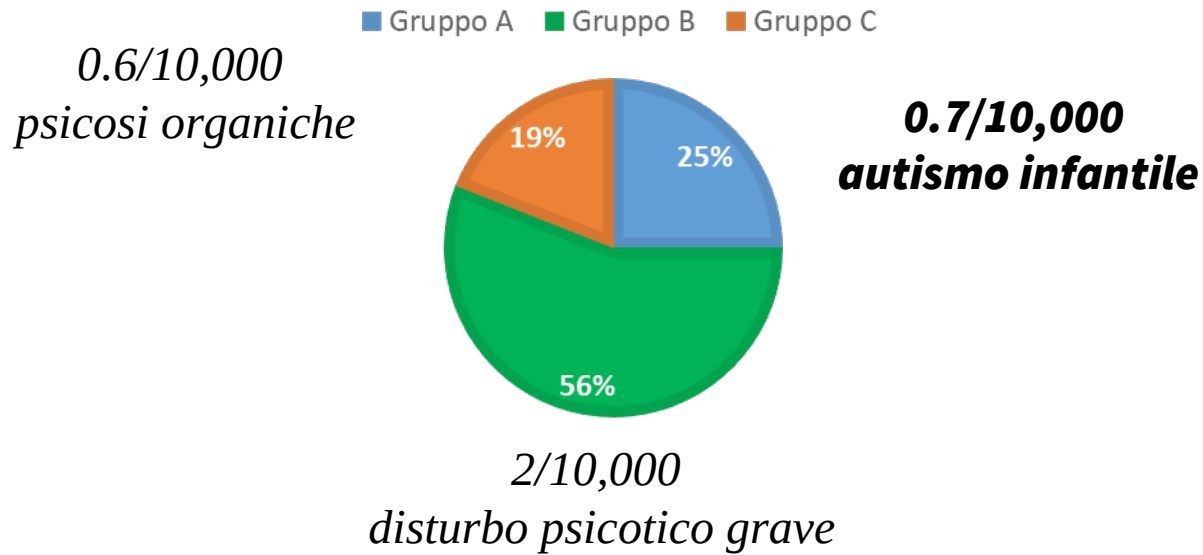
## **2. Prevalenza dell'autismo in USA**



# Epidemiology of Infantile Autism

Darold A. Treffert, MD, Winnebago, Wis

**Maggio 1970**

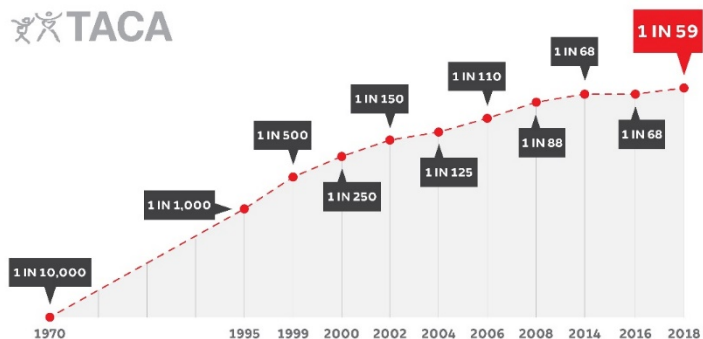


## Prevalence of Autism Spectrum Disorder Among Children Aged 8 Years — Autism and Developmental Disabilities Monitoring Network, 11 Sites, United States, 2014

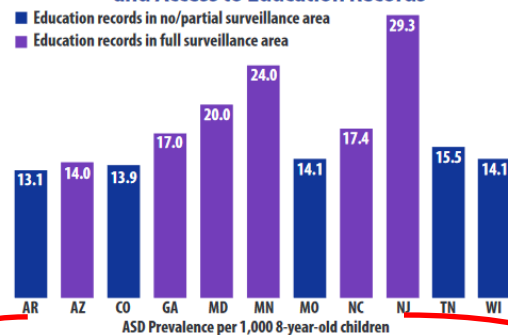
**1 in 59**  
children living in  
ADDM sites are  
identified with ASD



TACA



### ASD Prevalence by Site and Access to Education Records



### A Snapshot of Autism Spectrum Disorder in Arkansas

Findings from the Arkansas Autism and Developmental Disabilities Monitoring (AR ADDM) Program help us to understand more about the number of children with autism spectrum disorder (ASD), the characteristics of those children, and the age at which they are first evaluated and diagnosed.



**1.3%**

is lower than  
the average percentage  
identified with ASD in 2014  
1.7% in all ADDM sites



**1 in 77**

8-year-old children  
were identified with ASD  
by AR ADDM in 2014

### A Snapshot of Autism Spectrum Disorder in New Jersey

Findings from the New Jersey Autism Study (NJAS) help us to understand more about the scope of autism spectrum disorder (ASD) in children, describe the expression of ASD in those children, and identify disparities in the prevalence or detection of ASD.



**3.0%**

is higher than  
the average percentage  
identified with ASD in 2014  
1.7% in all ADDM sites



**1 in 34**

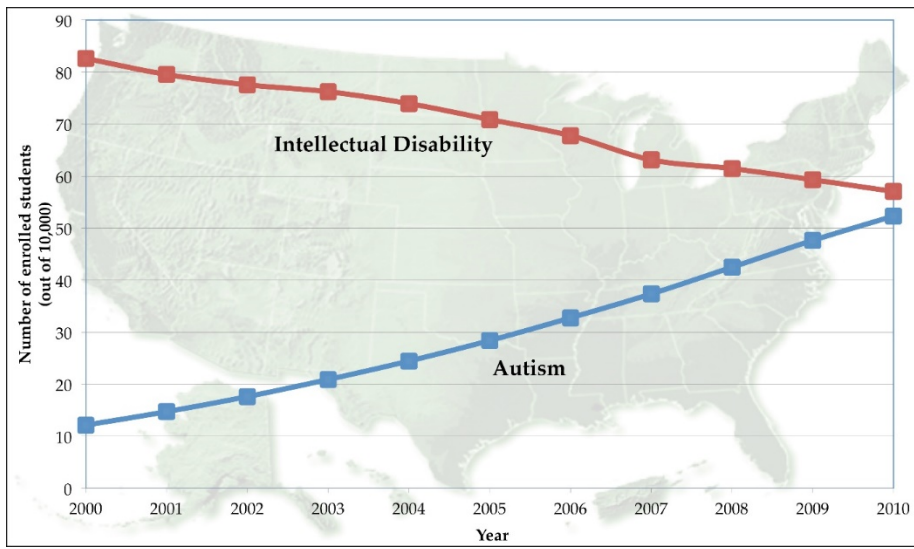
8-year-old children  
were identified with ASD  
by NJAS in 2014



Aumento della prevalenza: spiegazioni possibili (*non-eziologici*)

### Diagnostic Change – Cambiamento Diagnostico

diagnosi precoce, miglioramento dei servizi, inclusione di casi lievi, aumentata consapevolezza clinico/scientifica



Published by Oxford University Press on behalf of the International Epidemiological Association © The Author 2009; all rights reserved. Advance Access publication 7 September 2009 International Journal of Epidemiology 2009;38:1224-1234 doi:10.1093/ije/dyp261

#### SPECIAL THEME: AUTISM

### Diagnostic change and the increased prevalence of autism

Marissa King and Peter Bearman\*

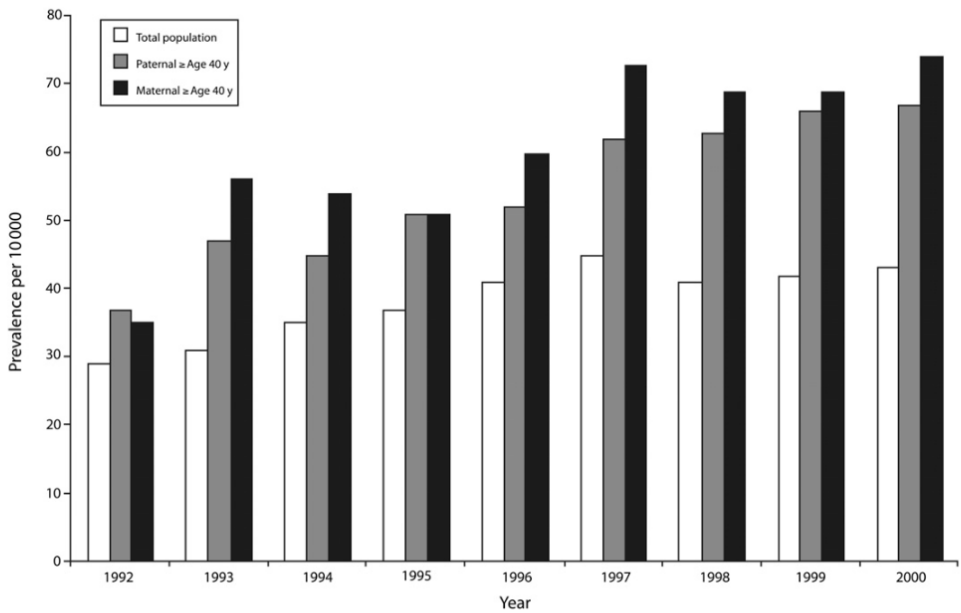
il 26.4% dell'aumento delle diagnosi di autismo in California è unicamente associato con il 'cambiamento diagnostico' di soggetti che precedentemente erano diagnosticati (erroneamente) con Ritardo Mentale



# Aumento della prevalenza: spiegazioni possibili (eziologiche)

## Età dei genitori

(genetica, epigenetica, fattori di rischio ambientale)



### Estimated Autism Risk and Older Reproductive Age

Marissa D. King, PhD, Christine Fountain, PhD, Diana Dakhlallah, BA, and Peter S. Bearman, PhD

Lo studio ha dimostrato che l'avanzata età materna, piuttosto che quella paterna può aumentare il rischio.

FIGURE 2—The observed prevalence of autism in the total population and in populations born to a mother or father over 40 years of age, California, 1992–2000.

### 3. Quali dati in Europa e altri continenti ?



## REVIEW ARTICLE

# Global Prevalence of Autism and Other Pervasive Developmental Disorders

Mayada Elsabbagh, Gauri Divan, Yun-Joo Koh, Young Shin Kim, Shuaib Kauchali, Carlos Marcín, Cecilia Montiel-Nava, Vikram Patel, Cristiane S. Paula, Chongying Wang, Mohammad Taghi Yasamy, and Eric Fombonne

Alta variabilità nel range delle stime di prevalenza tra ed entro i vari continenti

La prevalenza mediana è simile tra Europa e America

**Table IV. Summary of Prevalence Estimates of AD and PDD Across World Regions Since the Year 2000. Medians are not Presented When there were Too Few Estimates Available Within a Given Region**

Region	AD estimates			PDD estimates		
	Median	Range	Number of estimates	Median	Range	Number of estimates
Europe	19	7–39	16	62	30–116	14
America	22	11–40	7	65	13–110	12
Western Pacific	12	2.8–94	12	—	—	3
South East Asia	—	—	1	—	—	1
Eastern Mediterranean	—	—	0	—	—	3
Africa	—	—	0	—	—	0
All	17	2.8–94	36	62	1–189	33

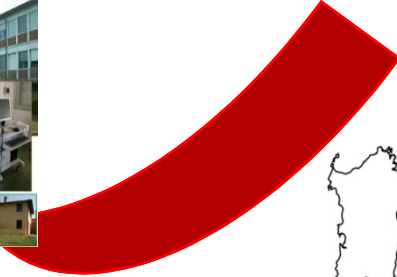
AD, autistic disorder; PDD, developmental disorder.

