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INCREASING PRETEND TOY PLAY OF TODDLERS WITH DISABILITIES IN AN INCLUSIVE SETTING

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We evaluated a program for increasing pretend toy play of 2-year-old children with disabilities in an inclusive classroom. Classroom personnel implemented the program, which involved choices of classroom centers containing toys that tend to occasion pretend play in toddlers without disabilities, along with prompting and praise. Increases occurred in independent pretend-play rates among all 5 participating toddlers. Results are discussed regarding the importance of promoting toy play of very young children with disabilities that is similar to the type of play of their nondisabled peers, and the need to identify critical program components that are applicable in inclusive settings.

DESCRIPTORS: pretend play, young children with disabilities

A continuing concern in the provision of services for young children with disabilities is ensuring that individuals develop important skills while participating in inclusive programs. Participation of young children with disabilities in programs with typically developing children is a major part of recommended practices in early intervention (Sandall, McLean, Santos, & Smith, 2000) and is endorsed by the Council for Exceptional Children and the National Association for the Education of Young Children (Sandall, McLean, & Smith, 2000). Despite the emphasis on inclusive services, questions remain regarding how those services should be provided to allow sufficient learning opportunities for young children with disabilities (DiCarlo, Reid, & Stricklin, 2003; Hauser-Cram, Bronson, & Upshur, 1993).

One particular area of concern in inclusive early-intervention settings is toy play. The importance of toy play as a form of environmental engagement among young children is well accepted (Weinberger & Starkey, 1994; Wolery & Werts, 1994). It is also well recognized that young children with disabilities often engage in less toy play than their typically developing peers (Blasco, Bailey, & Burchinal, 1993), and frequently need special interventions to increase toy play (Blasco et al.; Reid, DiCarlo, Schepis, Hawkins, & Stricklin, 2003).

When considering means of increasing toy play among young children with disabilities, attention is warranted regarding the specific type of play that is targeted. Toy play among typically developing children progresses from simple to more advanced types of play (McCabe, Jenkins, Mills, Dale, & Cole, 1999). However, children with disabilities frequently fail to engage in more advanced or complex toy play that is characteristic of their nondisabled peers (McCabe et al.; Sigafoos, Roberts-Pennell, & Graves, 1999). Failure to progress to more complex

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toy play can reduce learning opportunities and detrimentally affect overall skill development (Weinberger & Starkey, 1994). Consequently, when investigating means of increasing toy play among young children with disabilities, it is beneficial to focus on toy play that is commensurate with the type or complexity of play of their same-age nondisabled peers (cf. McCabe et al.).

One specific type of play that is common among typically developing young children is pretend play with toys (Casby, 1991). Pretend toy play is referred to in a number of ways, including make-believe (Weinberger & Starkey, 1994), symbolic (Schrader, 1990), and dramatic (Howe, Moller, Chambers, & Petrakos, 1993) play. In general, this type of play involves using a toy to simulate a real-life action or situation, such as pretending to feed a doll (Howe et al.). Pretend play is considered important in the developmental process and is related to the development of a variety of adaptive skills (Schrader, 1990; Weinberger & Starkey, 1994). Correspondingly, promotion of pretend play is a common goal of curricula and educational programs for young children (Goldstein & Cisar, 1992; Sigafoos et al., 1999). Despite the recognized importance of pretend toy play, few empirical studies have investigated ways of promoting this type of play among young children (e.g., 2-year-olds) with disabilities (Howe et al., 1993; McCabe et al., 1999), and especially among young children with disabilities in inclusive early-intervention settings (cf. Reinhartsen, Garfinkle, & Wolery, 2002).

The purpose of this investigation was to evaluate a method of increasing pretend toy play among 2-year-old children with disabilities in an inclusive classroom. In accordance with recommended practices in early intervention (McWilliam, 2000), and to potentially enhance the practical applicability of the procedures (Schepis, Reid, Ownbey, & Parsons, 2001), all intervention components were designed to be incorporated into the existing classroom routine by regular classroom staff.

