The Effectiveness of a Life Skills Training Based on the Response to Intervention Model on Improving Disruptive Behavior of Preschool Children

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Abstract
The purpose of this study was the effectiveness of a life skills training based on the response to intervention model on improving disruptive behavior of preschool children. The sample of the study comprised of 61 children (53 males and 8 females, Mean age= 5.2 years, SD = .87) attending two pre-schools in Baltim Town, namely Sanabil Kids and Basil School. Teacher's rating of Child's disruptive behavior scale to collect and analyze data. ANCOVA analysis for the differences in post- test mean scores between experimental and control groups on disruptive behavior showed that (F= 132.872, p< 0,01). T. test results for the differences in post- test mean scores between experimental and control groups showed that (t=19.155, p< 0,01) in the favor of experimental group. So, that there were differences in post- test mean scores between experimental and control groups on disruptive behavior in the favor of experimental group. Scheffe test for multi-comparisons in disruptive behavior test showed that there were statistical differences between pre and post measures in favor of post-test, and between pre and follow up measures in favor of follow up testing, but no statistical differences between post and follow up testing. Findings were discussed and implication of findings was included.

Keywords: Life Skills Training, Response to Intervention Model, Disruptive Behavior, Preschool Children

Introduction

In most early learning settings, skills taught may are not the same; they vary , but generally include the following: reciting days of the week, identifying colors, numbers, letters, and other early academic skills. Current research indicates that the skills that teachers and early education experts identify as positive indicators for school readiness have shifted from academically oriented skills to skills that are social in nature (Heaviside & Ferris, 1993; Lin, Lawrence & Gorell, 2003; Piotrkowski, Botsko, & Matthews, 2001).

Hanley et al. (2007) defined Preschool Life Skills as "desirable responses to commonly occurring and evocative classroom situations". Much of the current research has attempted to evaluate procedures for teaching preschool life skills (PLS) in preschool classes with typically developing children. For instance , Hanley, Heal, Tiger, and Ingvarsson (2007) implemented a classwide teaching program with 16 typically developing preschoolers to teach instruction following, functional communicative responses, delay tolerance, and friendship skills in response to data suggesting that non familial center-based childcare in the first 4.5 years of life was a risk factor for developing problem behavior (National Institute of Child Health and Human Development, Early Child Care Research Network, 2003). Children were exposed to contrived situations that targeted a specific skill (e.g., following instructions, tolerating delays imposed by teachers). A multiple-probe design across units showed acquisition of the skills and reduction of problem behavior for most children.

Luczynski& Hanley (2013) evaluated the effects of the preschool life skills program (PLS; Hanley, Heal, Tiger, & Ingvarsson, 2007) on the acquisition and maintenance of functional communication and self-control skills, as well as its effect on problem behavior, of small groups of preschoolers at risk for school failure. All instruction was provided in a small group context according to the current Response- to-intervention (RTI) framework, which is applied in typical elementary school settings. Six children were taught to request teacher attention, teacher assistance, and preferred materials, and to tolerate delays to and denial of those events during child-led, small-group activities. Teaching strategies included instruction, modeling, role play, and differential reinforcement. Six additional children randomly assigned to similarly sized control groups participated in small-group activities but did not experience

the PLS program. Within-subject and between-groups designs showed that the PLS teaching procedures were functionally related to the improvements and maintenance of the skills and prevention of problem behavior.

Response to Intervention (RtI) offers a comprehensive model for the prevention of delays in learning and behavior. The idea of Response to Intervention (RtI) in preschool goes back to a belief that "early delays may become learning disabilities if not addressed at the age when a child should be proficient with particular skills" (Coleman et al. 2009, p. 4).