## 4. Studio ASDEU-Italia nell'area metropolitana di Pisa





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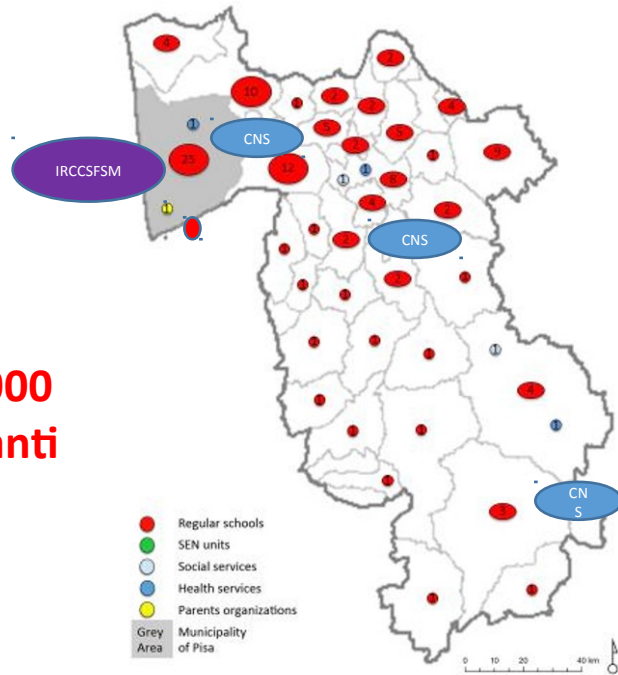


# asdeu

Autism Spectrum Disorders in the European Union

# Mappa dell'area di Studio: Pisa

**182,000  
Abitanti**



## Area di Pisa:

- 10.138 bambini nati tra Gennaio 2007 e dicembre 2009 (7-9 anni di età)
- 160 scuole primarie (elementari)
- 3 Servizi di Neuropsichiatria Infantile
- 1 Centro di Riferimento per i disturbi del neurosviluppo (IRCCS Fondazione Stella Maris)
- 1 Associazione di Genitori (Autismo Pisa)
- No Scuole speciali (presenti in altri stati del prog. ASDEU)

## Fase 2. (screening a scuola )

### Identificazione di 'nuovi casi' di autismo attraverso la Teacher Nomination e l'SCQ

#### Use of a Teacher Nomination Strategy to Screen for Autism Spectrum Disorders in General Education Classrooms: A Pilot Study

Susan L. Hepburn · Carolyn DiGiuseppi ·  
Steven Rosenberg · Kristina Kaparich · Cordelia Robinson ·  
Lisa Miller



➔ Teacher Nomination (Adattato da Hepburn S., 2008)

Codice Identificativo (ID) Insegnante \_\_\_\_\_

Stiamo conducendo uno screening mirato all'identificazione delle difficoltà sociali e comunicative nelle scuole elementari in diversi paesi Europei.

La preghiamo di prendersi un momento per leggere la seguente descrizione:

- A. Socialmente impacciato.
- B. Non sembra comprendere i sentimenti altrui.
- C. Parla molto dei propri interessi ma non è molto abile a conversare.
- D. Non usa il canale verbale semplicemente per essere amichevole.
- E. Non è molto flessibile - tende ad insistere su certe regole e routine.
- F. È fortemente interessato a pochi argomenti o attività.

1. Qualche alunno della sua classe corrisponde a questa descrizione?

SI  NO  (passi alla Domanda 3)

*NOTA: Non è necessario che una o tutte le caratteristiche sopra elencate siano applicabili ad un alunno per poter contrassegnare la casella "SI". Se ritiene che in generale uno o più suoi alunni rientrino in questa descrizione, la preghiamo di includerli.*

2. Quanti alunni della sua classe corrispondono a questa descrizione? \_\_\_\_\_

Nella tabella sottostante la preghiamo di nominare ciascun alunno **scrivendo solamente il codice identificativo (ID Alunno)** riportato sulla sinistra del nome e cognome dell'alunno nel suo Registro di Classe.

## Formazione insegnanti



*Epidemiology and Psychiatric  
Sciences*

[cambridge.org/eps](https://www.cambridge.org/eps)

**Original Article**

# Prevalence of Autism Spectrum Disorder in a large Italian catchment area: a school-based population study within the ASDEU project

---

A. Narzisi<sup>1</sup>, M. Posada<sup>2</sup>, F. Barbieri<sup>3</sup>, N. Chericoni<sup>1</sup>, D. Ciuffolini<sup>4</sup>, M. Pinzino<sup>1</sup>,  
R. Romano<sup>3</sup>, M.L. Scattoni<sup>5</sup>, R. Tancredi<sup>1</sup>, S. Calderoni<sup>1,6</sup> and F. Muratori<sup>1,6</sup>

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**1/87**



## Conclusioni

- Necessità di aumentare i centri Autismo con team specializzato nella diagnosi, nel trattamento e nella presa in carico delle famiglie
- Promuovere consapevolezza dell'autismo nella comunità (*carta di Rimini ?*)
- Guidare futuri progetti di ricerca sulle necessità 'reali' delle persone e delle famiglie con autismo
- Aumentare la Ricerca sui fattori di rischio
- Servizi per Autismo long-life

ASDs sono caratterizzati da una grande eterogeneità



Anche se ASDs sono definiti da un particolare pattern di comportamento, questi comportamenti sono molto diversi.

# ASD sfida la generalizzazione

## **Intelligenza**

*Ritardo grave-----Superiore*

## **Interazione Sociale**

*Ritirato-----Passivo-----Attivo ma strano*

## **Comunicazione**

*Non verbale-----Verbale*

## **Comportamenti**

*Intenso-----Lieve*

## **Aspetti sensoriali**

*Ricerca-----Avversione*

## **Abilita' motorie**

*Non coordinato-----Coordinato*

# ASD e' un disturbo dello sviluppo

- I sintomi e i comportamenti cambiano con lo sviluppo
- Lo sviluppo viene influenzato da ASD



# Diagnosticare ASD correttamente presenta difficoltà

- **Non esiste un test biologico per ASD**
- **Variabilità nei comportamenti tra vari bambini con ASD**
- **Variabilità nei comportamenti nello stesso bambino con ASD in vari contesti e nel corso del tempo/sviluppo**
- **Sovrapposizione di sintomi tra ASD e altri disturbi dello sviluppo (ex., disabilità cognitive, disturbi del linguaggio, ADHD, ansia, etc.)**

**MEP =**  
**Diagnosi Precoce**  
**X**  
**Trattamento**



# Rehabilitative Interventions and Brain Plasticity in Autism Spectrum Disorders: Focus on MRI-Based Studies

*Sara Calderoni<sup>1\*</sup>, Lucia Billeci<sup>2</sup>, Antonio Narzisi<sup>1</sup>, Paolo Brambilla<sup>3,4</sup>, Alessandra Retico<sup>5</sup> and Filippo Muratori<sup>1,2</sup>*

**This review aims to investigate the research literature on the neural circuit modifications after non-pharmacological intervention.**

**Neural effects of rehabilitative treatment in subjects with ASD were identified.**

**The results demonstrated brain plasticity during the treatment interval that results in an activation/functional connectivity more similar to those of subjects with typical development (TD).**

**Repeated MRI evaluation may represent a promising tool for the detection of neural changes in response to treatment in patients with ASD.**

**However, large-scale randomized controlled trials after standardized rehabilitative intervention are required before translating these preliminary results into clinical use.**

# Intervention for ASD

RCTs

Kasari (Los Angeles): JADD

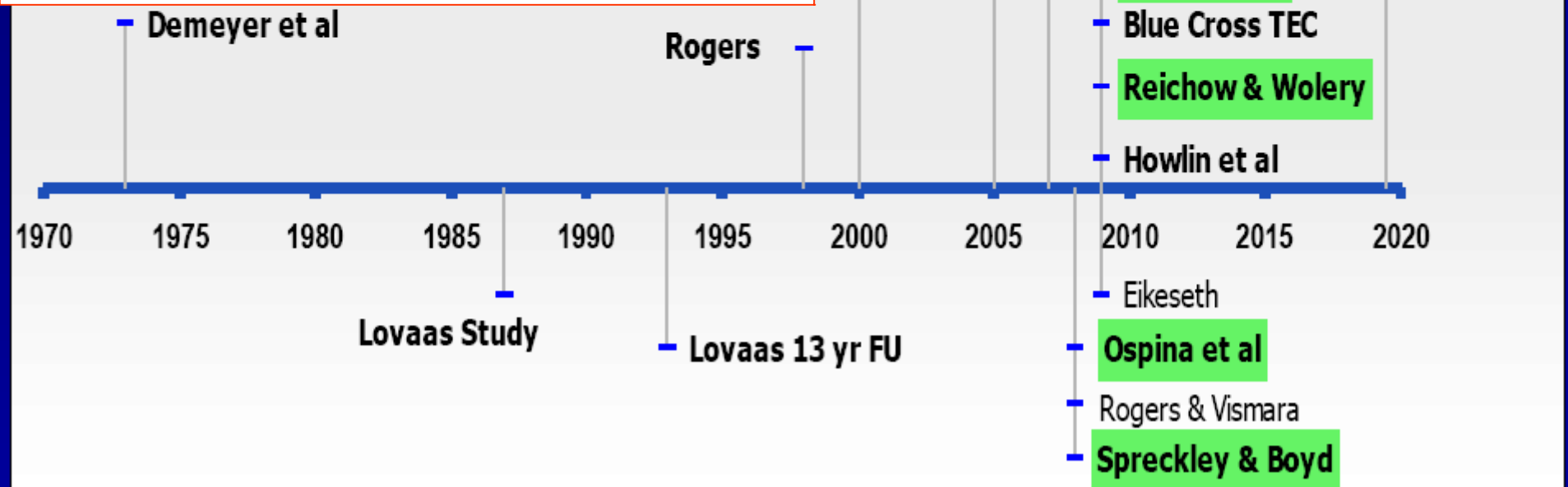
Rogers (Sacramento): Pediatrics

Green (Manchester): the Lancet

Landa (Philadelphia): JCPP

Carter (Boston): JCPP

Shanker (Toronto): Autism

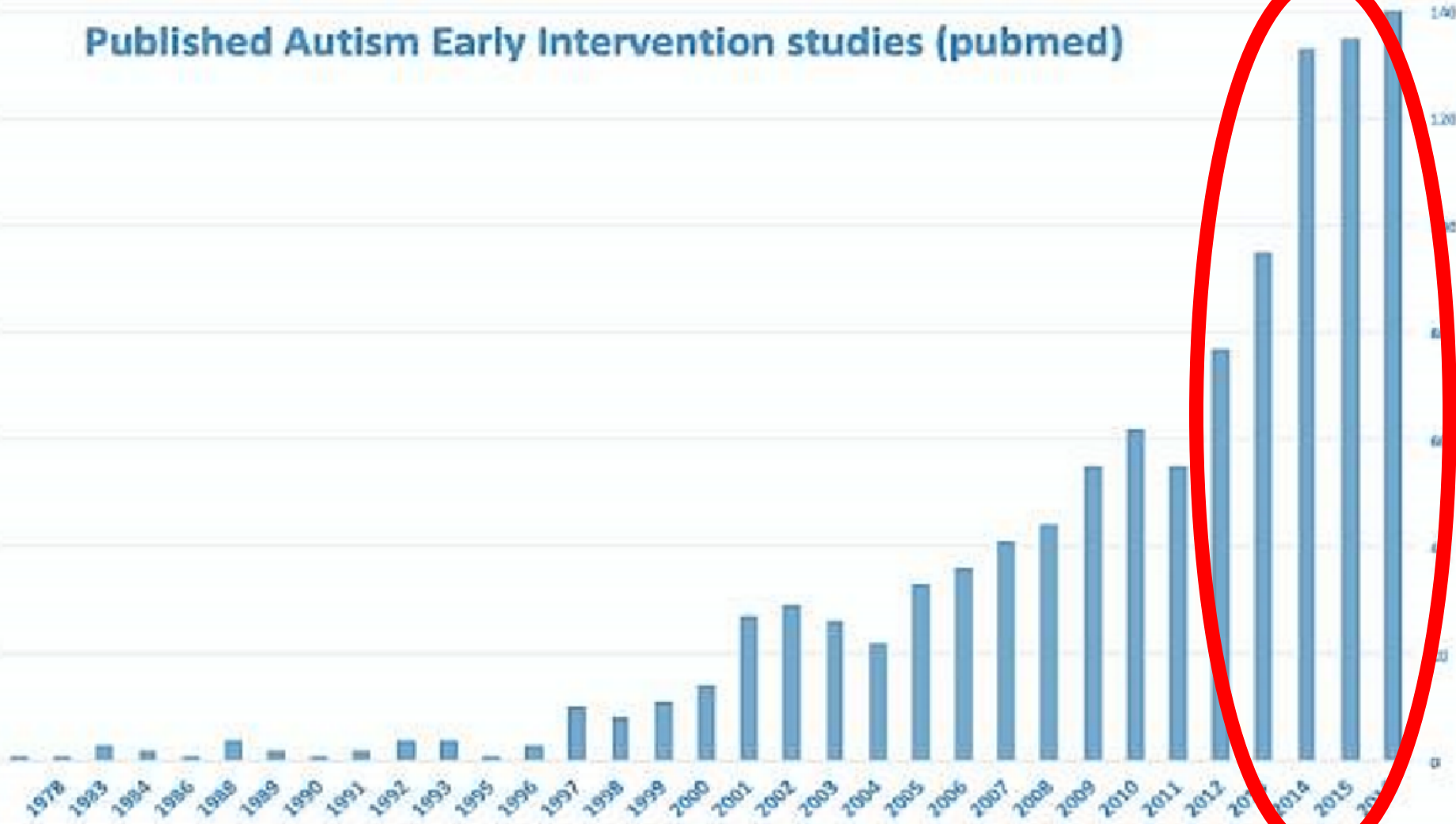


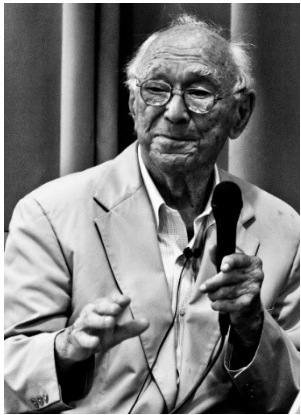


# Cosa sappiamo sugli interventi intensivi precoci?

- Ora molto.

