NSW Speech Pathology Evidence Based Practice Interest Group

Critically Appraised Paper (CAP)

CLINICAL BOTTOM LINE: Short term parent-mediated intervention targeting joint attention can result in significant improvements in targeted areas of joint attention, including responsiveness to joint attention and diversity of functional play acts.

Clinical Question: In Children with Autism, does joint attention (JA) intervention improve social communication skills?

Citation: Kasari, C., Gulsrud, A, Wong, Kwon, S & Locke, J (2010) Randomised Controlled Caregiver Mediated Joint Engagement Intervention for Toddlers with Autism. *J Autism Dev Disorders 40*:1045-1056.

Design/Method: Randomised controlled trial. Treatment and control/wait list group. ADI-R and Mullen administered to all children pre-treatment. IT group were given 8 week intervention directly after initial assessment. WL group waited 8 weeks with no intervention. Caregiver-child interaction video obs (20% blinded for reliability testing) completed prior to treatment and repeated at 8 weeks for both groups. Caregiver diaries and involvement scales given after each week completed in IT group. Mullen repeated at 12 months only.

Primary outcome measures:

1) Engagement states: 3 macro categories of engagement: unengaged/object engagement/joint engagement. (Adamson, 2004);
2) Functional and symbolic play acts (Kasari, 2006; Lifter 1993). Play coders were blinded.
3) Frequency of joint attention skills (initiating and responding joint attention (Kasari 2006 & 8))

Secondary outcome measures:

1) Quality of caregiver involvement (using CQIS scale 1-5)
2) Parent adherence to treatment and competence (6 item self report; adherence to treatment measure)
3) Service Utilisation Measure: list of programs/therapies child engaged with during treatment.

Participants: Jan 02- Sep 05; 38/42 children suitable for study; 4 excluded based on exclusion criteria/refusal to participate. Participants were 38 caregivers and their children with ASD ranging from 21-36 months; 29-male/9 female; Over 40% being ethnic minority backgrounds; Participants had to meet criteria of <36 months, ASD Dx, no additional syndromes

Treatment group n=19; control group n=19. 19 children in the treatment group were followed up at 1 year. Children were recruited from a large urban area.

Experimental Group: 19 chn received joint attention intervention. Intervention was adapted from Kasari (2006&2008). 10 modules incorporating core principles of the intervention. 24 sessions in total for each child; 3 sessions per week for 8 weeks. Session= interventionist coaching caregiver and child in play routines. Developmental procedures of responsive and facilitative interaction methods as well as aspects of ABA. Follow lead/interest; imitating child's actions; repeating back what child said; expanding what child said; giving corrective feedback; sitting close to the child/making eye contact and making environmental adjustments to engage the child. 30 mins of direct instruction/modelling/guided practice & feedback to parent-child dyad. Handouts given to parents after each module. 10 minutes at end to practice newly learned techniques.

Control Group: 19 children 14 male; 5 female were put on a wait list and then offered intervention 8 weeks later. Caregiver child interaction measured at 8 weeks and 14 months. Mullen repeated at 14 months. Children pursued regular interventions (service utilisation measures taken) during 8 week period and then embarked on program following 8 week wait. Chn matched for: gender; age; ethnicity; birth order; CA; MA; DQ. Parent matched for: age; level education; employment status

Results:

Primary Analysis

Post intervention:

Compared to the WL gp, the IT children:

1. Engaged in sig. less object-focused play
2. Engaged in sig. more joint engagement.
3. Showed greater responsiveness to joint attention
4. Showed sig. more functional play acts

There was no sig diff between gps for unengaged/other engagement. IT chn did not show greater initiations of JA or increased diversity of symbolic play. Overall, IT gp had greater improvement in 2/3 joint engagement state outcomes;1/2 responsiveness to joint attention outcomes;1/2 play quality outcomes.

One year follow up for IT group:

Maintenance and/or improvement occurred for states of joint engagement; joint engagement; responsiveness to joint attention; types of functional play acts.

Secondary Analysis (factors related to outcome)

Higher quality caregiver quality of involvement scores sig. predicted increased joint engagement scores post treatment. Neither parent-rated questions regarding adherence and competence predicted engagement, type of play or joint attention in caregiver-child dyad. Overall, high parent adherence and competence.

Service utilisation

Total number of hours in alternative services did not predict any of the variables of interest for either gp.

Comments

Strengths: matched controls (demographics provided for child and parent); randomised; controlled for possible confounders/factors in caregivers (secondary analysis); measured fidelity of intervention; high degree of fidelity in caregiver implementation of the intervention; controlled for variables such as interventions received during treatment period; external validity-recruited from diverse (including ethnic minority) demographic therefore easier to generalise to broader populations; parent mediated (therefore more cost effective); large effect sizes; minimal loss to follow up, provided detail on treatment given and tools used for assessment, intervention was based on developmental level of child, internal validity-tried to control for measurement bias (e.g. blinded observation measures/play coders etc).

Weaknesses: relatively small sample size; no long term comparison possible as control group received intervention therefore difficult to know if gains were maintained compared to control; **did not measure language skills pre-or post intervention (may affect responsiveness to intervention and be different in control vs IT gp)**; did **not specify range of severity of autism/PDD etc. for each grou**p

Level of Evidence (NH&MRC): Level II

Appraised By: Autism EBP
Clinical Group: SCH

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