PLS was initially evaluated as a classwide program and characterized in Hanley et al. (2007) as a Tier 1 application in a response-to-intervention (RTI) framework (National Center on Response to Intervention, 2010). The universal interventions (Tier 1) are implemented with all students to help prevent the development of social or behavioral problems and increase prosocial behavior. Hanley et al. (2007) used Tier 1 interventions, teaching skills at a classwide level to all students in a natural setting and using teacher praise to differentially reinforce prosocial behavior. Subsequent studies evaluated PLS in a small-group (Tier 2 application; Beaulieu, Hanley & Roberson, 2012; Luczynski & Hanley, 2013; Luczynski, Hanley, & Rodriguez, 2014). Selected interventions (Tier 2) focus on individuals who are not responsive to universal interventions and require more targeted interventions that are delivered in a small-group setting. Miltenberger et al. (2004) used BST during a Tier 2 intervention by using instructions, modeling, rehearsal, and feedback to teach firearm safety to a small group of young children. Targeted interventions (Tier 3) focus on students who do not respond adequately to Tier 1 or Tier 2 interventions and require individualized instruction for skill deficits or interventions for severe problem behavior (Campbell & Anderson, 2011; Gresham, 2004). Tier 3 interventions often consist of antecedent strategies to prevent problem behavior, instructional strategies to teach desired behavior, and individualized consequences to decrease problem behavior and increase appropriate behavior (Anderson & Borgmeier, 2010).

Purpose of study

The purpose of this study was the effectiveness of a life skills training based on the response to intervention model on improving disruptive behavior of preschool children.

Research Questions

The following two research questions were posed and investigated in the study:

1. Are there differences in post–test scores mean between control and experimental groups on disruptive behavior of preschool children?

2. If the program is effective, is this effect still evident a month later?

Methods

The study employed the quasi-experimental design to examine the effectiveness of a life skills training based on the response to intervention model on improving disruptive behavior of preschool children.

Sample

The sample of the study comprised of 61 children (53 males and 8 females, Mean age= 5.2 years , SD = .87) attending two pre schools in Baltim Town, namely Sanabil Kids and Basil School.

Measures

Teacher's rating of Child's disruptive behavior scale. This scale was developed for this study. Teacher's rating of Child's disruptive behavior scale was designed in reference to literature review. I developed 20 items based on focus group themes and the literature. The sale utilizes a 4-point Likert scale response option consisting of never (0), rarely (1), usually (2) and always (3) for each item. Two methods were used to assess reliability: internal consistency and stability as described below:1. Internal consistency: this was assessed using Cronbach's alpha coefficient. The value of 0.7 or above was considered satisfactory. Test–retest analysis. N=25 children from the study sample completed the scale twice with an interval of 2 weeks. The intraclass correlation coefficient (ICC) was calculated and a value of 0.4 or above was considered acceptable.

Procedure

Permission to conduct this study was obtained from both schools principals and students' parents. The training program consisted of 10 sessions; each lasted for 40 minutes, three sessions weekly. The PLS program was implemented using the response-to-intervention (RTI) model. Universal interventions (Tier 1) are implemented with all children to help. In Tier 1, behavioral expectations and social skills were taught. It also includes consequences for appropriate (e.g., tokens for appropriate behavior that are exchanged for a small item) and inappropriate behavior (e.g., timeout for inappropriate behavior. Tier 2 focuses on individuals who are not responsive to universal interventions and require more targeted interventions that are delivered in a small-group setting. Tier 2 interventions include explicit instruction of skills, structured prompts for appropriate behavior, opportunities for the children to practice the skills, and frequent feedback to the student. Tier 3 focuses on children who do not respond adequately to Tier 1 or Tier 2 interventions and require individualized instruction. Tier 3 interventions often consist of antecedent strategies to prevent problem behavior, instructional strategies to teach desired behavior, and individualized consequences to decrease problem behavior and increase appropriate behavior Each session consisted of instructions, modeling, and role play and feedback.

Data Analysis

The effects of implementing a life skills training based on the response to intervention model on improving disruptive behavior of preschool children were assessed using a repeated-measures design, pre-post- and follow-up testing.