Published Autism Early Intervention studies (pubmed)





J Autism Dev Disord (2015) 45:2411–2428  
DOI 10.1007/s10803-015-2407-8



ORIGINAL PAPER

## Naturalistic Developmental Behavioral Interventions: Empirically Validated Treatments for Autism Spectrum Disorder

Laura Schreibman · Geraldine Dawson · Aubyn C. Stahmer ·  
Rebecca Landa · Sally J. Rogers · Gail G. McGee · Connie Kasari ·  
Brooke Ingersoll · Ann P. Kaiser · Yvonne Bruinsma ·  
Erin McNerney · Amy Wetherby · Alycia Halladay



OPEN ACCESS Freely available online



## Behavioural and Developmental Interventions for Autism Spectrum Disorder: A Clinical Systematic Review

Maria B. Ospina<sup>1</sup>, Jennifer Krebs<sup>1</sup>, ... and Karkhaneh<sup>1</sup>, Lisa Hartling<sup>1</sup>, Lisa Tjosvold<sup>1</sup>, Ben Vandermeer<sup>1</sup>, Veronika ...\*



# PEDIATRICS<sup>®</sup>

OFFICIAL JOURNAL OF THE AMERICAN ACADEMY OF PEDIATRICS

## **Early Intervention for Children With Autism Spectrum Disorder Under 3 Years of Age: Recommendations for Practice and Research**

Lonnie Zwaigenbaum, Margaret L. Bauman, Roula Choueiri, Connie Kasari, Alice Carter, Doreen Granpeesheh, Zoe Mailloux, Susanne Smith Roley, Sheldon Wagner, Deborah Fein, Karen Pierce, Timothy Buie, Patricia A. Davis, Craig Newschaffer, Diana Robins, Amy Wetherby, Wendy L. Stone, Nurit Yirmiya, Annette Estes, Robin L. Hansen, James C. McPartland and Marvin R. Natowicz

*Pediatrics* 2015;136:S60

DOI: 10.1542/peds.2014-3667E

1

**Dovrebbero includere approcci evidence-based e cominciare il prima possibile;**

2

**Dovrebbe esserci un'attivo coinvolgimento dei familiari come parte del trattamento;**

3

**L'intervento dovrebbe agire su più aree dello sviluppo**

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*Pediatrics* 2015;136:S60

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**Dovrebbero includere approcci evidence-based e cominciare  
il prima possibile**

# Non-Pharmacological Treatments in Autism Spectrum Disorders: An Overview on Early Interventions for Pre-schoolers

Antonio Narzisi<sup>1</sup>, Colombi Costanza<sup>2</sup>, Balottin Umberto<sup>3</sup> and Muratori Filippo<sup>1,\*</sup>

**Evidence-base treatments focused on parenting-coaching**

Type of Intervention	Scientific Merit	Treatment Effect	Strategies of Intervention
PACT	1	2	Parental sensitivity and responsiveness to child communication
ESDM	1	2	Interpersonal exchange and positive affect, shared engagement with real-life materials and activities, adult responsivity and sensitivity to child cues, and focus on verbal and nonverbal communication, based on a developmentally informed curriculum that addresses all developmental domains.
ABA/Lovaas	3	2	Applied behavior analysis to teach skills using extrinsic reinforcers and aversive strategies
ABA	1	2	Applied behavior analysis to teach skills using both intrinsic and extrinsic reinforcers and less aversive strategies
DIR/Floor-Time	3	3	Following the child's lead and support his/her initiative; focus on joint attention; closing circles of communication; semi-structured problem solving; playful obstruction; to support visual attention; supporting imitation.
TED	NE	NE	Observation of brain electrical behavior that reveals forms of acquisition that are more subtle than conditioning. Focus on peculiar difficulties in filtering, focusing, and maintaining mental processes.
SCERTS	3	4	To increase child's communication and social-emotional functioning, and to support family interactions.
ESI	3	3	Focus on family; curriculum developed around the child's unique profile
TEACCH	3	3	Focus on the person and development of a program around his/her skills, interests and need.
PECS	3	3	Exchange of photos is considered a 'communicative action' to achieve a concrete outcome within a social context.
PRT	3	4	Pivotal skills as target of treatment; following the child's choice of activities and games; intrinsic reinforcers.
AUTISM 1-2-3	2	3	Focus on eye contact, gesture and vocalization/words

Scientific merit and treatment effect according to Eikeseth classification (2009).

NE= Not Evaluable

# PROGRAMMI EFFICACI DI INTERVENTO PRECOCE: IL PANORAMA E' CAMBIATO - **QUALITA'**






Modelli di intervento in eta' prescolare sostenuti da almeno uno studio randomizzato controllato

<b>ABA/DTT</b> (Smith et al., 2000)
<b>LEAP</b> (Strain & Bovey, 2011)
<b>ESI/SCERTS</b> (Wetherby et al., 2014)
<b>JASPER</b> (Kasari et al., 2010, 2014)
<b>PLAY</b> (Solomon et al., 2014)
<b>PACT</b> (Pickles et al., 2016)
<b>ESDM</b> (Dawson et al., 2010)
<b>TEACCH</b> (Turner-Brown et al., 2016)
<b>PRT</b> (Hardan et al., 2015)
<b>IMPACT</b> (Ingersoll et al., 2016)
<b>Adapted Responsive Teaching</b> (Baranek et al., 2016)
<b>Joint Attention Mediated Learning</b> (Schertz et al., 2013)

**Nessuna evidenza di superiorità di un modello**

Article

# Early Detection and Intervention of ASD: A European Overview

María Magán-Maganto <sup>1</sup> , Álvaro Bejarano-Martín <sup>1,\*</sup> , Clara Fernández-Alvarez <sup>1</sup> ,  
Antonio Narzisi <sup>2</sup>, Patricia García-Primo <sup>3</sup>, Rafal Kawa <sup>4</sup>, Manuel Posada <sup>3</sup>  and  
Ricardo Canal-Bedia <sup>1</sup> 


The Journal of Child  
Psychology and Psychiatry

 The Association  
for Child and Adolescent  
Mental Health

*Journal of Child Psychology and Psychiatry* 59:4 (2018), pp 444–456

doi:10.1111/jcpp.12828

## Annual Research Review: Early intervention for infants and young children with, or at-risk of, autism spectrum disorder: a systematic review

**Lorna French** <sup>1</sup>  and **Eilis M.M. Kennedy** <sup>1,2</sup>

<sup>1</sup>Children, Young Adults and Families Department, Tavistock Clinic, London, UK; <sup>2</sup>Research Department of Clinical, Educational and Health Psychology, University College London, London, UK

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2

**Dovrebbe esserci un'attivo coinvolgimento dei familiari come parte del trattamento**





## Parent-mediated communication-focused treatment in children with autism (PACT): a randomised controlled trial

Jonathan Green, Tony Charman, Helen McConachie, Catherine Aldred, Vicky Slonims, Pat Howlin, Ann Le Couteur, Kathy Leadbitter, Kristelle Hudry, Sarah Byford, Barbara Barrett, Kathryn Temple, Wendy Macdonald, Andrew Pickles, and the PACT Consortium

	London		Manchester		Newcastle		Combined	
	PACT (n=26)	TAU (n=26)	PACT (n=26)	TAU (n=26)	PACT (n=25)	TAU (n=23)	PACT (n=77)	TAU (n=75)
Child age (months; mean, range)	43 (29–55)	43 (24–58)	44 (26–58)	45 (31–60)	48 (33–60)	47 (31–60)	45 (26–60)	45 (24–60)
Girl	2 (8%)	2 (8%)	2 (8%)	4 (15%)	2 (8%)	2 (9%)	6 (8%)	8 (11%)
Both parents live at home	17 (65%)	16 (62%)	24 (92%)	21 (81%)	19 (76%)	20 (87%)	60 (78%)	57 (76%)
Parents' ethnic origin								
Both white	9 (35%)	4 (15%)	16 (62%)	18 (69%)	21 (84%)	19 (83%)	46 (60%)	41 (55%)
Mixed*	1 (4%)	3 (12%)	2 (8%)	3 (12%)	2 (8%)	3 (13%)	5 (6%)	9 (12%)
Non-white	16 (62%)	19 (73%)	8 (31%)	5 (19%)	2 (8%)	7 (30%)	14 (18%)	19 (25%)
Mother's age at baseline (years; mean, range)	34 (20–41)	34 (22–47)	32 (22–45)	33 (23–46)	32 (23–46)	33 (23–46)	33 (23–46)	33 (23–46)
Family size (mean, SD)								
Other children	1.2 (0.3)	1.2 (0.5)	0.8 (0.3)	0.9 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)	1 (0.3)
Adults	1.7 (1.2)	1.7 (1.3)	2.0 (1.3)	1.8 (1.2)	1.8 (1.2)	1.8 (1.2)	1.8 (1.2)	1.8 (1.2)
Education (one parent with qualifications after age 16 years)	21 (81%)	14 (54%)	23 (88%)	15 (58%)	21 (84%)	15 (65%)	21 (27%)	16 (21%)
Socioeconomic status†	17 (65%)	9 (35%)	18 (69%)	14 (54%)	16 (64%)	14 (61%)	16 (21%)	16 (21%)

Data are number (%), unless otherwise indicated. PACT=Preschool Autism Communication Trial. TAU=treatment as usual. \*One white professional or administrative occupation versus all others.

Table 1: Baseline characteristics of treatment groups by centre



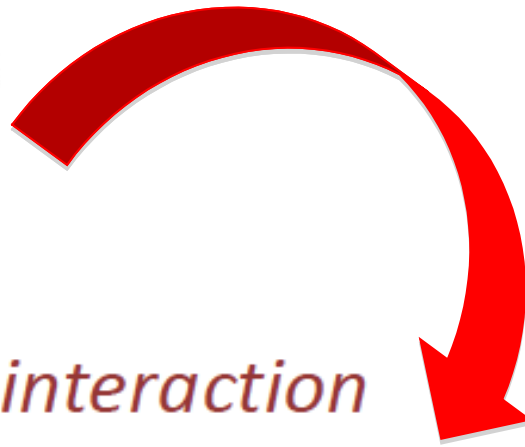
### Feedback techniques

- Positive clips from pci used to analyse successful interactions
- Therapist guides parent to identify successful strategies
- Hierarchy of feedback techniques adapted to parent style:
  - *Eliciting reflection*
  - *Guiding Reflection*
  - *Coaching*
  - *Modelling*



