

Jasper vs DTT: the gentle rivalry

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RESEARCH ARTICLE

Spoken language outcomes in limited language preschoolers with autism and global developmental delay: RCT of early intervention approaches

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Abstract

Preschool autistic children with significant global developmental delays and very limited language skills are at high risk for remaining minimally verbal at entry into primary school. This study compared two early intervention models for improving social communication and spoken language outcomes in 164 children who received intervention in their community preschool program for 6 months, with a six-month follow-up. The primary outcome measure was a standardized language assessment, and secondary measures focused on social communication. Results indicated children on average made 6 months gain in language development in the active 6 months of intervention with no difference between intervention models. Children who initiated joint attention more frequently, or who had

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«With no difference between intervention models»

Lay Summary

This study compared two different early intervention approaches for teaching spoken language to minimally verbal, globally delayed autistic preschoolers. Children were given an hour of therapy daily for 6 months and then reassessed 6 months later. The majority of the 164 participants were from historically excluded populations (low income and minority), and therapy was delivered in school community settings by expert clinicians. Results indicated that the participants made significant progress regardless of intervention approach: 6 months gain in standardized language scores over 6 months, but slower progress during the period after therapy ended. Children who initiated joint attention more frequently, or who had higher language understanding at baseline made more progress if assigned to receive JASPER, a naturalistic developmental behavioral intervention. Children who received Discrete Trial Training made greater language progress during 6-month period after therapy



The nature of autism

Disorder of discrimination

L'intervento deve focalizzarsi sull'insegnamento della discriminazione tramite prove distinte in contesti altamente strutturati che massimizzano il successo: Discrete Trial Teaching (DTT)
Vedi Smith et al., 2001,

Reduced social interest

L'intervento utilizza strategie sia comportamentali che basate sullo sviluppo in contesti il più possibile naturalistici: Naturalistic Developmental Behavioral Interventions (NDBI)
Vedi Klin et al. 2018, Schreibmann et al. 2015



Community based RCT: 6 mesi di intervento in 3 centri

DTT

- Lovaas 1987
- Significativo supporto empirico in termini di acquisizione di linguaggio, ma non specificatamente di interazione comunicativa

JASPER

- NDBI
- Kasari 2006 e 2021
- Gioco, linguaggio, attenzione condivisa, iniziative comunicative e reciprocità



164 bambini senza linguaggio o con meno di 20 parole (minimally verbal)

Domande di ricerca:

- JASPER porta maggiore cambiamento rispetto DTT in
 - linguaggio?
 - attenzione congiunta (IJA)?
 - Complessità e varietà di gioco
- DTT è più efficace per
 - Sviluppo cognitivo in test standardizzati?
- Ci sono moderatori in baseline come:
 - IJA/ Comprensione del linguaggio/ Età?



Intervento nel contesto della comunità

1-4° mese: 5 ore a settimana di insegnamento individuale a scuola, in aggiunta all'intervento (soprattutto comportamentale) già in essere (12-25 ore a settimana)

5° mese: 3 volte a settimana

6° mese: 2 volte a settimana + 8 incontri di caregiver coaching a casa sulla base dei protocolli manualizzati per i due modelli di intervento a confronto (JASPER/ DTT)



Misure di efficacia

Prima + dopo l'intervento + follow up a 6 mesi

- Linguaggio espressivo (primary outcome)
 - Reynell developmental language scales (Reynell, 1977)
 - Mullen scales of early learning (MSEL; Mullen, 1995)
 - Campioni di linguaggio naturale con il caregiver
- Gioco + attenzione condivisa per iniziativa (IJA) + regolazione comportamentale (secondary outcomes)



Quanti bambini arrivano a produrre frasi di 3-4 parole a età 5-6 anni?

TABLE 2 Percentage of children who gained phrase speech

Language status: <i>n</i> (%)	DTT			JASPER		
	Baseline	Post treatment	Follow-up	Baseline	Post treatment	Follow-up
No words	27 (32.93%)	10 (12.2%)	8 (10.53%)	24 (30.38%)	14 (17.72%)	14 (18.42%)
Single words	42 (51.22%)	33 (40.24%)	30 (39.47%)	45 (56.96%)	32 (40.51%)	26 (34.21%)
Word combinations	13 (15.85%)	18 (21.95%)	16 (21.05%)	10 (12.66%)	10 (12.66%)	13 (17.11%)
Phrase speech	0 (0%)	21 (25.61%)	22 (28.95%)	0 (0%)	23 (29.11%)	23 (30.26%)



e quindi a non essere più considerati "minimamente verbali"

TABLE 3 Overall changes in speech status

Language status at baseline and change by exit: <i>n</i> (%)	Total
No words at baseline	51
Did not improve by exit	23 (45%)
Improved by exit	28 (55%)
Single words at baseline	87
Did not improve by exit	42 (48%)
Improved by exit	45 (52%)
Word combinations at baseline	23
Did not improve by exit	6 (26%)
Improved by exit	17 (74%)



Risultati eterogenei anche tra partecipanti con caratteristiche simili

- Anche bambini con profili simili e un significativo svantaggio ci sono grandi variazioni in termini di risultato
- Più del 30% di loro non riesce a passare alla frase, ma il 70% dimostra un progresso lento, ma costante.
- Le abilità non verbali in età precoce non sono predittive dei risultati
- Anche bambini con importanti svantaggi possono fare miglioramenti significativi



Nessuna differenza nei risultati di JASPER e DTT

delay. As the presence of severe developmental delays has been widely considered a harbinger for less favorable outcomes, exploration of intervention efficacy specifically within this population is critical. Data on the primary research question (whether children experienced change in expressive language skills over the course of 6 months of DTT or JASPER) revealed that high-quality intervention resulted in language gains—*regardless of intervention type*. Namely, across both groups, children made an average of 6 months' progress on standardized language assessments. These improvements translated into meaningful clinical outcomes as well; nearly half (45%) of all participants were speaking in word combinations or phrase speech at the end of one year, thus moving away from a designation of minimally verbal (defined as fewer than 20 single words) by their entry to school. The subset of participants who spoke in only single words by the 1-year follow-up still demonstrated progress from baseline of no words or single words, with an average of 4 to 17 words gain. Improvements were greater from entry to



Vedi anche

Per una sintesi e un commento

<https://www.spectrumnews.org/news/two-scientists-two-interventions-a-gentle-rivalry-to-aid-autistic-children>

Per il full text della ricerca in open access

<https://onlinelibrary.wiley.com/doi/epdf/10.1002/aur.2932>

Per altri studi di intervento precoce e EBP, tra i quali una RCT che mette a confronto ESDM e DTT

<https://www.paneecioccolata.com/wp2/risorse-2/>

