This table is adapted from Koegel, Koegel, Vernon, and Brookman (2009). Empirically Supported Pivotal Response Treatment for Autism. In Weisz and Kazdin (2009). Evidence-based Psychotherapies for Children and Adolescents. New York: Guilford Press.

| Study | Lab | Design | Study Sample | Treatment / Independent Variable | Dependent Variables | Treatment Outcome |
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| Koegel, O'Dell, & Koegel (1987) | Original lab | Single subject design - Multiple baseline across participants | n = 2<br>Ages = 4.5, 5.8 | Discrete Trial vs. PRT (called Analogue Treatment* vs. NLP*) | • Imitative child utterances<br>• Spontaneous child utterances<br>• Generalization | Children produced more imitative and spontaneous utterances in PRT condition. Generalization of treatment gains occurred only in PRT condition |
| Laski, Charlop, & Schreibman (1988) | Independent replication | Single subject design - Multiple baseline across participants | n = 8<br>Ages = 5 - 9.6 | Parent training in PRT (called NLP*) at home and in the clinic | • Parent verbalizations<br>• Child vocalizations<br>• Frequency of echolalia | Post-treatment increases in parent requests for vocalizations. Increases in children's verbal responsiveness during intervention and generalization |
| Schreibman Kaneko, & Koegel (1991) | Independent replication with original lab collaboration | Group design with random assignment | n = 19 (parents of children with autism) | Discrete Trial vs. PRT (called Individual Target Behaviors* vs. PRT) | • Parental affect (scored by naïve observers) | Parents in the PRT condition displayed significantly more positive affect than parents trained in Discrete Trial. |
| Koegel, Koegel, & Surratt (1992) | Original lab | Single subject design - Repeated reversal design with counterbalancing | n = 3<br>Ages = 3.4 - 4.6 | Discrete Trial vs. PRT (called Analogue Treatment* vs. PRT) for teaching of target sounds and words | • Disruptive behavior<br>• Target language responses | Increased responding and less disruptive behaviors occurred during the PRT condition compared to the analogue condition |
| Pierce & Schreibman (1995) | Independent replication | Single subject design - Multiple baseline across participants | n = 2<br>Ages = 10, 10 | Peer-implemented PRT to increase social skills | • Intervals with peer interaction<br>• Conversation initiations<br>• Play initiations<br>• Attention behaviors | Following peer-implemented PRT, the children increased interactions to a high level of intervals, and increased play and conversation initiations. Both children exhibited increases in coordinated and supported joint attention behaviors following treatment |

* Historically, various terms have been used synonymously in these empirical articles.

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| Thorp, Stahmer, Schreibman (1995) | Independent replication | Single subject design - Multiple baseline across participants | n = 3<br>Ages = 5.4 - 9.9 | PRT teaching of sociodramatic play | • Language assessments<br>• Play behaviors (Role playing, make-believe, persistence, social behavior, verbal communication) | All three children increased in all play behavior measures. Play behavior gains maintained during generalization. |
| Stahmer (1995) | Independent replication | Single subject design - Multiple baseline across participants | n = 7<br>Ages = 4.3 - 7.2 | Modified PRT using symbolic play as a target behavior | • Symbolic play<br>• Complexity of play<br>• Creativity of play<br>• Generalization across toys, settings, play partners | Increase in symbolic play and play complexity after PRT play training. Maintenance of treatment gains during generalizations |
| Koegel, Bimbela, & Schreibman (1996) | Original lab with independent collaborator | Group design with random assignment | n = 17<br>Mean age = 6 | Discrete Trial vs. PRT (called Individual Target Behaviors* vs. PRT) | • Ratings of happiness, interest, stress, communication style during dinnertime probes | Discrete Trial condition resulted in no significant influence on interactions, while PRT resulted in positive parent-child interactions |
| Pierce & Schreibman (1997) | Independent replication | Single subject design - Multiple baseline across participants | n = 2<br>Ages = 7, 8 | Peer-implemented PRT to increase social skills | • Intervals with peer interaction<br>• Conversation initiations<br>• Play initiations<br>• Generalization to untrained peers | Peer-implemented PRT was successful in producing positive social behavior change across multiple peer-implementers. The social behavior change maintained during generalization with untrained peers. |
| Koegel, Camarata, Koegel, Bentall, & Smith (1998) | Original lab with independent collaborator | Single subject design – ABA with counterbalancing to control for order effects | n = 5<br>Ages = 4.8 - 6 | Discrete Trial vs. PRT (called Analogue Treatment* vs. PRT) for teaching target sounds | • Correct production of target sounds in language samples<br>• Intelligibility ratings | Significant gains in correct production of target sounds and speech intelligibility during the PRT intervention |