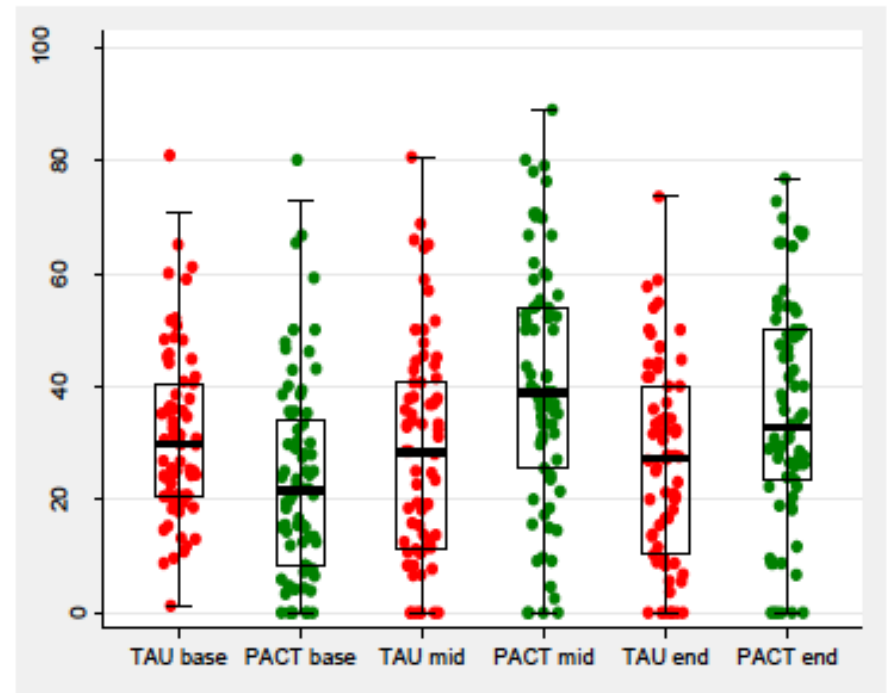
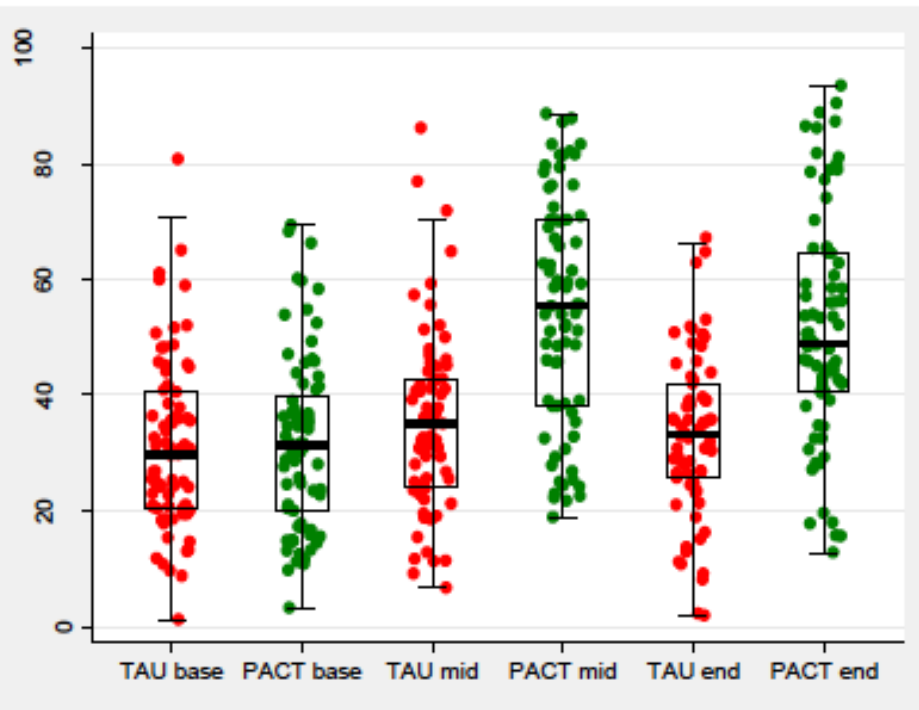


*Parent child interaction*



Parental synchrony

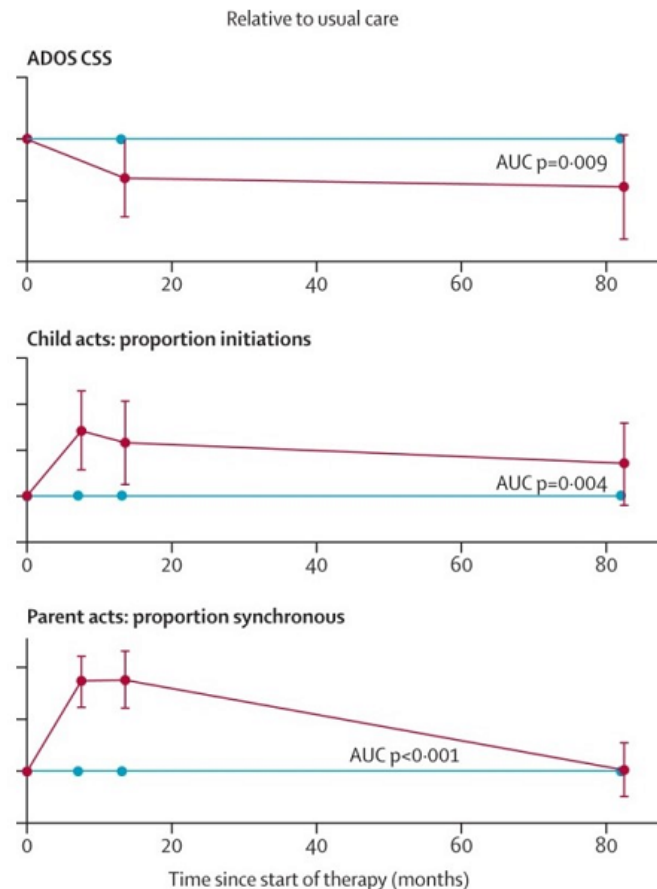
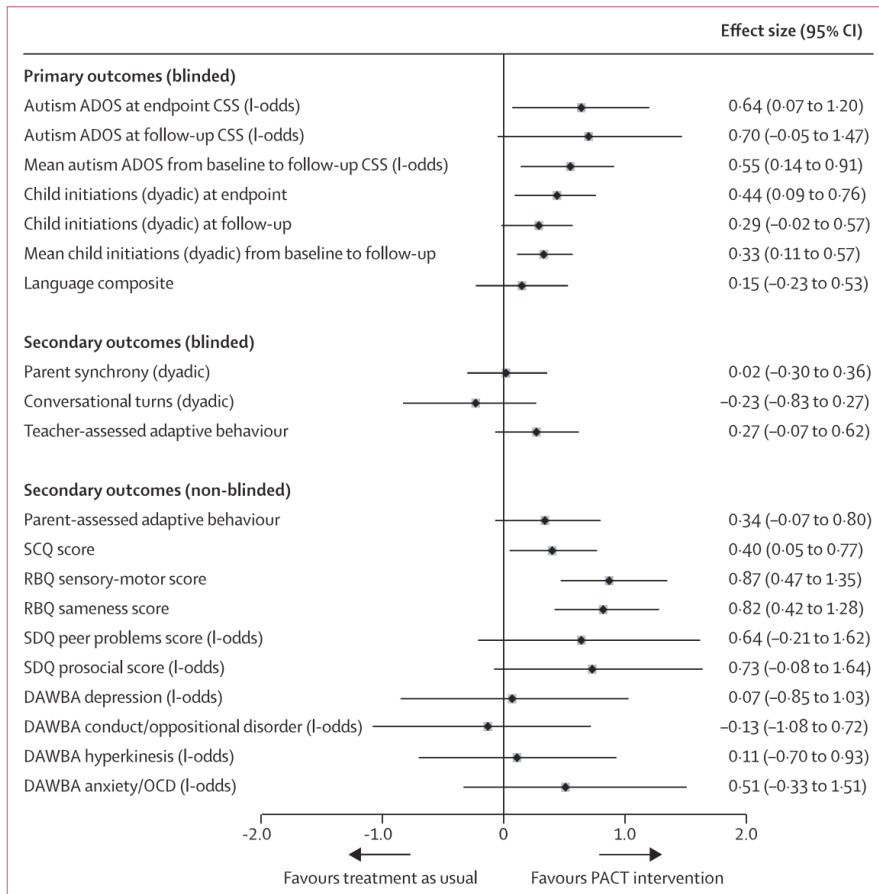
Child initiations





## Parent-mediated social communication therapy for young children with autism (PACT): long-term follow-up of a randomised controlled trial

Andrew Pickles, Ann Le Couteur, Kathy Leadbitter, Erica Salomone, Rachel Cole-Fletcher, Hannah Tobin, Isobel Gammer, Jessica Lowry, George Vamvakas, Sarah Byford, Catherine Aldred, Vicky Slonims, Helen McConachie, Patricia Howlin, Jeremy R Parr, Tony Charman, Jonathan Green





[Journal of Autism and Developmental Disorders](#)

May 2016, Volume 46, [Issue 5](#), pp 1860–1871 | [Cite as](#)

## Mechanism of Developmental Change in the PLAY Project Home Consultation Program: Evidence from a Randomized Control Trial

Authors

[Authors and affiliations](#)

Gerald Mahoney , Richard Solomon

There were two main findings.

First the effects of PLAY **on children's social engagement** were mediated by the increases in **parental responsiveness** and affect that were promoted by PLAY.

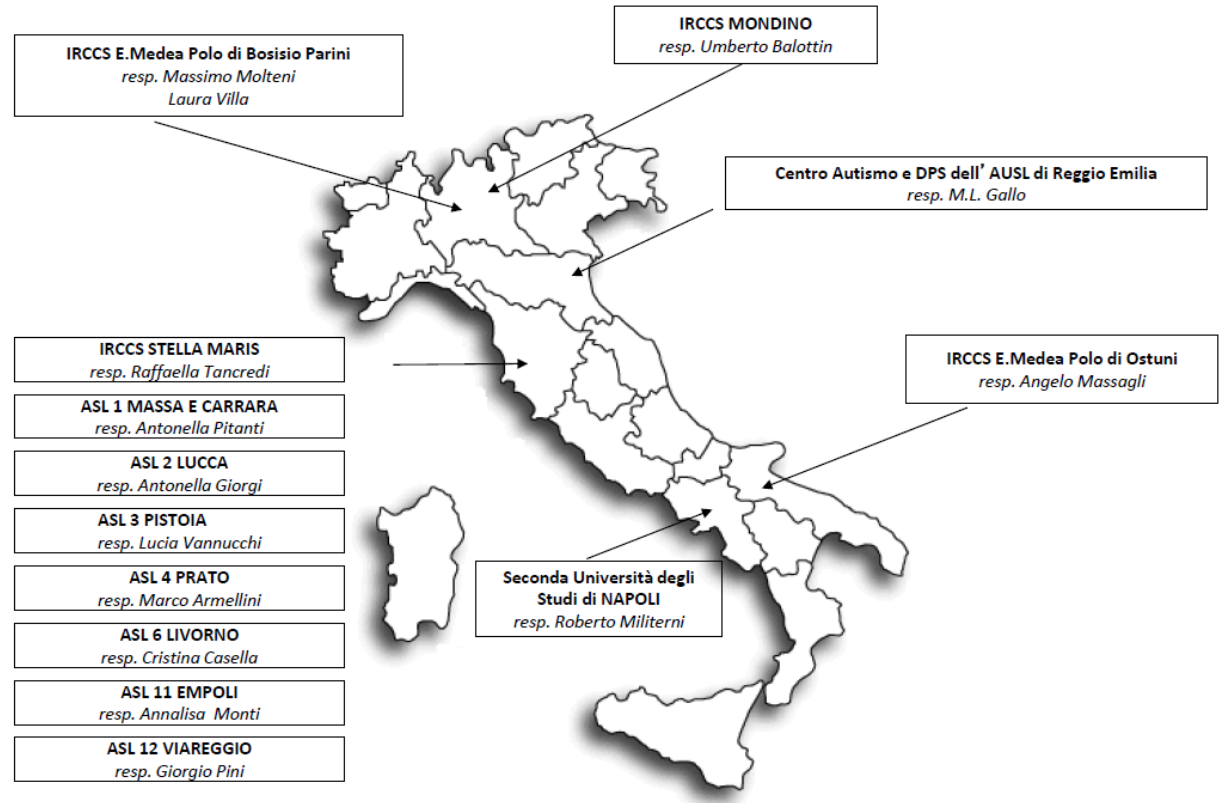
Second, the effects of PLAY on the severity children's Social Affect disorders were mediated by changes in parental responsiveness and affect; however, the effects of Responsive/Affect were mediated by the impact these variables had on children's social engagement.