Results

Table 1 shows data on ANCOVA analysis for the differences in post-test mean scores between experimental and control groups on disruptive behavior. The table shows that ($F= 132.872$, $p< 0,01$).

Table 2. *ANCOVA analysis for the differences in post- test mean scores between experimental and control groups on disruptive behavior*

Source	**Type 111 Sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Pre	2.167	1	2.167		
Group	597.747	1	597.747	364.670	0.01
Error	95.070	58	1.639		
Total	701.934	60			

Table 2 shows t-test results for the differences in post- test mean scores between experimental and control groups on disruptive behavior. The table shows that (t=19.155, p< 0,01) in the favor of experimental group. The table also shows that there are differences in post- test mean scores between experimental and control groups on disruptive behavior in the favor of experimental group.

Table 2. *T. test results for the differences in post- test mean scores between experimental and control groups on disruptive behavior*

Group	**N**	**Mean**	**Std. deviation**	**T**	**Sig.**
Experimental	31	15.45	3.40	19.155	0.01
Control	30	47.63	2.94		

Table 3 shows data on repeated measures analysis for disruptive behavior. The table shows that there are statistical differences between measures (pre- post- follow up, p< 0,01).

Table 3. *Repeated measures analysis for disruptive behavior*

Source	**Type 111 sum of squares**	**df**	**Mean square**	**F**	**Sig.**
Between groups	6323.974	1	6323.974	240. 362	0.01
Error 1	1710.165	59	26.310		
Between Measures	3743.818	2	1871.909	319.483	0.01
MeasuresxGroups	3827.121	2	1913.561	326.591	0.01
Error 2	761.695	116	5.859		

Table 4. shows data on Scheffe test for multi-comparisons in disruptive behavior test. The table shows that there are statistical differences between pre and post measures in favor of post test, and between pre and follow up measures in favor of follow up testing , but no statistical differences between post and follow up testing .

Table 4. *Scheffe test for multi-comparisons on disruptive behavior*

Measure	**Pre M= 47.83**	**Post M= 15.45**	**Follow up M= 16.00**
Pre	--	--	--
Post	18.95*	--	--
Follow up	17.85*	1. 10	--

Discussion

The purpose of this study was the effectiveness of a life skills training based on the response to intervention model on improving disruptive behavior of preschool children. ANCOVA analysis for the differences in post- test mean scores between experimental and control groups on disruptive behavior showed that (F= 132.872, p<0,01). T test results for the differences in post- test mean scores between experimental and control groups showed that (t=19.155, p< 0,01) in the favor of experimental group. So, that there were differences in post- test mean scores between experimental and control groups on disruptive behavior in the favor of experimental group. Scheffe test for multi-comparisons in disruptive behavior test showed that there were statistical differences between pre and post measures in favor of posttest, and between pre and follow up measures in favor of follow up testing, but no statistical differences between post and follow up testing . The results of this study goes in the

same line with Hanley et al. 's(2007) , who implemented a classwide teaching program to teach social skills to preschool children using behavioral skills training (instructions, modeling, role play and feedback) and contriving opportunities to practice the skills in the classroom. The results was 74% reduction in problem behavior and a four-fold increase in the target skills. Luczynski and Hanley (2013) delivered the training using small-group instruction. This modified small-group PLS program was effective in teaching and maintaining social skills, and to prevent problem behavior in the classroom.

Implication of Findings

A number of implications have emerged from the results of the present study. First, Good generalization of skills across teachers was observed with all participants. The present study assessed generalization of skills by using generalization probes or follow-up. Universal interventions (Tier 1) helps increase prosocial behavior. Selected interventions (Tier 2) can be valuable as it was delivered in a small-group setting ,includes explicit instruction of skills, structured prompts for appropriate behavior, opportunities for the children to practice the skills, and frequent feedback to the children. Targeted interventions (Tier 3) include instructional strategies to teach desired behavior, and individualized consequences to decrease problem behavior and increase appropriate behavior.

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