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| Koegel, Camarata, Valdez-Menchaca, & Koegel (1998) | Original lab with independent collaborator | Single subject design – Multiple baseline across participants | n = 3<br>Ages = 3.8 - 5.4 | Self-initiated question asking ("What's that?") using a PRT framework | • Spontaneous use of target question<br>• Number of stimulus items labeled correctly | Children consistently and spontaneously initiated "What's that?" across treatment and generalization settings. Significant increase in vocabulary due to item label acquisition |
| Koegel, Koegel, Shoshan, & McNerney (1999) Phase 1 | Original lab | Retrospective analysis of archival data | n = 6<br>Ages = 3.1 - 3.10 | High vs. low child-initiated social interactions in a PRT treatment | • Language age<br>• Number of initiations<br>• Pragmatic ratings<br>• Social/community functioning<br>• Adaptive behavior scale scores | Children with poor and favorable outcomes had comparable language ages and adaptive behavior scale scores at pre-intervention. Children who exhibited high levels of spontaneous initiations at pre-intervention had more favorable outcomes |
| Koegel, Koegel, Shoshan, & McNerney (1999) Phase 2 | Original lab | Clinical replication | n = 4<br>Ages = 2.7 - 3.11 | PRT teaching of child-initiated spontaneous interactions | • Language ages<br>• Number of initiations<br>• Pragmatics ratings<br>• Social/community functioning<br>• Adaptive behavior scale scores | Following initiation training, children increased their adaptive and pragmatic scores to near chronological age level. They did not retain their diagnosis of autism or their special education placements. Social/academic functioning was comparable to typically developing peers |
| Koegel, Carter, Koegel (2003) | Original lab | Single subject design – Multiple baseline across participants | n=2<br>Ages = 6.3, 4.4 | PRT to teach self-initiated queries as a method to access verbs together with a temporal morpheme | • Number of verb productions<br>• Number of queries<br>• Use of correct tense<br>• Mean length of utterance (MLU)<br>• Number/diversity of verbs<br>• Generalization | Children were successfully taught to use the queries "What happened?" or "What's happening?" during intervention. Both children generalized the use of "-ing" and "-ed" to other verbs and increased their MLU and verb diversity |

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| Sherer & Schreibman (2005) | Independent replication | Clinical replication | n=6<br>Mean age = 3.9 | PRT administered to groups with two distinct profiles (predicted responders vs. nonresponders | • Language (echolalia, cued speech, spontaneous speech<br>• Play (functional, symbolic, and varied play measures)<br>• Social measures (interaction, social initiations) | Children in the responder profile exhibited increases in language, play, and social behavior following PRT intervention |
| Baker-Ericzen, Stahmer, Burns (2007) | Independent replication | Clinical replication | n=158<br>Ages = 2.0 - 9.5 | 12-week PRT parent education program | • Vineland Adaptive Behavior Scales domain scores | Following parent education in PRT, all children showed significant improvement in adaptive behavior scale scores regardless of gender, age, and race/ethnicity of the children/families |
| Vismara & Lyons (2007) | Independent replication | Single subject design – ABA with counterbalancing and alternating treatments in final phase | n = 3<br>Ages = 2.2 - 3.2 | PRT with child's perseverative interests vs. nonperseverative interests | • Number of joint attention initiations<br>• Contingencies to joint attention initiations<br>• Child affect ratings | Using the child's perseverative interests in a PRT model increased joint attention initiations |
| Gillett & LeBlanc (2007) | Independent replication | Single subject design – Multiple baseline across participants | n = 3<br>Ages = 5, 4, 4 | Parent-implemented PRT (called NLP*) to target language and play skills | • Frequency of vocalizations<br>• Spontaneous vocalizations<br>• Appropriate play<br>• Social validity questionnaire | Increases in overall rate and spontaneity of utterances for all three children. Children also showed an increase in appropriate play. Parents rated the intervention simple to implement and endorsed continued use of PRT. |
| Bryson et al (2007) | Independent replication with original lab collaboration | Clinical replication | n = 27<br>Mean age = 4.4 | Large scale community training in PRT for interventionists, clinical supervisors, clinical leaders, and parents | • Fidelity of Implementation<br>• Intervals with Functional Verbal Utterances | Preliminary data shows that treatment providers maintained fidelity of implementation across time and increased the functional verbal utterances of the participant children |

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| Harper, Symon, Frea (2008) | Independent replication | Single subject design – Multiple baseline across participants | n = 2<br>Ages = 8.6 - 9.1 | Peer-Implemented PRT to increase social play | • Attempts at gaining a peer's attention<br>• Turn taking Interactions<br>• Play Initiations | Following peer implementation of PRT, both children increased initiations and turn-taking initiations. The results maintained during generalization |
| Lydon, Healy, Leader (2011) | Independent replication | Single subject design – Multiple baseline across participants | n = 5<br>Ages = 3:10 – 6:1 | PRT vs. Video Modeling (VM) in the acquisition and generalization of scripted and novel statements. | • Duration of interaction with toys<br>• Number of scripted and unscripted play verbalizations<br>• Number of scripted and unscripted play actions | Results showed a significant increase in the number of play actions for both PRT and VM in the training environment, with greater increases as a result of PRT. Significant increases were also found in the number of play actions in PRT compared to VM in the generalization environment. |

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