METHOD

Setting and Participants

The setting was an inclusive classroom that served children between the ages of 15 and 36 months. Two groups of children attended the classroom. One group attended for a half day on Mondays and Wednesdays, and one group attended for a half day on Tuesdays and Thursdays. Each group included 12 children, half of whom had disabilities and half of whom did not. Each child with disabilities met eligibility criteria for special education services according to Part C of the Individuals with Disabilities Education Act of 1997 (Shelden & Rush, 2001).

The classroom was staffed by a certified early-intervention special educator, a speech-language pathologist, an occupational therapist, and a teacher assistant, and was organized into interest centers, such as manipulative materials, dolls, kitchen, computer, and sand play. The investigation was conducted in the kitchen and doll centers, which were equipped with toys that are considered to occasion pretend-play actions among children without disabilities (see Howe et al., 1993, and *Behavior Definitions,* below). In addition, most of the pretend toy play by the typically developing 2-year-old children in the classroom was observed to occur in these two interest centers.

At the outset of the study, 3 children with disabilities between the ages of 26 and 30 months participated, 2 of whom attended the classroom on Mondays and Wednesdays. The 3rd child attended on Tuesdays and Thursdays. Based on the Early Intervention Developmental Profile (Rogers & D'Eugenio, 1981), Sally functioned cognitively in the 18-month range, Nate in the 16-month range, and Kirk in the 22-month

range. Adaptively, the children functioned between 9 and 19 months below chronological age level. Each child was ambulatory, and each required assistance from staff to complete self-care routines (Nate and Kirk received nutritional intake through gastrostomy tubes). Each child vocalized infrequently for apparent communication purposes (only Kirk occasionally used actual words). Nate and Kirk used a voice output communication device when specifically prompted by a staff person, and Sally used a few manual signs when prompted.

While the intervention phase of the investigation was in effect with the 3 target children with disabilities, 2 additional children with disabilities were added to the investigation for replication purposes. Jill attended the classroom on Tuesdays and Thursdays, and Chas attended on Mondays and Wednesdays. Jill was 27 months of age and functioned cognitively in the 16-month range. Chas was 29 months old and functioned cognitively in the 14-month range. Both Jill and Chas were ambulatory.

The 5 children were selected for the investigation based on staff reports and prebaseline observations that indicated their frequencies of pretend toy play were below that of their nondisabled peers. When the target toddlers did play with toys, most of the toy play was less advanced than pretend play, usually involving functional play with simple cause–effect toys (cf. Sigafoos et al., 1999).

Behavior Definitions and Observation System

The target behavior was independent pretend-play actions. Based on definitions in previous research (Casby, 1991; McCabe et al., 1999; Weinberger & Starkey, 1994), *pretend play* was defined as at least a single-step action that appeared to imitate a real-life situation involving objects that corresponded to the toys used in the action. Single-step play, involving one specific action with a toy, is characteristic of the type of pretend play frequently observed among 2-year-old typically developing children (Howe et al., 1993). Examples of single-step pretend toy play included a child appearing to pour a drink into a cup (e.g., tilting a toy pitcher down toward a toy cup), stirring a toy spoon in a toy bowl, talking on a toy telephone, and feeding a doll by placing a toy spoon to the doll's mouth. To be scored as independent, each pretend-play action had to occur without any prompt within the preceding 5 s. Staff prompts could be verbal (e.g., "brush the doll's hair"), modeling (e.g., a staff member showing how to pretend to scoop food from a bowl to a plate), or physical assistance in the form of partially or totally guiding the child through a pretend-play action. Separate occurrences of pretend play were recorded if the child completed a pretend-play action with one toy and then completed a pretend-play action with another toy. Separate occurrences also were recorded if the play involved only one toy and pretend play with that toy was terminated and then reinitiated after at least 5 s. Observers also recorded each toy used for a pretend-play action by each child during each observation session, as well as each choice of toys provided by a staff person to a child, and whether the child made a choice in response to this staff action (see *Baseline,* below).

Pretend play was observed continuously throughout 10-min free-play periods. Observations occurred for only 1 toddler at a time, and each toddler was observed a maximum of twice per classroom day. For reliability purposes, the periods were divided into 1-min intervals. During the 10-min observation sessions, a child's behavior was observed only while he or she was present in one of the two centers that contained the pretend-play toys.

