

## iCAHE JC Critical Appraisal Summary

### Journal Club Details

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<b>Date of submission</b>	23 Jan 2013
<b>Journal Club location</b>	Tiny Tots Port Pirie
<b>JC Facilitator</b>	Carly Bertram
<b>JC Discipline</b>	Multi-D

### Clinical Scenario

In children (0-4years) with autism, what has shown to be the most effective treatment approach (Hanen More Than Words, Greenspan's DIR/Floortime Training, PECS or Applied Behaviour Analysis) in stimulating expressive language and communication development?

### Review Question/PICO/PACO

- P** children (0-4years) with autism
- I** Hanen More Than Words, Greenspan's DIR/Floortime Training, PECS or Applied Behaviour Analysis
- C** comparing different approaches
- O** expressive language and communication development

### Article/Paper

Carter A, Messinger D, Stone W, Celimli S, Nahmias A & Yoder P (2011) A randomized controlled trial of Hanen's 'More Than Words' in toddlers with early autism symptoms, *Journal of Child Psychology and Psychiatry*, 52:7; 741-752.

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**Article Methodology:** Randomised Controlled Trial

**Returned JC on:** 4 Feb 2013

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Ques No.	Yes	Can't Tell	No	Comments
1	✓			<p><b>Did the trial address a clearly focused issue?</b></p> <p>Yes the aim of the study was to test if participation in the Hanen's 'More Than Words' (HMTW) program: (a) enhanced parental responsivity to toddler's actions, their focus of attention, and their communication (i.e., behaviors that are emphasized in the HMTW intervention); and (b) increased communication in toddlers with symptoms consistent with autism spectrum disorders (ASD). In addition, the potential moderating role of two pretreatment child characteristics, communication and object interest, both of which have been found to be moderators in a previous child-centered treatment with preschool children with autism were explored.</p> <p><i>Population:</i> Sixty-two children (51 boys and 11 girls) and their parents</p> <p><i>Intervention:</i> Hanen's 'More Than Words' (HMTW) is a parent training program designed to teach parents of young children with ASD practical strategies to use during every day routine to increase children's communication.</p> <p>This randomized controlled trial compared Hanen's 'More than Words' (HMTW), a parent implemented intervention, to a 'business as usual' control group.</p> <p><i>Outcome:</i> Children's communication and parental responsivity were measured at each time point. Children's object interest, a putative moderator, was measured at Time 1.</p> <p><i>Outcome Measures:</i></p> <ul style="list-style-type: none"> <li>-The Screening Tool for Autism in Two-Year-Olds</li> <li>-The Mullen Scales of Early Learning</li> <li>-The Vineland Adaptive Behavior Scales, 2<sup>nd</sup> Ed.</li> <li>-The Autism Diagnostic Observational Schedule</li> <li>-Parent Interview for Autism—Clinical Version</li> <li>-The Early Social Communication Scales (ESCS) –</li> <li>-The Parent–Child Free Play Procedure (PCFP)</li> <li>-The Developmental Play Assessment (DPA)</li> <li>-Fidelity of Treatment Implementation (FOT)</li> <li>-A Consumer Satisfaction Survey</li> </ul>
2	✓			<p><b>Was this a randomised controlled trial (RCT) and was it appropriately so?</b></p> <p>This study was a randomized controlled trial which was an appropriate study design to address the objective of the study (i.e. to test the effectiveness of a intervention- 'Hanen's More than Words'.</p> <p>The participants were randomised within each site using software that utilized a random number generator to assign children to the intervention or control group.</p> <p><b>Is it worth continuing? YES</b></p>

3	✓		<p><b>Were all of the patients who entered the trial properly accounted for at its conclusion?</b></p> <p>Yes, figure one shows the recruitment, enrolment, randomisation and retention of participants. Participants were treated with 'partial'* intention to treat analyses. All participants with pre-treatment data and data from at least one of the follow-up periods were included in analyses.</p> <p><i>['The term 'partial' intent to treat was used because 'full' intent to treat requires imputation of all missing data. We elected not to carry forward values from earlier periods to later periods when participants were missing Time 1 data for a particular procedure or to use multiple imputation.']</i></p>
4	✓		<p><b>Were patients, health workers and study personnel 'blind' to treatment?</b></p> <p>It was noted in the paper that majority of the assessors and all of the observational coding of children's behaviour were blind to treatment condition.</p>
5		✓	<p><b>Were the groups similar at the start of the trial?</b></p> <p>No, there was considerable heterogeneity (see table 1) with respect to developmental functioning on the Mullen Scales of Early Learning and Vineland Adaptive Behaviour Scales Second Edition. The sample was also diverse with respect to socio-demographic characteristics.</p>
6	✓		<p><b>Aside from the experimental intervention, were the groups treated equally?</b></p> <p>Yes, the groups were treated equally.</p>
7			<p><b>How large was the treatment effect?</b></p> <p>The effect size immediately after treatment was medium to large (.71) and was moderate even at the follow-up period (.50). Table 2 contains effect size confidence intervals and descriptives.</p>

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8			<p><b>How precise was the estimate of the treatment effect?</b></p> <p>Please see table 2 for confidence intervals.</p> <p><i>*Notes on confidence intervals</i></p> <p><i>[can determine precision of results]</i></p> <p>Confidence intervals (CI) describe the uncertainty inherent in the observed effect (e.g. communication score), and describe a range of values within which one can be reasonably confident that the true effect actually lies. If the CI is relatively narrow, the effect size is known precisely. If the interval is wider the uncertainty is greater, although there may still be enough precision to make decisions about the utility of the intervention. Intervals that are very wide indicate that we have little knowledge about the effect, and that further information is needed.</p> <p>The width of the CI for an individual study depends to a large extent on the sample size. Larger studies tend to give more precise estimates of effects (and hence have narrower CI) than smaller studies. For continuous outcomes (e.g. scores on communication), precision depends also on the variability of measurements across individuals.</p>
9 10 11	Journal club to answer		<p><b>Can the results be applied to the local population?</b></p> <p><b>Yes</b></p> <p>The population chosen were toddlers who had been diagnosis with autism mainly boys and approximately half being identified by their parents as being white. This shows similar characteristics to port Pirie and the mid north cluster.</p> <p><b>Were all clinically important outcomes considered?</b></p> <p><b>Yes</b></p> <p>The outcomes measured are specific to speech and autism. The measurements were taken over a period of time allowing comparison between inter/intra subjects.</p> <p><b>Are the benefits worth the harms and costs?</b></p> <p><b>Yes</b></p> <p>The benefit from using the Hansen’s more than words program showed the children who entered the program with limited object interest, improved more than the children who initialing presented with greater object interest. Therefore using the program you would have to choose the children dependent on their object interest.</p> <p>The cost involved would be ensuring the health professional is fully trained in the Hansen more than words program.</p>