# Exploratory study describing 6 month outcomes for young children with autism who receive treatment as usual in Italy

Filippo Muratori<sup>1,2</sup>

Antonio Narzisi<sup>1</sup>

IDIA group



**Subjects:** 70 toddlers with ASD;  
**Range Age:** 18-48 months;  
**Intervention:** TAU for 5.2 hours per week  
**Duration of intervention:** 6 months;  
**Primary Outcome:** ADOS

## SCHEDA RIASSUNTIVA DEGLI INTERVENTI EFFETTUATI

da: **ID** (spazio riservato al servizio/centro che ha in carico il bambino)

**Indicare il modello di trattamento svolto dal bambino**

### Tipi di Trattamento

<b>A</b>	ABA		<b>H</b>	Denver Model
<b>B</b>	Picture Exchange Communication System (PECS)		<b>I</b>	TED
<b>C</b>	Pivotal Response Training (PRT)		<b>L</b>	Discrete Trial Training
<b>D</b>	DIR/Floor-Time		<b>M</b>	TEACCH
<b>E</b>	Storie Sociali		<b>N</b>	Altro (specificare)

### Interventi coordinati dalla famiglia:

*(Indicare il tipo di trattamento svolto, il codice corrispondente e le ore (h) settimanali previste)*

Diretti al bambino				Diretti ai genitori			
Codice Trattamento	Ore settimanali di trattamento di cui:			Codice Trattamento	Ore settimanali di trattamento di cui:		
<b>0.1</b>	Educatore	h	m	<b>1.1</b>	Sostegno psicologico di coppia <i>(senza il bambino)</i>	h	m
<b>0.2</b>	Neuro-psicomotricista	h	m	<b>1.2</b>	Sostegno psicologico al genitore <i>(senza il bambino)</i>	h	m
<b>0.3</b>	Logopedista	h	m	<b>1.3</b>	Parent Training <i>(senza il bambino)</i>	h	m
<b>0.4</b>	Psicologo	h	m	<b>1.4</b>	Terapia congiunta <i>(genitore-bambino insieme)</i>	h	m
<b>0.5</b>	Altro <i>(specificare)</i>	h	m	<b>1.5</b>	Altro <i>(specificare)</i>	h	m

Codice	Frequenza Scolastica	h settimanali
<b>3.1</b>	Frequenza complessiva	
<b>3.2</b>	Frequenza con Insegnante di sostegno	
<b>3.3</b>	Frequenza con Assistente specialistico	

SCHEDA RACCOLTA DATI  
PER I SERVIZI

Ore (esprimere in minuti) di trattamento effettuate dal bambino: \_\_\_\_\_ nel mese di \_\_\_\_\_ 20\_\_

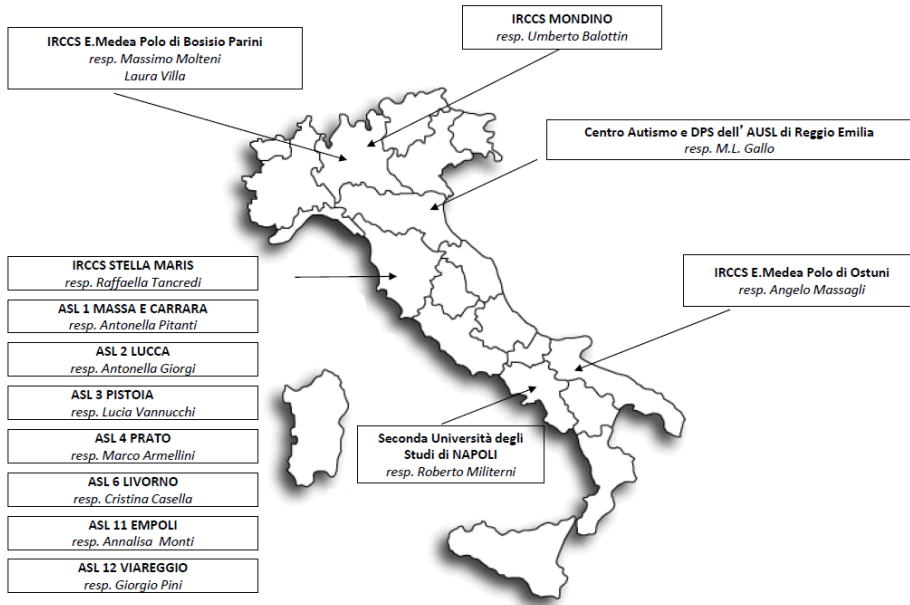
Codice Trattamento	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	tot			

**n.b. inserire la quantità di trattamento somministrato in minuti**

# Exploratory study describing 6 month outcomes for young children with autism who receive treatment as usual in Italy

Filippo Muratori<sup>1,2</sup>  
Antonio Narzisi<sup>1</sup>

IDIA group



## Multi-informant Protocol

Doctors



Parents

VABS-II  
GMDS-ER  
ADOS-2

Child Behaviour CheckList (CBCL)

Parenting Stress Index (PSI-IV)

MacArthur (MCDI)

# Outcome predictors in autism spectrum disorders preschoolers undergoing treatment as usual: insights from an observational study using artificial neural networks

Antonio Narzisi<sup>1</sup>

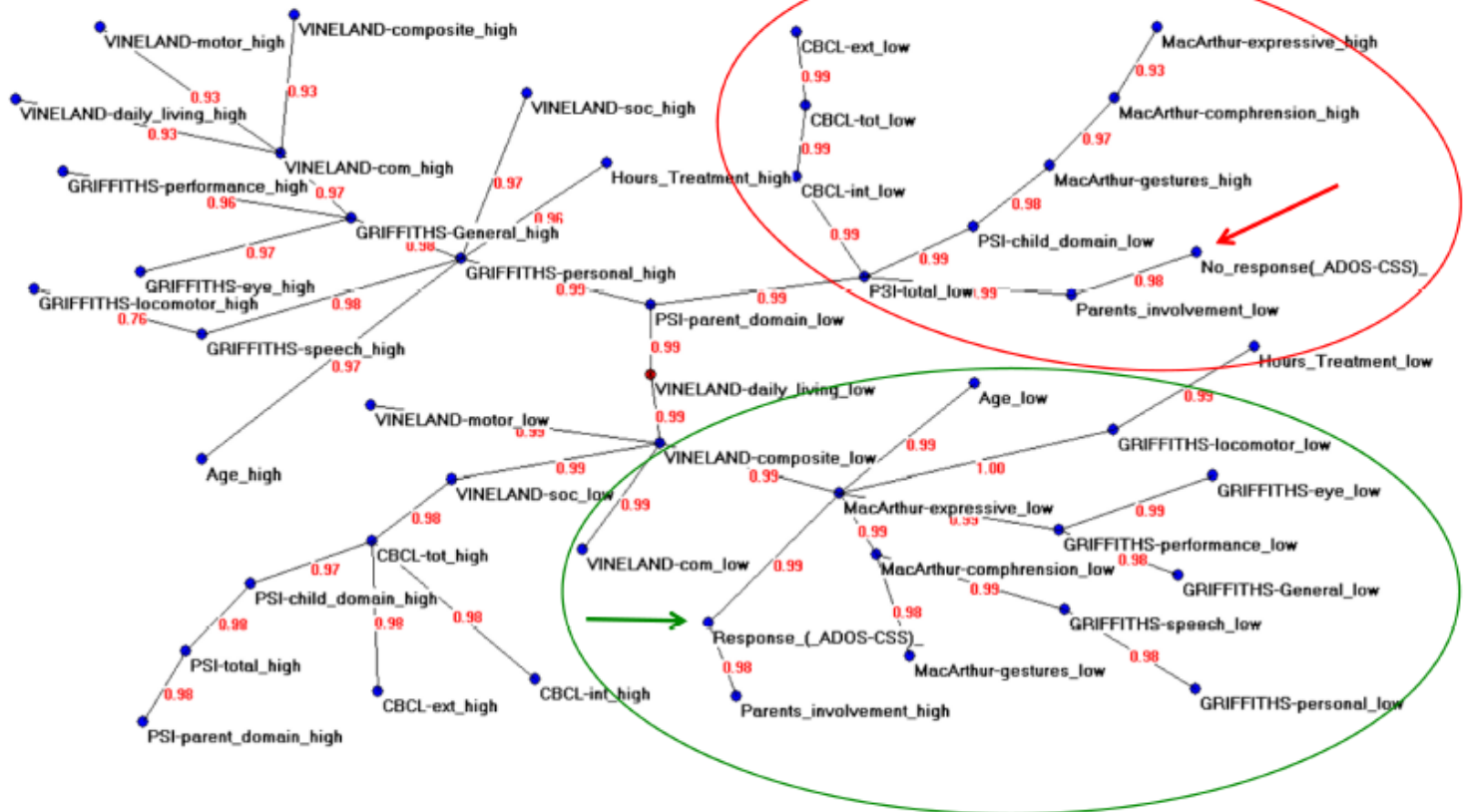
Filippo Muratori<sup>1,2</sup>

Massimo Buscema<sup>3,4</sup>

Sara Calderoni<sup>1</sup>

Enzo Grossi<sup>3,5</sup>

**No responders**



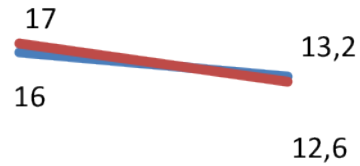
**Responders**



# RESULTS - ADOS

## ADOS - TOT

— No involved — Involved



T0

T1

TIME X GROUP

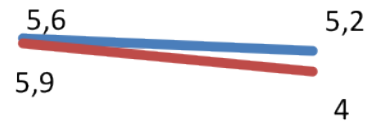
F = 4,21

P = .017

$\Delta = -2,8$  vs  $-4,4$

## ADOS - COM

— No involved — Involved



T0

T1

TIME X GROUP

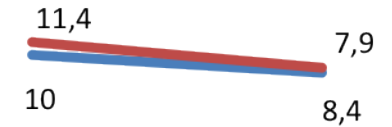
F = 3,59

P = .030

$\Delta = -0,7$  vs  $-1,6$

## ADOS - INT

— No involved — Involved



T0

T1

TIME X GROUP

F = 3,49

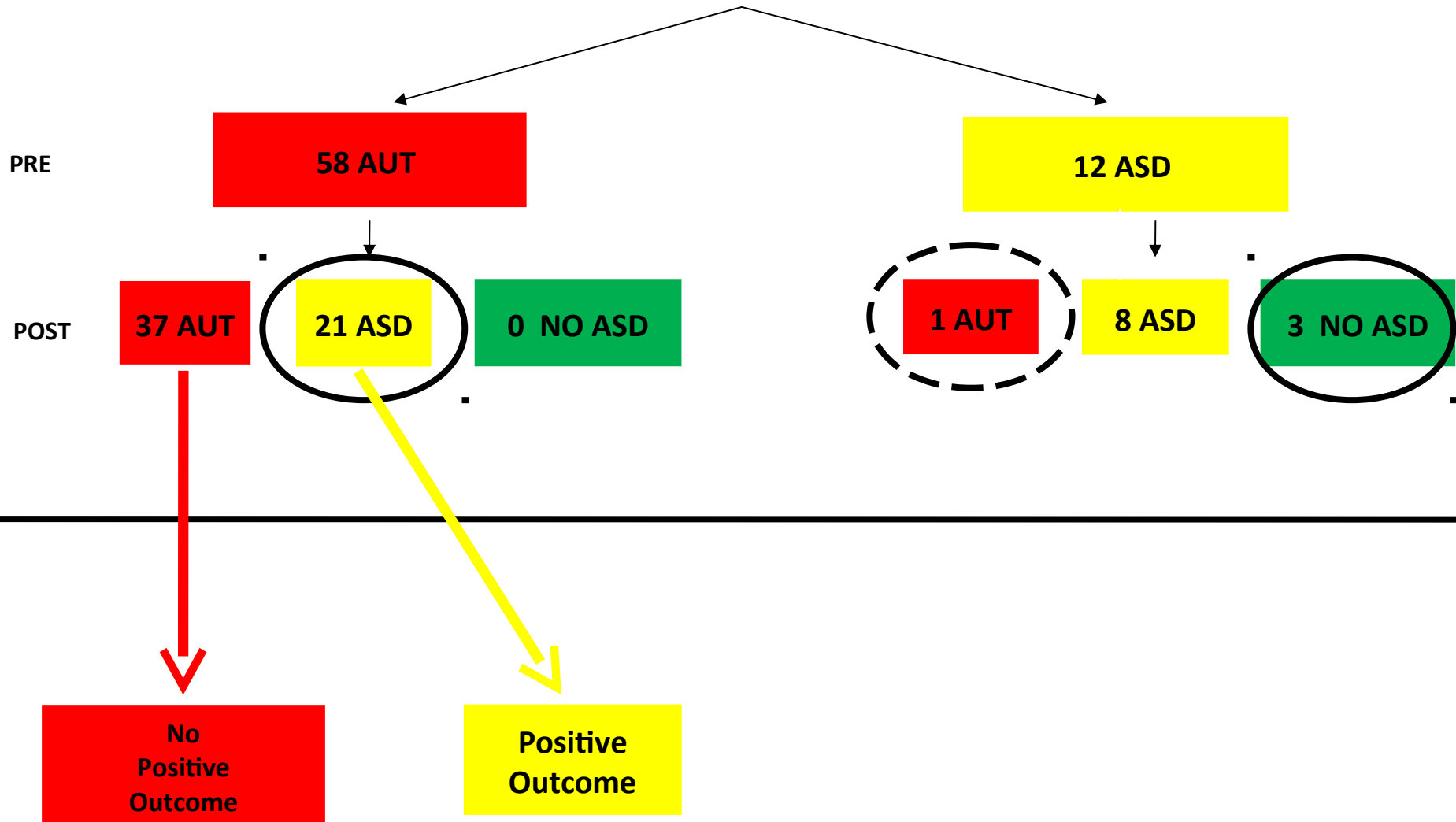
P = .033

$\Delta = -2,1$  vs  $-3$

# Early treatment in autism after first diagnosis: an observational study

Cambiamenti diagnosi ADOS-G dopo 6 mesi di trattamento (*Clinical change*)