Interobserver agreement checks were conducted for all 5 children and during both experimental conditions on 17% of all observations. Interobserver agreement was cal-

culated on a minute-by-minute basis by dividing the smaller number of recordings of independent pretend-play actions of one observer by the larger number of the other observer and multiplying by 100%. If both observers recorded zero occurrences for a particular minute of observation, then 100% agreement was recorded for that minute. The resulting minute-by-minute figures were then averaged for a given session. Interobserver agreement for independent pretend play averaged 87% (range, 55% to 100%) per session. The lower range was due to a session in which one observer recorded one occurrence of pretend play and one observer recorded zero for that minute (resulting in an agreement of 0%).

We calculated interobserver agreement for the number of different toys played with by each child by dividing the smaller number of toys recorded by one observer during a session by the larger number recorded by the other observer and multiplying by 100%. Interobserver agreement averaged 95% (range, 75% to 100%). Interobserver agreement averaged 94% (range, 0% to 100%) for number of choices provided by a staff person to a child and 94% (range, 0% to 100%) for number of choices actually made by a child.

Experimental Conditions

Baseline. Baseline involved the routine free-play time in the classroom. Children were free to move about the classroom and play with toys of their choosing. As part of the usual classroom routine, staff attempted to prompt toy play by providing a choice of interest centers when they observed that a child was not engaged in play. The choice process involved a choice board that included picture and object symbols that represented two of the various interest centers. The staff member typically presented the board to a child who was not playing and asked him or her to tell in which of the two centers on the board he or she would like to play, while simultaneously naming the center options. Following a choice, the staff member escorted the toddler to the chosen center. Presentation of choices in this manner was not provided on a systematic or set schedule, but averaged approximately once per child during a given 10-min free-play period. The two specific interest centers represented on the choice board also varied nonsystematically and included all of the interest centers in the classroom. Otherwise, during baseline, staff generally attempted to support child engagement in activities through, for example, instructions and prompting, assisted children with self-care needs, and provided supervision for all toddlers in the classroom. As with use of the choice board, there was no consistent system for prompting toy play (e.g., different staff used different types of prompts and prompt sequences).

Responsive teaching program. The teaching program was designed to be responsive to two issues related to pretend toy play that became apparent during baseline observations. Specifically, during baseline (a) the children did not visit the two interest centers in which the pretend-play toys were available consistently, and (b) when the children were in a target center, they frequently did not engage in a pretend-play action. Hence, the responsive teaching program was designed to increase the amount of time the children spent in the target centers and to increase their pretend-play actions. The teaching program also included a child-directed component, as recommended in early-intervention services (Haney & Cavallaro, 1996), to provide repeated choices of interest centers that contained pretend-play toys.

Providing a choice of the two interest centers represented the first component of the responsive teaching program. At the beginning of a free-play session, a staff member provided a choice of the two centers using the choice board. The staff member pre-

sented the choice board to the child and asked him or her which center he or she would like while naming both centers (e.g., "Do you want to play in the kitchen or with the dolls?"). The staff person ensured that the child looked at each object on the board and waited 5 to 7 s for a response. Each child had been repeatedly exposed to this procedure prior to and during baseline. After the child looked at each object on the board, the next object that the child either touched, pointed to, or looked at was considered the child's choice response. If the child only looked at an object, the staff member guided the child's hand to touch the corresponding object. If the child did not make a choice, the staff member arbitrarily selected an interest center and guided the child's hand to touch a corresponding object. The child was then escorted to the chosen center (chosen either by the child or by the staff person). Once in the selected center, the staff member waited 10 s for the child to touch a toy. If the child did not touch a toy within 10 s, the staff member initiated toy play by guiding the child's hand to touch a toy. Staff initiation of toy play in this manner occurred only when the child entered an interest center immediately after the choice board had been presented.

Following toy contact, initiated either by the child independently or prompted by the staff person, least-to-most assistive prompts were used to assist the child in completing a pretend-play action with the toy if the child did not complete such action independently within 5 s of touching the toy (if the child completed a pretend-play action independently after touching a toy, the staff person provided no assistance but praised the child's actions). The least-to-most assistive prompts began with a verbal prompt and then proceeded to a modeling prompt, and then to a physical prompt as necessary. Following completion of the prompted pretend-play action, the staff member praised the child's pretend play.

