

Report for critical review of randomised controlled trial

Date: May 6, 2016

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Title: **A randomised controlled trial of preschool-based joint attention intervention for children with autism**

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Source: Journal of Child Psychology and Psychiatry, 2012, 53:1, 97-105

Background:

Impairment in social interaction and verbal and non-verbal communication, along with a restricted repertoire of activities and interests are major characteristics of autism. The core social-skill, JA and Joint Engagement (JE) are also deficits in this type of disability. Previous studies emphasised on the specialist-mediated and parent-mediated intervention by conducting randomised trials and single case studies. They showed effective results for the children with autism. However, there was inadequate knowledge regarding the JA-intervention implemented in preschool. Therefore, the researchers would like to see whether a preschool-based JA-intervention would increase JA-skills and JE in young children with autism. Two hypotheses were examined in this study, where the JA-intervention shows superior to the control group, and whether the effect should generalise to the interaction with the mothers.

Method:

A chronological age of 29-60 months with a confirmed ICD-10 diagnosis of childhood autism were included in this randomised controlled trial. The study was conducted in preschool setting. Main intervention providers were preschool teachers. Total participants were 61 children and they were divided to 34 children in JA-intervention group and 27 children in control group. The intervention period was 8 weeks.

Result:

JA-intervention group performed significantly poorer on expressive language compared to the control group. However, according to the adjusted event ratio (ER), children in the JA-intervention group were almost five times more likely to demonstrate initiation of JA-skills than the control group. Outcomes were identified both on teacher-child play and mother-child play.

Conclusion:

As the researcher hypothesised, the children in the JA-intervention group evinced more JA-skills during play with the preschool teachers than the controls. The authors compared the results of previous studies by the parent-mediated intervention and specialist-mediated intervention. They

found that targeting core social-skill deficits can lead to increased JA with the intervention provider no matter who it is; the preschool teacher, the mother or the specialist. In this way, the study could provide additional knowledge that expanded from earlier specialist- and parent-mediated studies.

Discussion during the journal club reading

- Randomised controlled trial was appropriate for this type of study as the investigators wanted to test a hypothesis of effectiveness or not of JA-intervention. However, they did not equally randomise the participants between intervention and control group. Intervention group had more participants than the control group and this may affect the study result.
- Sample size was calculated based on priori power analysis. To be more independent and relevant sample size, it should be decided based on epidemiological method. Increasing the sample size will reduce sampling error.
- Because Norwegian community mental health clinics have full facilities to provide care for disabled children, they can provide intervention by one to one approach. This could be a hindrance factor for other studies conducted in different nations. The result may not generalise to other settings which can not provide such supporting.
- Regarding the gender issue, boys were more participated in the study than the girls and investigators did not present the results of both gender separately. To abstain from generally inferencing for both gender, they should have described the outcome separately.
- To assess the post-intervention result, the investigators did not describe whether they used independent evaluator or not. Evaluating the effects of intervention by professional evaluator may produce more reliable output.
- Although the investigators aimed to assess the effect of JA-intervention, they also evaluated the output of Joint Engagement. The result was not significant and the reason for that situation was discussed mainly on intervention provider. Actually, their output should focus specifically on JA result.