



DIR® and DIRFloortime® Evidence-Base Quick Facts

The following is a brief sample of the evidence-base supporting DIR and DIRFloortime (Floortime). The research includes the highest levels of evidence. Unlike behavioral approaches which narrowly focus on specific behaviors, DIR is an interdisciplinary, individualized, whole-child, developmental approach that is broad in both its approach and its impact, making it more complex to quantify in research. Nevertheless, the research that supports DIR and the DIRFloortime approach is strong and continues to mount.

Four randomized-controlled studies were published since 2011 identifying statistically significant improvement in children with autism who used Floortime versus traditional behavioral approaches (Solomon, et. al., 2014; Casenheiser, Shanker &Steiben, 2011; Lal and Chhabria, 2013; Pajareya and Kopmaneejumruslers, 2011). These studies also showed the effectiveness of addressing the caregiver (Casenheiser et. al., 2011; Solomon, et. al., 2014) and specific skill improvement including turn taking, two way communication, understanding cause and effect and emotional thinking (Lal and Chhabria, 2013).

DIRFloortime has the strongest research of any intervention to support its effectiveness in improving the core challenges of autism including relating, interacting, and communicating while decreasing caregiver stress and improving parent-child relationships.

Solomon, Necheles, Ferch, and Bruckman (2007) conducted a pre-post survey of the Play and Language for Autistic Younsters (PLAY) Project Home Consultation program. This program, based on the DIR model, is used in fifty agencies across seventeen U.S. states. Results indicated statistically significant improvement in the children's Functional Developmental Levels and 100% of the parents reported satisfaction in participating.

In 2002, a pre/post-randomized controlled trial utilizing an approach based on developmental, individual-differences, and relationship-based philosophy was published by Salt, Shemilt, Sellars, Boyd, Coulson and Mc Cool. The study showed not only statistically significant improvement in specific skill development, but also that caregivers reported a decrease in stress with treatment while the control group showed an increase in stress.

Case studies have also been effective in supporting the use of DIRFloortime with children with autism. Dionne and Martini (2011) demonstrated statistically significant improvement in communication between parent and child. Wieder and Greenspan (1997, 2005) did comprehensive case studied that spanned from 8-15 years. These studies supported the long lasting results DIRFloortime had on individual child skills, as well as, the emotional connections the families were able to develop over time using this approach.

Floortime and related DIR based approaches are listed on evidence-based treatment reviews. Most recently, the Journal of Clinical Child and Adolescent Psychology published an article entitled, "Evidenced Base Update for Autism Spectrum Disorder" where they categorized Floortime as a "Developmental Social Pragmatic (DSP) Parent Training" and listed focused DSP Parent Training in their second level evidence base category indicating it as "Probably Efficacious." (Smith & Iadarola, 2015) Several recent studies on Floortime were cited in the article including the recent randomized clinical trial studies. The research is beginning to catch up with what we have known in practice for many years

The evidence is strong and building – DIRFloortime works! Learn more at www.icdl.com/research.

