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**Early diagnosis and Early Start Denver Model intervention in autism spectrum disorders delivered in an Italian Public Health System service**

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**Background:** Early diagnosis combined with an early intervention program, such as the Early Start Denver Model (ESDM), can positively influence the early natural history of autism spectrum disorders. This study evaluated the effectiveness of an early ESDM-inspired intervention, in a small group of toddlers, delivered at low intensity by the Italian Public Health System. **Methods:** Twenty-one toddlers at risk for autism spectrum disorders, aged 20–36 months, received 3 hours/wk of one-to-one ESDM-inspired intervention by trained therapists, combined with parents' and teachers' active engagement in ecological implementation of treatment. The mean duration of treatment was 15 months. Cognitive and communication skills, as well as severity of autism symptoms, were assessed by using standardized measures at pre-intervention (Time 0 [T0]; mean age =27 months) and post-intervention (Time 1 [T1]; mean age =42 months). **Results:** Children made statistically significant improvements in the language and cognitive domains, as demonstrated by a series of nonparametric Wilcoxon tests for paired data. Regarding severity of autism symptoms, younger age at diagnosis was positively associated with greater improvement at post-assessment. **Conclusion:** Our results are consistent with the literature that underlines the importance of early diagnosis and early intervention, since prompt diagnosis can reduce the severity of autism symptoms and improve cognitive and language skills in younger children. Particularly in toddlers, it seems that an intervention model based on the ESDM principles, involving the active engagement of parents and nursery school teachers, may be effective even when the individual treatment is delivered at low intensity. Furthermore, our study supports the adaptation and the positive impact of the ESDM entirely sustained by the Italian Public Health System. **Keywords:** early diagnosis, early intervention, autism spectrum disorder, Early Start Denver Model, Public Health System service