If at any time during the observed free-play session the child left a target interest center, the process of providing a choice of the two centers using the choice board was repeated. Throughout the responsive teaching condition, the choice board was presented an average of 2.4 times per session for Sally, 1.5 for Nate, 5.8 for Kirk, 1.8 for Jill, and 3.0 for Chas. Sally made an independent choice on 75% of the presentations, Nate on 95%, Kirk on 77%, Jill on 100%, and Chas on 80%. Choices included both of the interest centers.

In summary, the responsive teaching program consisted of three components. First, a choice of the two interest centers that contained pretend-play toys was provided at the beginning of a free-play session and when a child left one of the centers during the session. Second, once the child was in a target center following the choice-board presentation, a staff member prompted toy play if the child did not touch a toy within 10 s of entering the center. Third, if the child completed a pretend-play action following contact with a toy, the child was praised for the action; if the child did not independently complete a pretend-play action within 5 s, the child was prompted to engage in pretend play with the toy and praise was then provided.

Experimental Design

The experimental design for the first 3 children with disabilities was a multiple baseline across the 3 toddlers. Two concurrent AB designs were then used with the 2 additional children.

Comparison Observations with Typically Developing Children

To evaluate the degree to which the level of pretend toy play among the children with disabilities approximated the level of such

play among their nondisabled peers, comparison observations of the pretend toy play of 3 nondisabled children in the classroom (age range, 19 to 25 months) were made. The observations were conducted in the same manner using the same behavior definitions and observers as with the children with disabilities. Interobserver agreement was assessed on one occasion, resulting in 70% agreement for independent pretend play and 80% for number of different toys with which each child played. The 3 typically developing children—Zen, Hal, and Bill—were observed on 10, 8, and 8 occasions, respectively. Observations occurred during the time period that encompassed the baseline and responsive teaching conditions for the first 3 children with disabilities.

RESULTS

As indicated in Figure 1, during baseline, the first 3 target 2-year-olds were observed to be in the doll and kitchen interest centers inconsistently. When the children were in these centers, low rates of independent pretend play were observed. For Sally, Nate, and Kirk, independent pretend-play actions averaged 0.05 per minute (range, 0 to 0.2), 0.13 (range, 0 to 0.5), and 0, respectively. During the responsive teaching program, all 3 children visited the interest centers every session, and increases in rate of independent pretend play occurred for each child. Pretend play increased to averages of 0.6 per minute (range, 0.1 to 1.3), 1.0 (range, 0 to 2.3), and 0.1 (range, 0 to 0.7), for Sally, Nate, and Kirk, respectively, although the increase occurred very gradually for Kirk. Similar results occurred for Jill and Chas (Figure 2). For Jill, independent pretend play increased from an average of 0.06 per minute (range, 0 to 0.5) during baseline when she was in the target centers to 0.6 (range, 0.3 to 1.0) during the program, although there appeared to be a decreasing trend. For Chas, pretend play increased from a baseline average of 0.2 per minute (range, 0 to 0.5) to 1.4 (range, 0.8 to 2.4) during the responsive teaching program.

In addition to the changes in pretend play described above, the number of different toys each of the 5 children played with during the responsive teaching program increased relative to baseline. The average number of toys played with during baseline for Sally, Nate, Kirk, Jill, and Chas were 1.3, 0.6, 1.9, 3.5, and 4, respectively (data not shown in figures). During the program the respective averages increased to 9.3, 6.6, 6.4, 8, and 7.8.

Comparison Observations With Typically Developing Children

Across the 3 children without disabilities, independent pretend-play actions averaged 0.6 per minute. (Mean rate for Zen was 0.9 with a range of 0 to 2; for Hal, it was 0.5 with a range of 0 to 1.4; for Bill, it was 0.4 with a range of 0 to 0.8.) These results indicate that during baseline, each of the children with disabilities had a lower average rate of independent pretend-play actions than the average for each of the children without disabilities. In contrast, during the responsive teaching program, all but 1 of the children with disabilities (Kirk) engaged in independent pretend play at a rate similar to or higher than the rate for the children without disabilities. Also, during the responsive teaching program, the children with disabilities played with at least as many different toys on average across sessions as did the children without disabilities (averages for Zen, Hal, and Bill were 6.1, 2.4, and 4.2, respectively).