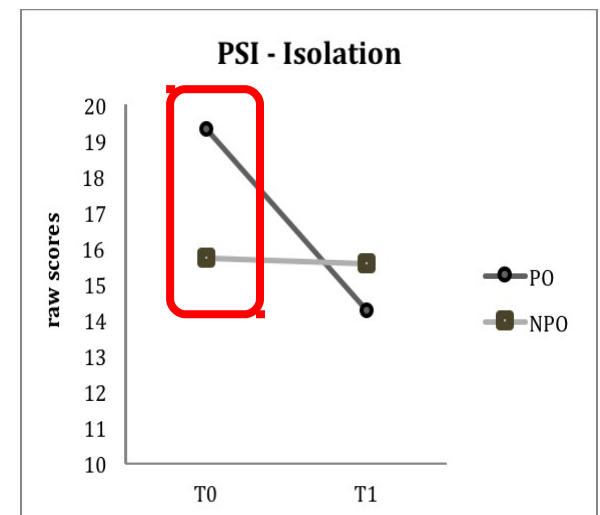
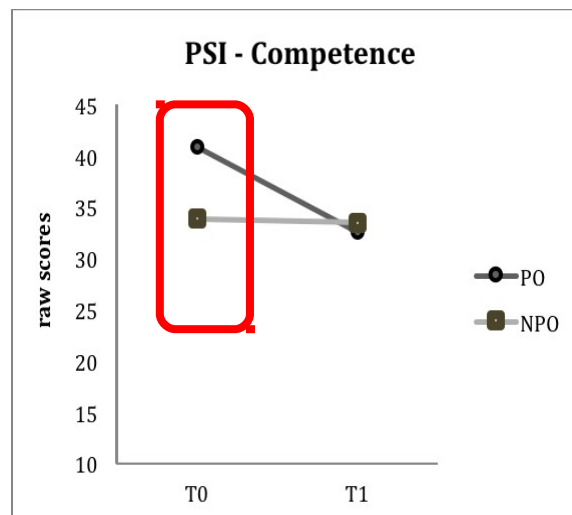
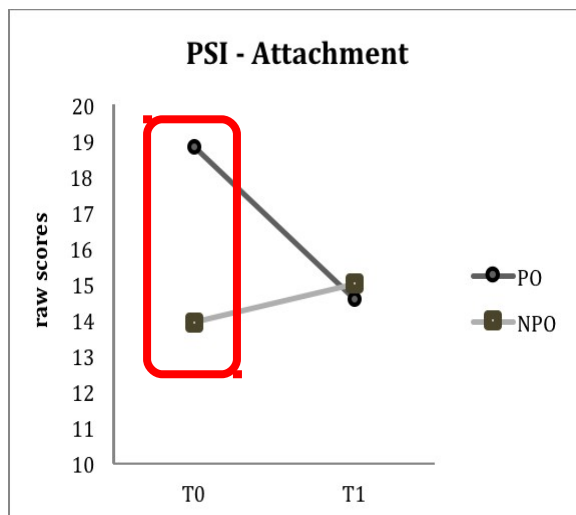
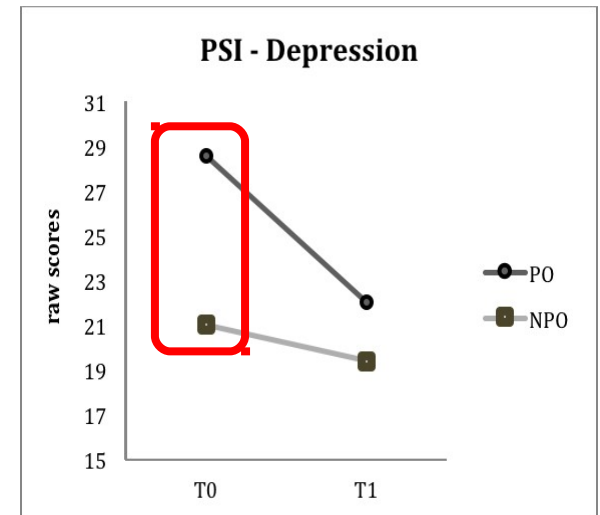
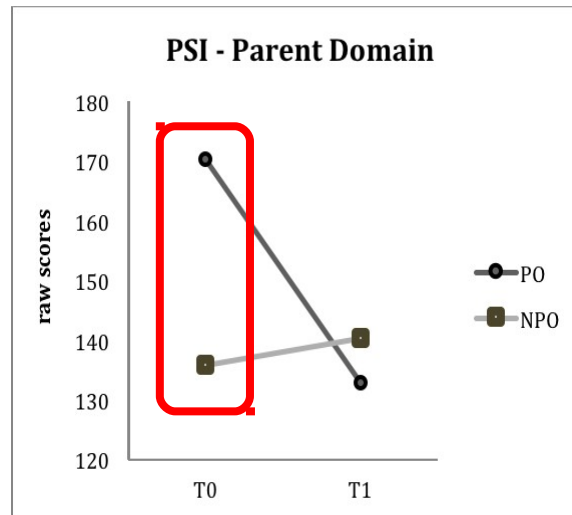
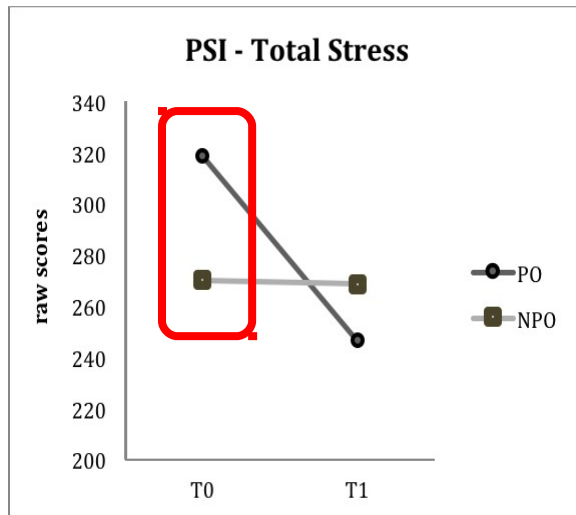
**N = 70**



# Early treatment in autism after first diagnosis: an observational study

No Positive Outcome *VERSUS* Positive Outcome

N = 70



# Non-Specialist Psychosocial Interventions for Children and Adolescents with Intellectual Disability or Lower-Functioning Autism Spectrum Disorders: A Systematic Review

Brian Reichow<sup>1,2\*</sup>, Chiara Servili<sup>3</sup>, M. Taghi Yasamy<sup>3</sup>, Corrado Barbui<sup>4</sup>, Shekhar Saxena<sup>3</sup>

## Specialist:

- psychiatrists
- psychiatric nurse practitioner
- psychologists
- speech and language pathologist
- occupational therapists
- physical therapists

## Non Specialist:

- teacher
- aide
- parent
- general practitioner
- nurse practitioner
- local clinician

This review supports the delivery of psychosocial interventions by non-specialist providers to children who have intellectual disabilities or lower-functioning autism spectrum disorders.

Given the scarcity of specialists in many low-resource settings, including many lower- and middle-income countries, these findings may provide guidance for scale-up efforts for improving outcomes for children with developmental disorders or lower-functioning autism Spectrum disorders

# PEDIATRICS®

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## **Early Intervention for Children With Autism Spectrum Disorder Under 3 Years of Age: Recommendations for Practice and Research**

Lonnie Zwaigenbaum, Margaret L. Bauman, Roula Choueiri, Connie Kasari, Alice Carter, Doreen Granpeesheh, Zoe Mailloux, Susanne Smith Roley, Sheldon Wagner, Deborah Fein, Karen Pierce, Timothy Buie, Patricia A. Davis, Craig Newschaffer, Diana Robins, Amy Wetherby, Wendy L. Stone, Nurit Yirmiya, Annette Estes, Robin L. Hansen, James C. McPartland and Marvin R. Natowicz

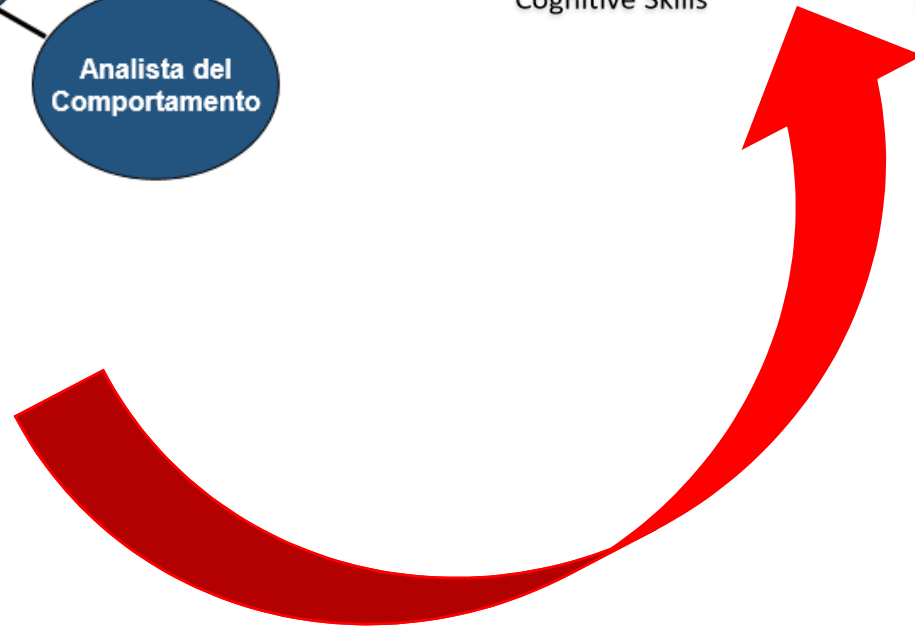
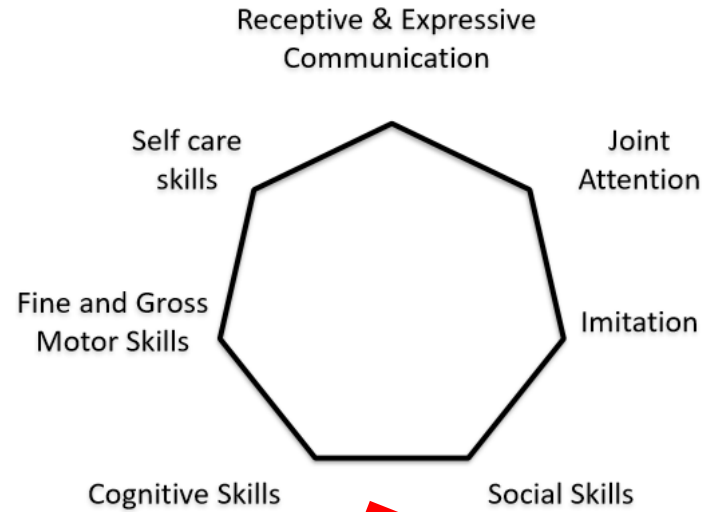
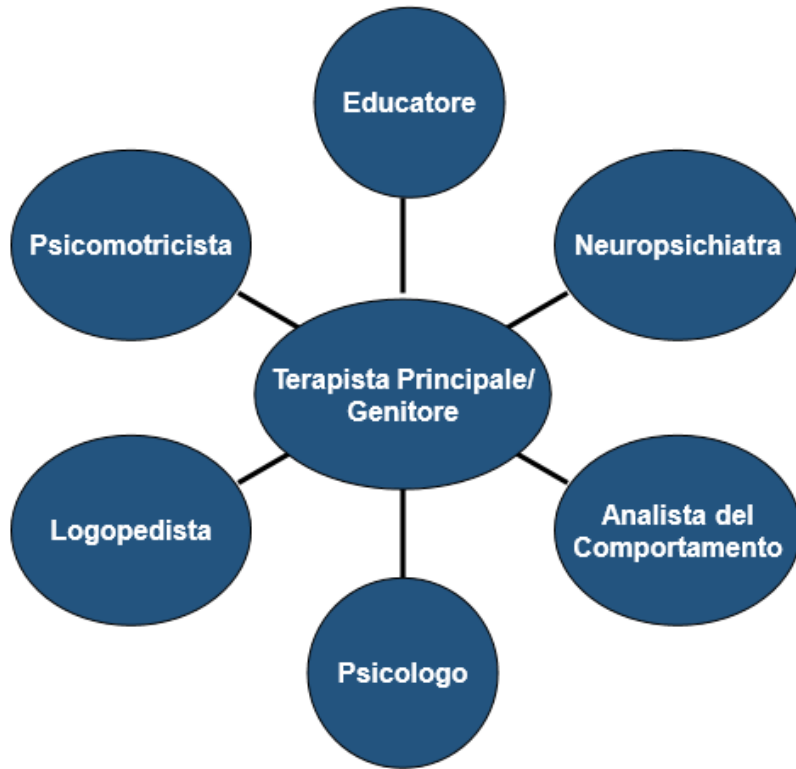
*Pediatrics* 2015;136:S60

DOI: 10.1542/peds.2014-3667E

3

**L'intervento dovrebbe agire su più aree dello sviluppo**

## Il team di intervento in un modello multidisciplinare





# HHS Public Access

Author manuscript

Autism. Author manuscript; available in PMC 2016 July 01.

