| **Author, Year, Country**  **Groups, N Enrollment/**  **N Final** | **Age at Intake**  **Mean months ± SD** | **Measure** | **Baseline Score, Mean ± SD** | **Follow-Up Score, Mean ± SD** | **Analytic Data** |
| --- | --- | --- | --- | --- | --- |
| **RCTs** | | | | | |
| Aldred et al. 201227, 28  UK  **IG:** Parent training in social communication intervention plus community intervention, 14/14  **CG:** Eclectic therapy, 14/14  **CGa:** aged 24-27 months, total ADOS score 11-17 (young high functioning)  **CGb:** aged 24-47 months; total ADOS score 18-24 (young low functioning)  **CGc:** aged 48-71 months; total ADOS score 11-17 (older high functioning)  **CGd:** aged 48-71 months; total ADOS score 18-24 (older low functioning)  Quality: Good | **IG:** 51.4 ± 11.8  **CG:** 50.9 ± 16.3 | ADOS total score | **IG:** 16.1 ± 4.5  **IGa:** 12 ± 3.3  **IGb:** 19 ± 1.3  **IGc:** 14 ± 3.3  **IGd:** 20 ± 1  **CG:** 15.6 ± 4.9  **CGa:** 11 ± 2.3  **CGb:** 19 ± 1  **CGc:** 14 ± 3.3  **CGd:** 20 ± 1.3 | **IG:** 11.8 ± 6.4  **IGa:** 6 ± 3.6  **IGb:** 13 ± 5.6  **IGc:** 11 ± 4.5  **IGd:** 17 ± 2.6  **CG:** 16.1 ± 4.4  **CGa:** 13 ± 4  **CGb:** 16 ± 4.3  **CGc:** 16 ± 1.3  **CGd:** 20 ± 0.6 | Co-varying for baseline ADOS score, there was a significant difference in ADOS change between the groups (F 1,25 = 7.30; p =0.01). |
| Oosterling et al. 201036  **IG:** Nonintensive parent training+specialized preschool, 40/36  **CG:** Eclectic therapy, 35/31  Quality: Fair | **IG:** 35.2 ± 5.5  **CG:** 33.3 ± 6.4 | ADOS  Joint attention factor | NR | Change from baseline scores:  **G1:** -0.8 ± 2.3  **G2:** -0.9 ± 0.2 | Joint attention factor:  Group effect, F=0.12  Time effect, F=0.67,  Group\*Time effect= 0.76  Social affect : Group effect, F=0.01  Time effect, F=6.08 (p<0.05)  Group\* Time effect, F= 0.10 |
| Social affect | NR | **G1:** -2.5 ± 4.0  **G2:** -2.3 ± 3.7 |
| Rogers et al. 201229, 30  US  **IG**: Parent-delivered Early Start Denver mode (ESDM), 49/49  **CG**: Eclectic therapy, 49/49  Quality: Fair | **IG:** 21.02 ± 3.51  **CG:** 20.94 ± 3.42 | Modified ADOS social affect | **IG:** 29.45 ± 9.16  **CG:** 34.14 ± 8.69 | **IG:** 26.61 ± 10.14  **CG:** 27.33 ± 10.62 | Change from baseline  IG: d= - 0.37  CG: d= - 0.63  CG showed greater improvement in social affect score than IG (estimated difference between groups = 3.43, SD=1.72, p =0.05). |
| ADOS–Restrictive and Repetitive | **IG:** 3.92 ± 2.01  **CG:** 4.31 ± 1.92 | **IG:** 3.96 ± 1.86  **CG:** 3.82 ± 2.04 | Change from baseline:  IG: d=0.02  CG: d= - 0.22 |
|  |  |  | No significant group difference in ADOS scores  No effect of intervention hours on the group difference in both scores , p>0.05 |
| Pajareya et al. 201137  Thailand  **IG:** DIR/Floortime,16/15  **CG:** Usual care, 16/16  Quality: Fair | **IG:** 56.6 ± 10.1  **CG:** 51.5 ± 13.9 | CARS | **IG:** 37.2 ± 6.2  **CG:** 39.7 ± 6.6 | Change scores;  **IG:** 2.9 ± 2.0  **CG:** 0.8 ±1.2 | No baseline difference between the groups, p=0.86  Change CARS scores: Significantly greater decrease for the IG as compared to CG (p=0.002) |