DISCUSSION

Results indicated that the responsive teaching program was accompanied by increases in rate of independent pretend toy

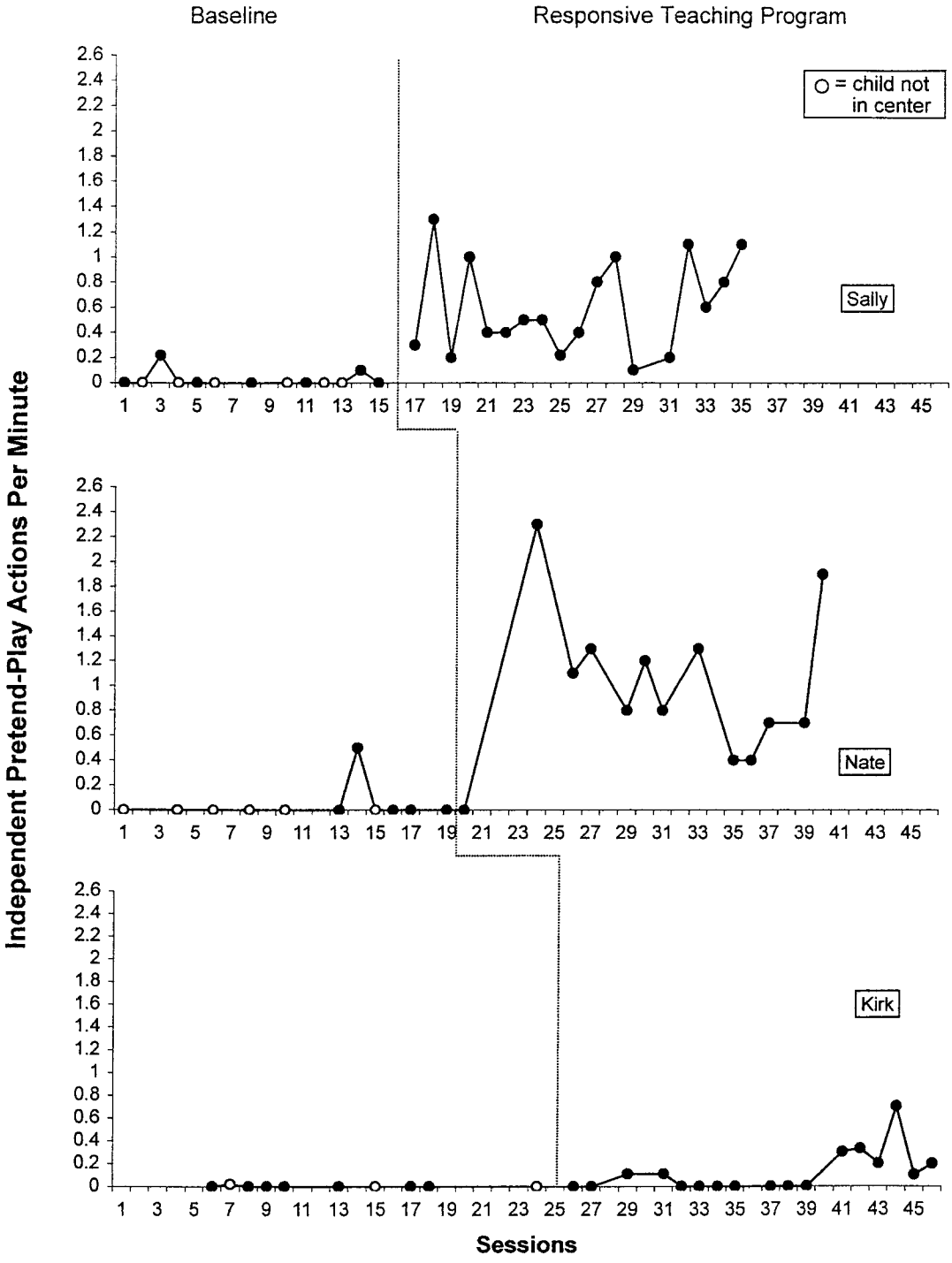

Figure 1. Number of independent pretend toy-play actions per minute for each of the first 3 participants during each observation session in both experimental conditions (the open circles indicate when a child did not enter a target center throughout the observed free-play period).