Published in final edited form as:

Autism. 2016 July ; 20(5): 572-579. doi:10.1177/1362361315599755.

## Sensory symptoms in children with autism spectrum disorder, other developmental disorders and typical development: A longitudinal study

Carolyn McCormick<sup>1</sup>, Susan Hepburn<sup>2</sup>, Gregory S Young<sup>3</sup>, and Sally J Rogers<sup>3</sup>

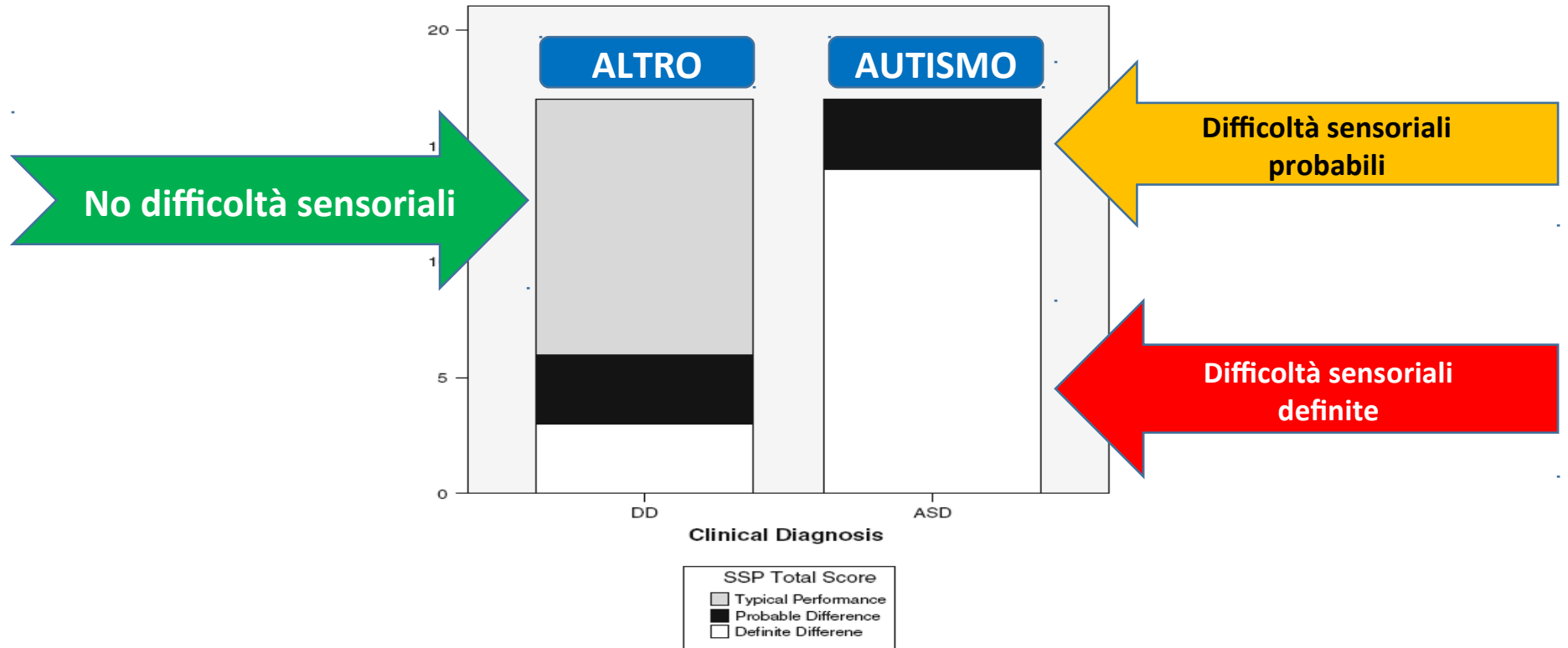
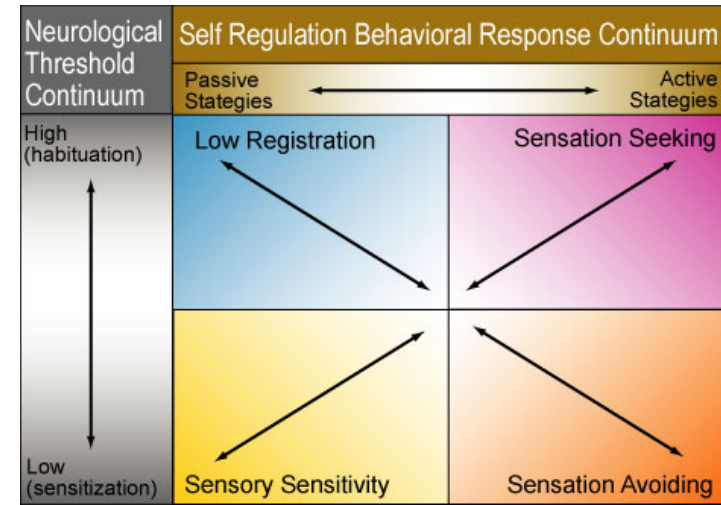


Fig. 1 SSP total scores by study group

# Tra fattibilità ed efficacia

Autism. 2018 Oct;22(7):770-773. doi: 10.1177/1362361318803043. Epub 2018 Sep 20.  
**Early intervention for autism: Are we prioritizing feasibility at the expenses of effectiveness? A cautionary note.**

Vivanti G<sup>1</sup>, Stahmer A<sup>2</sup>.

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*Editorial*

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**Early intervention for autism: Are we prioritizing feasibility at the expenses of effectiveness? A cautionary note**



Autism  
2018, Vol. 22(7) 770–773  
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SAGE



# Implementation of the Early Start Denver Model in an Italian community

Costanza Colombi<sup>1</sup>, Antonio Narzisi<sup>2</sup>, Liliana Ruta<sup>3</sup>,  
Virginia Cigala<sup>4</sup>, Antonella Gagliano<sup>4</sup>, Giovanni Pioggia<sup>3</sup>,  
Rosamaria Siracusano<sup>4</sup>, Sally J Rogers<sup>5</sup>,  
Filippo Muratori<sup>2,6</sup> and Prima Pietra Team

Autism

1–8

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DOI: 10.1177/1362361316665792

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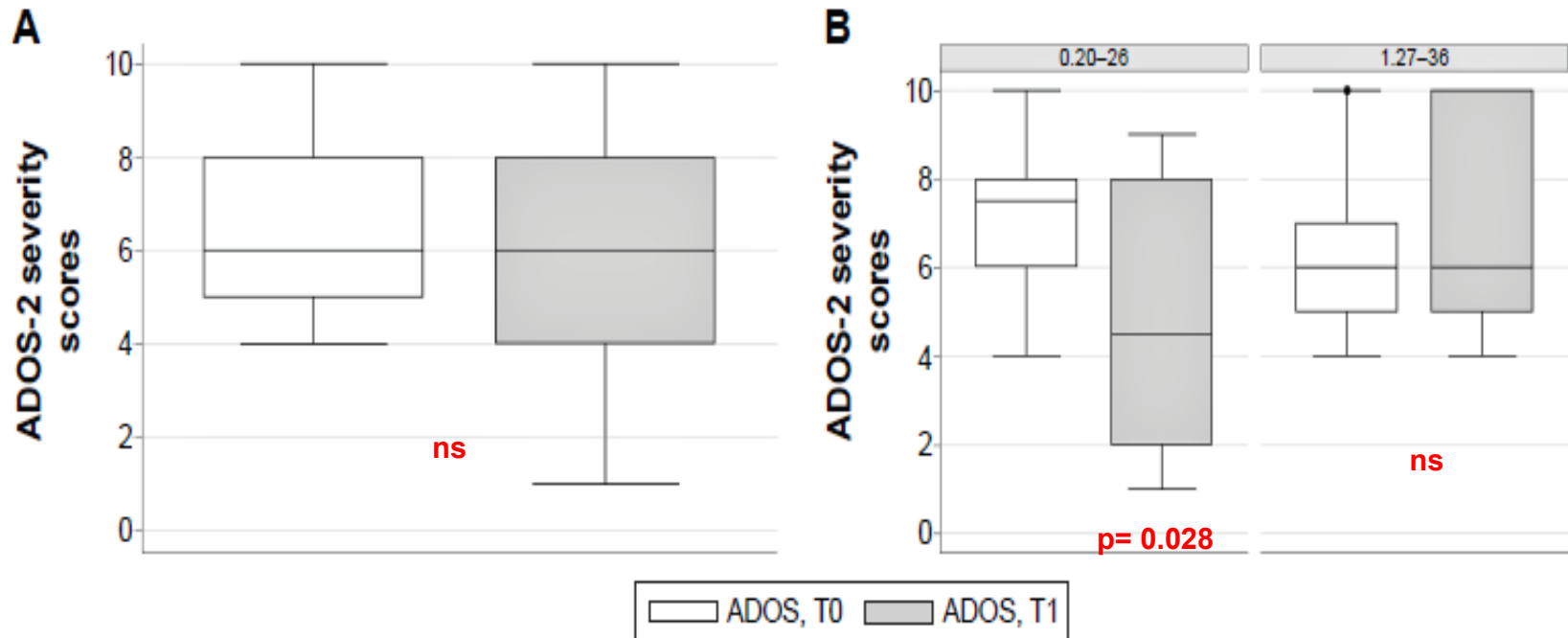
**Table 2.** Child outcome after 3 and 6 months of study participation.

Measure	3-month outcome		6-month outcome		Group × time (baseline vs 3 months)		Group × Time (baseline vs 6 months)	
	Mean Δ ESDM (22)	Mean Δ Control (70)	Mean Δ ESDM (22)	Mean Δ Control (70)	F	p	F	p
<b>GMDS</b>								
Total Scale (GQ)	10.5	4.9	14.8	7.6	2.0	0.03	2.3	0.02
Locomotor Development	7.8	1.4	10.1	1.2	1.1	0.24	1.7	0.08
Personal Social Development	14.7	4.4	24.5	9.0	2.0	0.04	4.0	0.00
Hearing and Speech	12.0	5.8	17.6	11.4	2.4	0.01	2.1	0.03
Hand and Eye Coordination	9.3	3.6	15.9	7.8	1.6	0.10	1.8	0.06
Performance Test	12.3	5.7	15.3	6.3	2.9	0.76	1.7	0.49
<b>VABS</b>								
Composite	7.9	3.5	7.7	5.8	2.1	0.03	1.3	0.18
Communication	10.6	6.5	5.6	8.6	2.8	0.00	0.6	0.49
Daily Living	6.7	3.1	7.0	6.5	1.6	0.09	0.5	0.55
Socialization	9.5	3.1	10.5	4.9	1.7	0.08	1.3	0.19

ESDM: Early Start Denver Model; GQ: General Quotient; GMDS: Griffiths Mental Development Scales; VABS: Vineland Adaptive Behavior Scales.