| Carter et al. 201138  US  **IG**: More than Words, 32/29  **CG**: Eclectic therapy, 30/26  Quality: Fair | **IG:** 21.11 ± 2.71  **CG**: 21.51 ± 2.82 | PIA-CV nonverbal communication-raw scores | **IG:** 2.30 ± 0.64  **CG:** 2.28 ± 0.73 | **IG:** 2.89 ± 0.67  **CG:** 2.92 ± 0.65 | Residualized gain scores from baseline:  **IG: -**0.05 ± 0.63  **CG:** 0.06 ± 0.58  ES=-0.19 , 95%CI :-0.81 to 0.43 |
| Green et al. 201031  UK  **IG:** Preschool autism communication intervention (PACT), 77/74  **CG:** Eclectic therapy, 75/72  Quality: Fair | **IG:** 45  **CG:** 45 | ADOS-G  Total social-communication algorithm score | **IG:** 19.6 ± 4.2  **CG:** 19.3 ± 4.0 | **IG:** 15.7 ± 6.0  **CG:** 16.5 ± 5.7  Change from baseline, mean (SD):  **IG:** -3.9 ± 4.7  **CG:** -2.9 ± 3.9 | Change in ADOS-G diagnosis to ASD, n (%):  IG: 22 (30)  CG: 17 (24)  Change in ADOS-G diagnosis to non-spectrum, n (%):  IG: 4 (5)  CG: 5 (7)  Treatment effect with ANCOVA estimates:  without baseline covariate adjustment:  -1·06 (95% CI –2·48 to 0·36)  with adjustment for center and age:  -1·00 (–2·38 to 0·39)  No interaction with treatment for ADOS-G algorithm score >17 (p=0.85) |
| Drew et al. 200239  UK   **IG:** Parent training, 12/12  **CG:** Local/eclectic services, 12/12  Quality: Fair | **IG:** 21.4 ± 2.7  **CG:** 23.6 ± 3.8 | ADI-R  -Non-Verbal Communication | **IG:** 12.8 ± 1.6  **CG:** 12 ± 2.4 | **IG:** 11.0 ± 2.8  **CG:** 11.9 ± 1.8 | No significant group differences in any of the Severity measures (p>0.05) |
| Reciprocal Social Interaction | **IG:** 19.6 ± 3.0  **CG:** 20.3 ± 4.5 | **IG:** 18.3 ± 4.9  **CG:** 20.1 ± 4.3 |
| Repetitive & Stereotyped Behavior | **IG:** 3.2 ± 1.1  **CG:** 3.7 ± 1.6 | **IG:** 3.9 ± 1.8  **CG:** 4.2 ± 2.0 |
| **Prospective cohort studies** | | | | | |
| Strauss et al, 201232, 33  Italy  **IG**: Staff & parent mediated early intervention, 24/24  **CG**: Eclectic therapy, 20/20  Quality: Good | IG: 55.67 ± 17.63  CG: 41.94 ± 13.07 | ADOS-Total | **IG:** 15.96 ± 4.33  **CG:** 14.56 ± 5.05 | **IG:** 13.21 ± 3.83  **CG:** 13.56 ± 4.72 | Change from baseline:  IG: t= - 3.1, p=0.005  CG: t= -1.826, p=0.09 |
| ADOS  Social interaction | **G1:** 10.54 ± 2.34  **G2:** 9.63 ± 3.24 | **G1:** 8.83 ± 2.70  **G2:**  9.00 ± 2.97 | IG: t= - 3.995, p<0.001  CG: t= -1.775, p=0.096 |
| ADOS  Communication | **G1:** 6.04 ± 1.88  **G2:** 4.94 ± 2.23 | **G1:** 4.38 ± 1.34  **G2:** 4.56 ± 1.97 | IG: t= - 3.745, p<0.001  CG: t= - 1.031, p=0.319  No age effect on score change differences on ADOS total (F (44) = 1.009, p = .230  In both groups, the predictive power of parental stress on autism severity was modified by perception of difficult child, with higher perceptions of difficulty associated with lower decreases in autism severity |

ABA=Applied Behavior Analysis; ADI-R=Autism Diagnostic Interview Revised; ADOS=Autism Diagnostic Observation Schedule; ADOS-G=Autism Diagnostic Observation Schedule-Generic; CARS=Childhood Autism Rating Schedule; CG – Control Group; ESDM=Early Start Denver Model; ES=effect size; GARS=Gilliam Autism Rating Scale; IG=Intervention Group; NR=Not Reported; PACT=Preschool Autism Communication Intervention; PDD-NOS=Pervasive Developmental Disorder-Not Otherwise Specified; PIA-CV =Parent Interview for Autism-Clinical Version; SD=Standard Deviation.