

## **Module: Differential Reinforcement of Other Behaviors**

### **Evidence Base for Differential Reinforcement of Other Behaviors**

The National Professional Development Center on ASD has adopted the following definition of evidence-based practices.

To be considered an evidence-based practice for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals using:

- *randomized or quasi-experimental design studies*. Two high quality experimental or quasi-experimental group design studies,
- *single-subject design studies*. Three different investigators or research groups must have conducted five high quality single subject design studies, or
- *combination of evidence*. One high quality randomized or quasi-experimental group design study and three high quality single subject design studies conducted by at least three different investigators or research groups (across the group and single subject design studies).

High quality randomized or quasi experimental design studies do not have critical design flaws that create confounds to the studies, and design features allow readers/consumers to rule out competing hypotheses for study findings. High quality in single subject design studies is reflected by a) the absence of critical design flaws that create confounds and b) the demonstration of experimental control at least three times in each study.

This definition and criteria are based on the following sources:

Horner, R., Carr, E., Halle, J., McGee, G., Odom, S., & Wolery, M. (2005). The use of single subject research to identify evidence-based practice in special education. *Exceptional Children*, 71, 165-180.

Nathan, P., & Gorman, J. M. (2002). *A guide to treatments that work*. NY: Oxford University Press.

Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. D., Thompson, B., & Harris, K. (2004). *Quality indicators for research in special education and guidelines for evidence-based practices: Executive summary*. Arlington, VA: Council for Exceptional Children Division for Research.

Rogers, S. J., & Vismara, L. A. (2008). Evidence based comprehensive treatments for early autism. *Journal of Clinical Child and Adolescent Psychology*, 37(1), 8-38.

Using these criteria, the empirical studies referenced below provide documentation for supporting differential reinforcement as an evidence-based practice. The studies cited in this

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section document that this practice meets the NPDC on ASD's criteria for an evidence-based practice. This list is not exhaustive; other quality studies may exist that were not included.

### **Preschool**

Newman, B., Tuntigian, L., Ryan, C. S., & Reinecke, D. R. (1997). Self-management of a DRO procedure by three students with autism. *Behavioral Interventions*, 12(3), 149-156.

### **Elementary and Middle School**

Adelinis, J., Piazza, C., & Han-Leong, G. (2001). Treatment of multiply controlled destructive behavior with food reinforcement. *Journal of Applied Behavior Analysis*, 34(1), 97-100.

Lee, R., McComas, J. J., & Jawor, J. (2002). The effects of differential and lag reinforcement schedules on varied verbal responding by individuals with autism. *Journal of Applied Behavior Analysis*, 35(4), 391-402.

Newman, B., Tuntigian, L., Ryan, C. S., & Reinecke, D. R. (1997). Self-management of a DRO procedure by three students with autism. *Behavioral Interventions*, 12(3), 149-156.

Piazza, C., Moes, D., & Fisher, W. (1996). Differential reinforcement of alternative behavior and demand fading in the treatment of escape-maintained destructive behavior. *Journal of Applied Behavior Analysis*, 29(4), 569-572.

Taylor, B., Hoch, H., & Weissman, M. (2005). The analysis and treatment of vocal stereotypy in a child with autism. *Behavioral Interventions*, 20, 239-253.

Shabani, D., & Fisher, W. (2006). Stimulus fading and differential reinforcement for the treatment of needle phobia in a youth with autism. *Journal of Applied Behavior Analysis*, 39(4), 449-452.