# Early diagnosis and Early Start Denver Model intervention in autism spectrum disorders delivered in an Italian Public Health System service

Raffaella Devescovi<sup>1</sup>  
Lorenzo Monasta<sup>2</sup>  
Alice Mancini<sup>3</sup>  
Maura Bin<sup>1</sup>  
Valerio Vellante<sup>1</sup>  
Marco Carrozzi<sup>1</sup>  
Costanza Colombi<sup>4</sup>



**This study supports the adaptation and the positive impact of the ESDM entirely sustained by the Italian Public Health System**

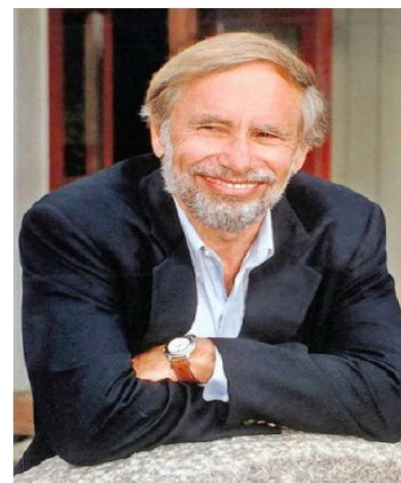
Per concludere.....



**Il buono**

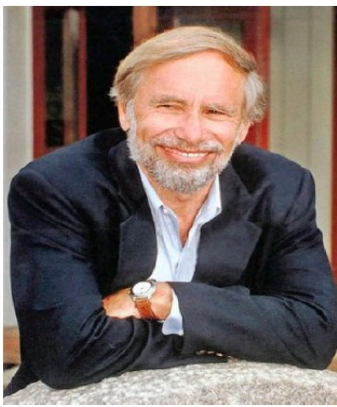


**Il brutto (*ma simpatico*)**



**Il cattivo**





# Behavioral Treatment and Normal Educational and Intellectual Functioning in Young Autistic Children

*Journal of Consulting and Clinical Psychology*, 55 (1), 3-9.

1987

O. Ivar Lovaas

University of California, Los Angeles

Insegnamento sistematico di piccole unità misurabili di comportamento in sessioni ripetute e ravvicinate in rapporto 1:1. Ampio utilizzo del rinforzo positivo e negativo, dei Prompt e della loro attenuazione (Fading). **Parent training intensivo.**

## La Ricerca

- 19 bambini ABA intensivo (40 ore settimanali)
- 19 bambini con trattamento ABA non intensivo (10 ore a settimana)
- 19 bambini non sottoposti ad alcun trattamento.

## Risultati

Il gruppo sperimentale mostra un incremento del QI, del linguaggio e una riduzione di comportamenti bizzarri.

## Conclusioni

**Guarigione (IQ) nel 47% (9 su 19) dei casi**

Group	Recovered	Aphasic	Autistic/Retarded
<b>Experimental</b>			
N	9	8	2
M IQ	107	70	30
Range	94-120	56-95	~~*
<b>Control Group 1</b>			
N	0	8	11
M IQ	~~	74	36
Range	~~	30-102	20-73
<b>Control Group 2</b>			
N	1	10	10
M IQ	99	67	44

## COMMENTS

### Relation of Behavioral Treatment to “Normal Functioning”: Comment on Lovaas

→ Eric Schopler, Andrew Short, and Gary Mesibov  
University of North Carolina at Chapel Hill

- Selezione dei bambini non rigorosa;
- Inappropriate misure di outcome;
- Insufficienti criteri di selezione dei soggetti;
- Applicabilità del modello a 40 ore a settimana;
- Definizione di guarigione sulla base del solo QI.



## Tuttavia.....

Lo studio di Lovaas, i cui risultati non sono mai stati replicati, ha avuto importanti meriti:

- 1) ha cominciato a parlare della possibilità di 'guarigione' dall'autismo;
- 2) ha dimostrato che un trattamento precoce può modificare il percorso dell'autismo e migliorare l'outcome;
- 3) ha coinvolto i genitori nel trattamento;
- 4) ha posto il problema di quanto un trattamento deve essere intensivo per essere efficace.

# DIR Model (Greenspan SI, Wieder S)

*È un modello molto strutturato articolato attorno a tre assi*



- **D: *Developmental*** (livello di sviluppo funzionale ed emotivo raggiunto dal bambino; funzionale significa l'abilità del bambino ad utilizzare le proprie capacità per raggiungere un obiettivo emotivo);
- **I: *Individual-Difference*** (differenze individuali nella modalità di processare le informazioni sensoriali e nelle modalità di pianificazione motoria);
- **R: *Relationship-Based*** (tipo di relazioni ed interazioni che il bambino stabilisce con i partner adulti).



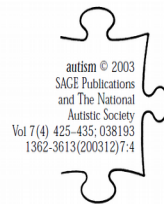
Il **floortime** è la componente più importante del DIR.  
Sequenze di gioco della durata di 15' ripetute nella giornata in cui il genitore segue i seguenti principi:

- Fare attenzione al profilo sensoriale e al livello funzionale emotivo
- Seguire la guida del bambino e sostenerne l'iniziativa
- Focalizzarsi sulla attenzione congiunta
- Chiudere i circoli comunicativi
- Creare problem solving semistrutturati e affettivi
- Mantenere alto il livello emotivo-affettivo
- Usare l'ostruzione giocosa
- Sostenere l'attenzione visiva
- Lavorare sull'imitazione

### Climbing the symbolic ladder in the DIR model through floor time/interactive play

SERENA WIEDER Interdisciplinary Council on Developmental and  
Learning Disorders, Bethesda, USA

STANLEY I. GREENSPAN George Washington  
University Medical School, Washington, USA



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SAGE Publications  
and The National  
Autistic Society  
Vol 7(4) 425-435; 038193  
1362-3613(200312)7:4

#### Mapa sviluppo funzionale: 6 livelli

- 1) capacità di regolazione e attenzione condivisa;
- 2) coinvolgimento ricco di calore, fiducia e intimità;
- 3) comunicazione intenzionale a due vie (circoli comunicativi che si aprono e si chiudono reciprocamente e con l'utilizzo di molti gesti affettivi e micro-affettivi);
- 4) problem-solving interattivo ed uso dei gesti;
- 5) Utilizzo funzionale delle idee
- 6) Costruire ponti tra le idee.



## Pilot study of a parent training program for young children with autism

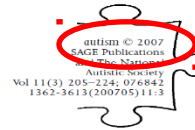
The PLAY Project Home Consultation program

RICHARD SOLOMON Ann Arbor Center for Developmental and Behavioral Pediatrics, Michigan, USA

JONATHAN NECHELES Northwestern University Feinberg School of Medicine, Chicago, USA

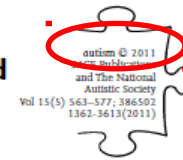
COURTNEY FERCH Wayne State University Medical School, Detroit, USA

DAVID BRUCKMAN Cleveland Department of Public Health, Ohio, USA



## A pilot randomized controlled trial of DIR/Floortime™ parent training intervention for pre-school children with autistic spectrum disorders

KINGKAEW PAJAREYA Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand  
KAEWTA NOPMANEEJUMRUSLERS National Institute for Child and Family Development, Mahidol University, Bangkok, Thailand



- intervento di parent- training
- bambini con ASD (DSM-IV-TR)

### Intervento:

i terapeuti lavorano con i genitori fornendo un training 1:1. Una componente 'chiave' è quella di rivedere i video eseguiti durante le consulenze a 'casa' con i bambini e valutare i progressi dei bambini;

*Modeling; Coaching; video-assessment e scrittura di obiettivi* (Solomon, 2007; Pajareya, 2011)

### Risultati

- miglioramenti significativi alle scale FEAS (Solomon, 2007; Pajareya, 2011)
  - riduzione del punteggio alla CARS (Pajareya, 2011)
- 45,5% da buoni a molto buoni progressi nello sviluppo funzionale (Pajareya, 2011)
  - soddisfazione genitoriale 90% (Pajareya, 2011)
- costi vantaggiosi '2500 dollari/anno' (Pajareya, 2011)



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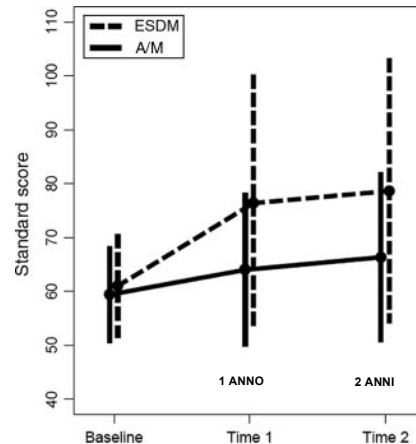
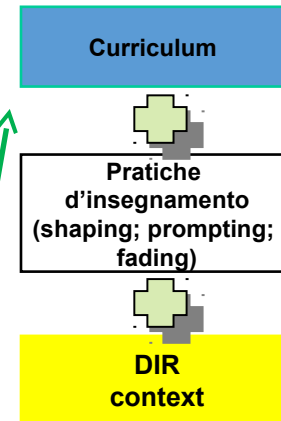
## Randomized, Controlled Trial of an Intervention for Toddlers With Autism: The Early Start Denver Model

Geraldine Dawson, Sally Rogers, Jeffrey Munson, Milani Smith, Jamie Winter, Jessica Greenon, Amy Donaldson and Jennifer Varley  
*Pediatrics* 2010;125:e17; originally published online November 10, 2009; DOI: 10.1542/peds.2009-0958

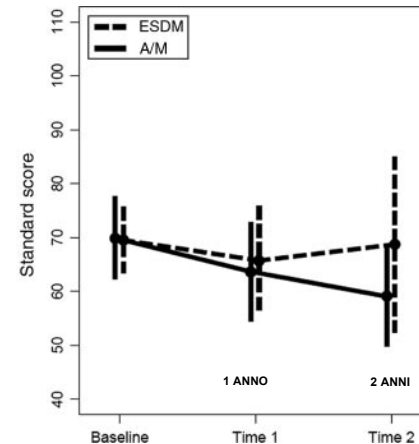
- 24 bambini (18-30 mesi)
- Gruppo ESDM: 15 ore per settimana di terapia 1:1 con il terapeuta per 2 anni + Parent Training per 16 ore a settimana + 5,2 altre terapie (es. Logopedia)

- Orientamento e attenzione sociale
- Condivisione e sincronia affettive
- Imitazione
- Attenzione congiunta
- Linguaggio
- Gioco simbolico

- All'interno di un approccio a base relazionale
- Nella cornice di un affetto fortemente positivo
- Per programmi a casa, programmi di gruppo, parent training (educazione per i genitori), o terapie specifiche (e.g., logopedia)



Quoziente Generale di Sviluppo



Livello Adattivo - VINELAND

**ANCHE I METODI EVOLUTIVI POSSONO ESSERE SISTEMATIZZATI**

# “Attention: Myth Follows!” Facilitated Communication, Parent and Professional Attitudes towards Evidence-based Practice, and the Power of Misinformation

ARTICLE in EVIDENCE-BASED COMMUNICATION ASSESSMENT AND INTERVENTION · OCTOBER 2015

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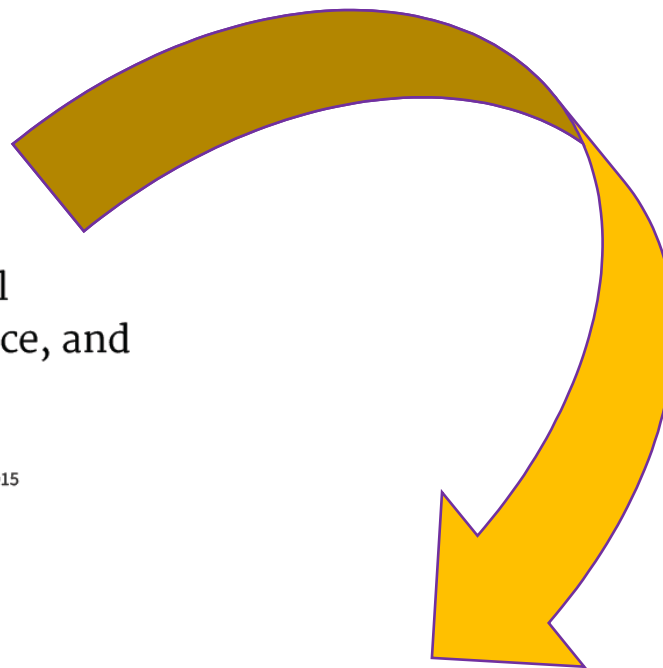
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**“parents surveyed rated professionals as the most trusted source of information when it came to selecting treatments for their children”**

**GRAZIE**