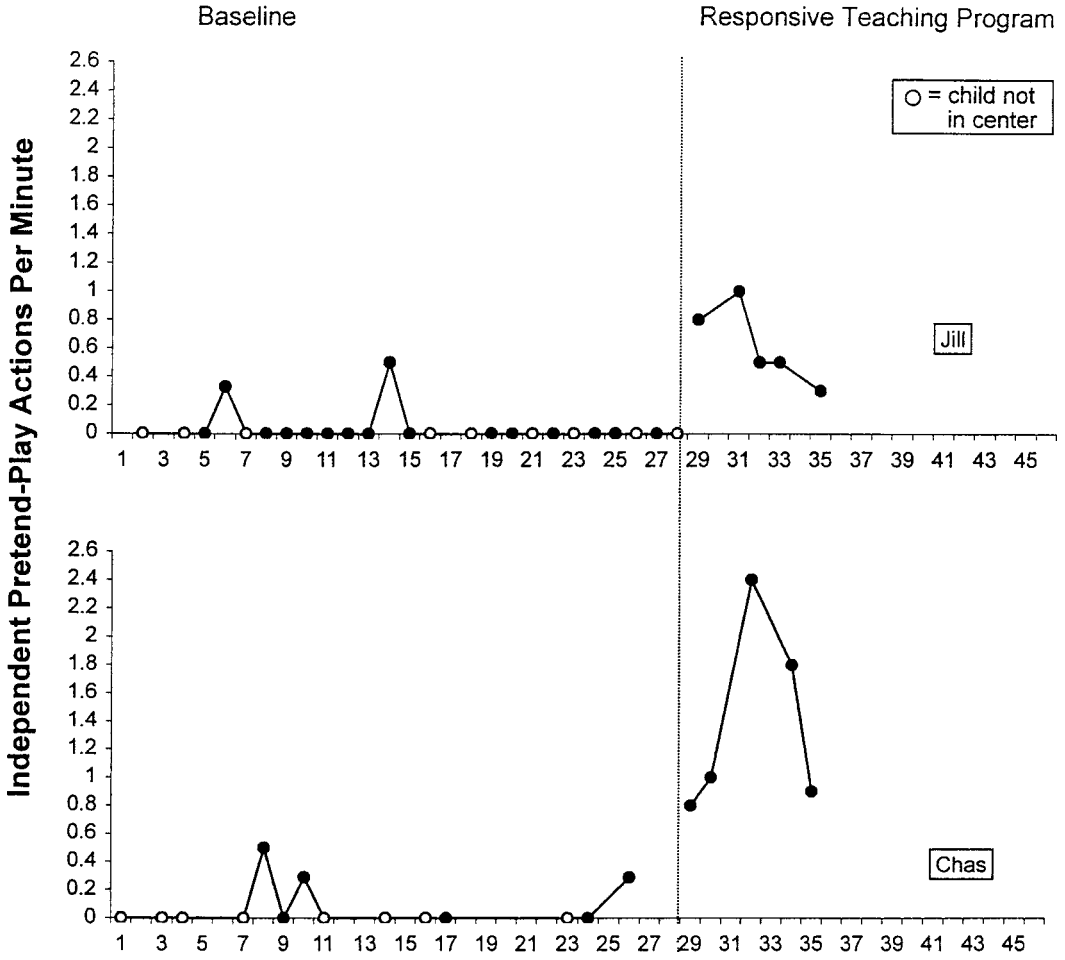

Figure 2. Number of independent pretend toy-play actions per minute for each of the 2 later participants during each observation session in both experimental conditions.

play each time the program was implemented with 2-year-old children with disabilities. On average, the increase brought the 5 children with disabilities to pretend-play rates similar to those of children without disabilities, with one exception (Kirk). In accordance with recommended practices in early intervention (Schepis et al., 2001), regular staff members carried out all components of the responsive teaching program during routine classroom activities. Such features should enhance the practicality of implementation in terms of other staff being able to incorporate the program procedures into their classroom routines (McWilliam, 2000). Also in accordance with recommended practices (Reinhartsen et al., 2002), the program included a child-directed component by providing the children with choices of interest centers (albeit restricted to two) and then honoring their choices by allowing them to play in the chosen center. Incorporating a child-directed component into staff-implemented procedures may make the program more acceptable in early-intervention settings that espouse a child-directed philosophy (Ivory & McCollum, 1999).

