NSW Speech Pathology
Evidence Based Practice Interest Group

Critically Appraised Paper (CAP)

CLINICAL BOTTOM LINE: When joint attention skills (responding to joint attention and initiating joint attention) were directly targeted participants in this study showed improvements in this skill. However, the generalisation of these skills was not firmly established and further studies with a greater number of participants is needed.

Clinical Question [patient/problem, intervention, (comparison), outcome]: In Children with Autism, does joint attention (JA) intervention improve social communication skills?

Citation: Whalen, C and Schreibman, L (2003). Joint attention training for children with autism using behaviour modification procedures *Journal of Child Psychology and Psychiatry* 44:3 pp 456-468

Design/Method: Single subject multiple baseline design

Participants: 11 children approximately 4 yrs of age (5 children with autism and 6 typically developing children). Children with autism had diagnosis of autism or another autism spectrum disorder provided by a physician unrelated to the study using the DSM-IV criteria. Each child was assessed using the Bayley Scales of Infant Development, the MacArthur Communicative Development Inventory, The Childhood Autism Rating scale, Gilliam Autism Rating Scale. Children with Autism received also an unstructured joint attention assessment (to assess the child's ability to respond to proto declarative joint attention bids and to measure the child's unprompted joint attention behaviours), a structured laboratory observation (assess generalisation of joint attention behaviours) and a structured joint attention assessment (protoimperative and protodeclarative joint attention, social behaviours and problem behaviour measures).

Experimental Group: Children were administered pre treatment assessments and then participated in the baseline for 2-10 weeks according to the multiple baseline design. Treatment consisted of 2 phases: 1) Response training in which a child was taught to respond appropriately to joint attention bids and 2) initiation training in which the child was taught to initiate joint attention bids.
Sessions took place 3 days a week for 1.5 hours each day. Intervention consisted of a naturalistic behaviour modification technique using components from Discrete trial Training (DT) and Pivotal Response Training (PRT) to target joint attention responding and joint attention initiations. The paper outlines the components of the therapy.

Control Group: None – 6 typical children were assessed to establish a developmental norm for the purpose of setting training criteria for the children with autism. They did not participate in the intervention phases of the study.

Results: Efficacy of training: Results suggest intervention was effective for all subjects for teaching correct responding to the joint attention initiations by the experimenter from pre to post treatment but behaviours were not maintained at three month follow up for all subjects. Teaching joint attention initiations was effective in 4 of 5 subjects in that all increased from baseline to post treatment. However, behaviours were not maintained at 3 month follow up for all subjects.
Generalisation of target behaviours to unstructured assessment: All participants that completed the intervention maintained the ability to respond correctly to joint attention at levels higher than baseline except one participant who decreased to baseline levels from post treatment to follow up. In terms of initiating joint attention, 3 participants showed slight increases, no differences were observed for one subject and substantial gains were observed for one subject. Decreases in joint attention initiations were observed for 3 participants from post treatment to follow up.
Generalisation to naturalistic setting: Following response training decreases from post treatment to follow up were seen with protodeclarative pointing, supported joint attention and co ordinate joint attention were seen with the experimenter although 3 out of four children had higher levels than at baseline.

Comments – Strengths/weaknesses of paper Strengths: Outlines components of therapy used in detail, clinically relevant, asks questions for future research Weaknesses: Limited number of participants, no true control group, didn't address the extent of generalisation in the long term (after three months post therapy)

Level of Evidence (NH&MRC): IV

Appraised By:
Clinical Group: EBP Autism, Oct 2011

May 2002

DISCLAIMER—THIS CAP WAS COMPLETED by PRACTISING SLPs. YOU ARE STRONGLY ENCOURAGE TO READ THE ARTICLE FOR YOURSELF BEFORE MAKING ANY CLINICAL DECISIONS ASSOCIATED WITH THE CLINICAL QUESTION.
ALSO—PLEASE NOTE THE DATE WHEN THIS CAP WAS COMPLETED, and the YEAR OF PUBLICATION OF THE ARTICLE. THE CLINICAL BOTTOMLINE MAY HAVE CHANGED IN LIGHT OF MORE RECENT RESEARCH.

Form based on Worrall & Bennett, Evidence based Practice: Barriers & Facilitators for Speech-Language Pathologists, *Journal of Medical Speech-Language Pathology* 2:9, xi – xvi
Updated February 2006