DIR® and DIRFloortime® Evidence-Base Quick Facts

References

- Casenhiser, D. M., Shanker, S., & Stieben, J. (2011). Learning through interaction in children with autism: Preliminary data from a social-communication-based intervention. *Autism*, 1-22. <http://dx.doi.org/10.1177/1362361311422052>
- Dionne, M., & Martini, R. (2011). Floor Time Play with a child with autism: A single-subject study. *Canadian Journal of Occupational Therapy*, 78, 196-203. <http://dx.doi.org/10.2182/cjot.2011.78.3.8>
- Greenspan, S. I., Brazelton, T. B., Cordero, J., Solomon, R., Bauman, M. L., Robinson, R., ... Breinbauer, C. (2008). Guidelines for early identification, screening, and clinical management of children with autism spectrum disorders. *Pediatrics*, 121(4), 828-830. <http://dx.doi.org/10.1542/peds.2007-3833>
- Greenspan, S., & Wieder, S. (1997). Developmental patterns and outcomes in infants and children with disorders in relating and communicating: A chart review of 200 cases of children with autistic spectrum diagnoses. *Journal of Developmental and Learning Disorders*, 1, 87-141. Retrieved from <http://www.playworks.cc/articles/200casechartreview.pdf>
- Hess, E. (2013). DIR®/Floortime™: Evidence based practice towards the treatment of autism and sensory processing disorder in children and adolescents. *International Journal of Child Health and Human Development*, 6(3). Retrieved from <http://www.centerforthedevelopingmind.com/sites/default/files/IJCHD-2013-6-Hess-Floortime.pdf>
- Lal, R., & Chhabria, R. (2013). Early intervention of autism: A case for Floor Time approach. *Recent Advances in Autism Spectrum Disorders*, 1. <http://dx.doi.org/10.5772/54378>
- Nikolopoulos, C., Keuster, D., Sheehan, M., Dhanya, S., Herring, W., Becker, A., & Bogart, L. (2010). Socially Assistive Robots and Autism. *Solid State Phenomena*, 166-167, 315-320. <http://dx.doi.org/10.4028/www.scientific.net/SSP.166-167.315>
- Pajareya, K., & Kopmaneejumruslers, K. (2011). A pilot randomized controlled trial of DIR/Floortime™ parent training intervention for pre-school children with autistic spectrum disorders. *Autism*, 15(2), 1-15. <http://dx.doi.org/10.1177/1362361310386502>
- Pajareya, K., & Nopmaneejumruslers, K. (2012). A one-year prospective follow-up study of a DIR/Floortime™ parent training intervention for pre-school children with Autistic Spectrum Disorders. *Journal of the Medical Association of Thailand*, 95(9), 1184-1193. Retrieved from <http://www.floortimethailand.com/images/info/interesting%20ari/2063.pdf>
- Salt, J., Shemilt, J., Sellars, V., Boyd, S., Coulson, T., & McCool, S. (2002). The Scottish Centre for Autism preschool treatment programme II: The results of a controlled treatment outcome study. *Autism*, 6(1), 33-46. <http://dx.doi.org/10.1177/1362361302006001004>
- Smith, Tristram & Iadarola, Suzannah (2015) Evidence Base Update for Autism Spectrum Disorder, *Journal of Clinical Child & Adolescent Psychology*, 44:6, 897-922
- Solomon, R., Necheles, J., Ferch, C., & Bruckman, D. (2007). Pilot study of a parent training program for young children with autism: The PLAY Project Home Consultation program. *Autism*, 11(3), 205-224. <http://dx.doi.org/10.1177/1362361307076842>
- Solomon, R., Van Egeren, L., Mahoney, G., Quon Huber, M., Zimmerman, P. (2014). PLAY Project Home Consultation Intervention Program for Young Children With Autism Spectrum Disorders: A Randomized Controlled Trial. *Journal of Developmental and Behavioral Pediatrics*, 35(8), 475-485. http://www.playproject.org/assets/PLAY_Project_Home_Consultation_Intervention.1.pdf
- Weeks, K. (2009). Musical gold: The partner's singing voice in DIR®/Floortime™. *Growing and Maturing*, 15, 22-23. Retrieved from www.imagine.musictherapy.biz/Imagine/archive_files/Early%20Childhood%20News%20letter%202009.pdf#page=22
- Wieder, S., & Greenspan, S. I. (2005). Can children with autism master the core deficits and become empathetic, creative and reflective? A ten to fifteen year follow-up of a subgroup of children with autism spectrum disorders (ASD) who received a comprehensive developmental, individual-difference, relationship-based (DIR) approach. *The Journal of Developmental and Learning Disorders*, 9, 39-60. Retrieved from <http://playworks.cc/articles/DIRstudy--10yearfollowup.pdf>