Although toy play of the children with disabilities increased to levels similar to those of their peers without disabilities, it should

be noted that the type of play observed among the two groups was not necessarily identical. As indicated previously, single-step pretend-play actions are commonly observed among typically developing 2-year-olds (Howe et al., 1993). However, typically developing toddlers may also engage in more advanced pretend play with toys that involves various multiple-step actions. This type of play was not monitored as part of this investigation because of the focus on single-step actions, which appeared to be a reasonable goal for the toddlers with disabilities given the infrequency of their pretend toy play. Also, duration measures of instances of pretend play were not addressed. Duration of pretend-play actions may also vary across children with and without disabilities, and may relate to differences in quality of pretend play. Future research is warranted to determine methods of evaluating and perhaps increasing pretend toy play among very young children with disabilities that targets multiple-step actions and duration of play to compare more precisely their quality of play to that of their nondisabled peers.

One seemingly noteworthy aspect of the results is that the observed increases in pretend toy play occurred among very young children with disabilities in an inclusive setting. Past research on toy play has focused on 3- to 5-year-olds in preschools. To our knowledge, research specifically on methods of increasing pretend toy play among 2-year-olds in inclusive settings prior to entering preschool classrooms has not been reported, although the need for such research has been acknowledged (Reinhartsen et al., 2002). The results offer encouragement for intervening with children at quite young ages in inclusive settings to help advance their level of play.

The increases in pretend-play actions with toys also are noteworthy in that these results suggest that pretend toy play may have become reinforcing for these children. However, the exact mechanism underlying the increases in independent pretend play cannot be determined from the current investigation. For example, it may have been that staff praise alone was sufficiently reinforcing to increase pretend toy play. Given the low frequencies of pretend toy play (as well as inconsistent presence in classroom interest centers with pretend-play toys) during baseline, however, it seems unlikely that the children would have experienced sufficient reinforcement from praise to account for the amount of behavior change observed. Alternatively, increased familiarity with the toys that likely resulted from staff prompting pretend toy play may have been responsible for the observed increases (e.g., Hanley, Iwata, Lindberg, & Conners, 2003). Limiting choices of interest centers during the sessions to the two that were equipped with toys designed for pretend play may also have contributed to the increases. That is, limiting choices to toys considered to be related to pretend play may have increased contact with these types of toys. Another variable that may affect pretend play is preferences for specific toys that tend to occasion this type of play. In the current investigation, preferences for specific pretend-play toys were not addressed.

Additional research is warranted to identify which components of the teaching program might be responsible for increases in pretend play, as well as the impact of preferences across pretend-play toys. Nonetheless, given the lack of pretend play among 2-year-olds with disabilities relative to this type of play among typically developing 2-year-olds, it is important to demonstrate ways to increase pretend toy play (Sigafoos et al., 1999). Demonstrations are particularly needed in inclusive settings that are becoming more common for young children with disabilities. If effects of the program evaluated here are replicable in other inclu-

sive settings, then more refined investigations could delineate separate program components that may or may not be necessary for the program's overall efficacy. Such research could provide useful information to help young children with disabilities engage in toy play at a level similar to that of their typically developing peers.

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STUDY QUESTIONS

1. According to the authors, what is pretend toy play and why is it an important behavior?
2. How was pretend play defined and measured?
3. What features of the interobserver agreement procedures and results suggest that pretend play may have been difficult to observe in a reliable manner?
4. Briefly describe the three components of the responsive teaching program.
5. Summarize the three general characteristics of the results.
6. What aspects of the observation procedures must be considered when comparing rates of pretend play exhibited by the participants and their nondisabled peers?
7. Describe the general types of interventions (independent variables) that may have accounted for observed changes in the participants' pretend-play behavior.
8. How might one determine the behavioral benefits of teaching children to engage in pretend play?

Questions prepared by Sarah Bloom and Stephen North, University of Florida