

CAHE JC Critically Appraised Article Summary

Journal Club criteria

Date of submission	Pilot 2007
Journal Club location	Port Pirie Regional Health Service
JC Facilitator	Alison Vine

Clinical Scenario

For children aged 18 months to 5 years with speech or language delays who demonstrate aggression and/or oppositional behaviours is therapy including ABA (applied behaviour analysis) or therapy non-inclusive of ABA more successful in increasing functional outcomes?

Review Question/PICO/PACO

P Children 18 months to 5 years with speech or language delays demonstrating aggression

I Therapy inclusive of Applied Behaviour Analysis (ABA)

C Therapy non inclusive of ABA

O Functional Outcomes

Article/Paper

Critical Appraisal for Sheinkopf JS, Bryna Siegel B. *Home-Based Behavioral Treatment of Young Children with Autism*. Journal of Autism and Developmental Disorders. 1998;28(1):15

Article Methodology: Case Cohort

Returned JC on: Pilot 2007

By CAHE staff member: Matt Sutton



Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p>Population:</p> <ul style="list-style-type: none"> Drawn from a larger longitudinal study on young autistic children. Age between 29 and 47 months Diagnosed with autism or pervasive developmental disorder <p>Intervention:</p> <ul style="list-style-type: none"> One-on-one behavioural treatment based on methods developed by Lovaas et al. (1981). <p>Outcomes:</p> <ul style="list-style-type: none"> IQ scores (different tests dependent upon developmental appropriateness for each child) Cognition (measures included the Merrill-Palmer Scale of Mental Tests (Stutsman, 1948), the Bayley Scales of Infant Development (Bayley, 1969), the Wechsler Preschool and Primary Scale of Intelligence (WPPSI; Wechsler, 1967), and the Cattell Infant Intelligence Scale (Cattell, 1940). Symptom presentation (no. of symptoms)
2	✓			The question can be addressed with a case control study, however, it would have been preferable to use a RCT Worth Continuing? YES
3		✓		<p>The cases were recruited from a longitudinal study. There are no details from where this population originally came from or how they were recruited. There appears to be no overt selection bias with the process used to select from within this population. Both experimental and control groups appear to be similar at baseline for important dependent variables.</p> <p>No power calculation was carried out to determine adequate numbers to minimise chances of a type II error.</p>
4		✓		The same applies for the above. The matching to the experimental group has been carried out appropriately however.
5	✓	✓		<p>All measures for cognition have been referenced, and while not looking up specific references, this is generally considered adequate validation. If these are measures you are unfamiliar with however, it is recommended you look up the references.</p> <p>The IQ measures used varied between children. This may or may not be appropriate. Someone familiar with this field would need to make this judgement.</p> <p>The intervention is clearly defined; however, adherence to treatment protocols was not able to be monitored as no direct observation was carried out. The time frame for pre and post measures was similar for both groups.</p> <p>Assessors were stated as being “essentially blind”. This is not the same as blinding.</p>

Ques No.	Yes	Can't Tell	No	Comments
6	✓			A. What confounding factors have the authors accounted for? Issues such as co-interventions, socio-economic, social support, and treatment intensity have been identified as confounding factors.
	✓			B. Have the authors taken account of the potential confounding factors in the design and/or in their analysis? The data was analysed to examine the effect of treatment intensity.
7				Bottom line: Children with autism or PDD may gain improved IQ's with a home-based behavioural treatment based on methods outlined by Lovaas et al. 1981. There is little difference for symptom behaviour between groups.
8				The results show a statistically significant improvement in the experimental groups IQ of $p=0.01$. This is well below the accepted figure of 0.05, thus giving good precision.
9		✓		While statistically significant, the total sample size was quite small, reducing the power of the result. The retrospective nature of the study, and the lack of control on the intervention also reduces the validity of the results. The results do, however, seem to be consistent with other studies, and other aspects of the study such as appropriate case matching mean the results certainly should be out rightly discounted.
10				Refer to the CASP critical appraisal tool for guidelines to help address this question.
11	✓			An easy way to confirm this is to check the references. However, this should not be the sole source of information.