

## Promoting Inclusion for Young Children With Special Needs on Playgrounds

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*Playgrounds are underutilized for enhancing the social development of young children with special needs. The unstructured, fast-paced nature of play in this setting necessitates using teacher-mediated interventions to enhance inclusion of children with special needs in cooperative interactions with their typically developing peers. In this review, we discuss the importance of moving classroom centers, activities, and materials onto playgrounds. This sets the stage for teachers to implement interventions to foster cooperative interactions between young children with and without special needs and increases opportunities for generalization. Children who exhibit aggressive behaviors may have significant difficulty engaging in social interactions on playgrounds; hence, interventions to foster their social skills are presented. Despite barriers to implementation, playground interventions need to be incorporated into educational plans, and research determining whether interventions improve social skills and acceptance of children with special needs is required.*

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### INTRODUCTION

Although the impact of inclusion in classroom settings has been documented (Buysse and Bailey, 1993), relatively little information is available about how to promote cooperative play between children with and without

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special needs on playgrounds (Frost, 1992). Furthermore, the majority of existing literature has focused on improving the physical space by modifying or changing the design or equipment of the playground for children with special needs (Frost, 1992; Jambor and Gargiulo, 1987; Murphy, 1988; Schleifer, 1990). In this era of fiscal cutbacks, educators and therapists should strive to develop cost-effective suggestions and activities to foster inclusion, as redesign of playground areas may not be feasible because of budgetary concerns. Therefore, we discuss teacher-mediated interventions and ideas for developing activities and centers that do not require significant environmental changes. Importantly, the interventions reviewed in this paper can be used to enhance Individual Education Plans (IEPs) for children with special needs.

Active facilitation of the development of social skills for children with special needs is important. A substantial body of research has suggested that many children with special needs in early intervention programs exhibit social skills deficits (Buysse and Bailey, 1993; Odom and Brown, 1993; Nabors, 1996). Such deficits may be related to difficulties in establishing friendships (Raupp, 1985). Such social isolation may persist to adulthood (Landesman-Dwyer and Berkson, 1984; Parker and Asher, 1987). Children with special needs who exhibit aggressive behaviors on playgrounds may be at increased risk for not being accepted on playgrounds; thus, suggestions for facilitating their inclusion in this setting are a focus of this paper.

Children with special needs may not receive the training they require to facilitate their social skills development on playgrounds for several reasons. First, teachers may not be as active in implementing interventions to foster inclusive play on playgrounds, as this time is commonly viewed as a "free play" opportunity. Second, the unstructured, fast-paced nature of interactions in this setting may make it more difficult for children with special needs to enter play groups and become involved in ongoing play (Nabors and Badawi, 1997; Nabors *et al.*, 1999). Third, children with special needs may not be able to physically access some areas that are optimal spaces for cooperative play. Fourth, children with special needs may not have as much experience with "outdoor games" as their typically developing peers, because they have had fewer opportunities to engage in outdoor play after school hours.

Because of all these and other reasons, playground time may not always be utilized to its fullest potential in enhancing the inclusion of children with special needs. Environmental arrangements and teacher-mediated activities can increase the inclusion of children with special needs in social interactions. Environmental interventions are those involving changes in the ecology (space and materials), group composition, or activities. Educators, therapists, and researchers should strive to move classroom activities and

centers to playgrounds (Yerkes, 1982). Moving classroom interventions to playgrounds may increase use of playgrounds as a setting in which to foster the social development of children who have special needs and will increase generalization of skills training to a new setting. Moving classroom centers, toys, and materials to this setting may increase occurrence of interventions to improve the social skills of children with special needs on playgrounds.

### **CENTERS, TOYS, AND ACTIVITIES: MOVING THE CLASSROOM TO THE PLAYGROUND**

Centers are a popular method for organizing toys and materials and providing an arena for social interactions in the classroom. Developing art, sand and water tables, dramatic play, and big block areas as playground centers and devising educational goals for involving children with special needs in play in these centers may encourage social interactions between children with and without special needs. Recommended centers, toys, and materials for use on playgrounds are presented in Table I.

Centers should be filled with developmentally appropriate toys and materials, which can be used to facilitate inclusive play between children with and without special needs. Toys and materials that can move from classroom to playground include: small blocks, interlocking building blocks, paint, balls that are soft, crayons, sand, water, and clay. Toys typically used in sand and water table areas in classrooms such as buckets, shovels, trucks, boats, and balls should be available on playgrounds. These types of toys can be key props in developing activities to improve inclusion of children with special needs. For instance, children with motor impairments can play with peers at a wading pool (e.g., outdoor water table), using small boats and sponges. Ensuring that the sandbox is filled with small rakes, trucks, sand buckets, and shovels offers other opportunities to facilitate cooperative play. Play with other toys such as small action figures, dolls, puppets, and cars can promote “pretend” or symbolic play between children. It is important for teachers to initially structure or join in play when children are using these types of materials on playgrounds to ensure that roles are developed for children with special needs (see Table I).

Several other centers can be moved from the classroom to the playground. For instance, a reading center can be established. Then children can take a rest together on bean-bag chairs or blankets, while they listen to a favorite tale. Musical instruments also can move from classroom to playground so that a “band” can give an outdoor concert. These activities provide natural opportunities for adults to be involved in directing creative play

**Table 1.** Classroom to Playground: Activities and Materials to Facilitate Inclusion

	Climbing/gross motor play	Sand and water tables	Art/creativity area	Vehicles
	<ul style="list-style-type: none"> <li>• “Sympathetic swing”—movement occurs when an able-bodied companion uses the swing next to it (Schleifer, 1990)</li> <li>• Wide-width slide (Schleifer, 1990)</li> <li>• Tire swing</li> <li>• Light-weight balls of different sizes (Goldstein, 1991)</li> <li>• Tunnels (Lowenthal, 1996)</li> <li>• Obstacle course with modifications for children with special needs</li> </ul>	<ul style="list-style-type: none"> <li>• Tables with indentations to allow children with poor balance to stand (Schleifer, 1990)</li> <li>• Adequate room for wheel chairs (Schleifer, 1990; Sheldon, 1996)</li> <li>• Small figurines for pretend play (action figures, boats, etc.)</li> <li>• Shovels, buckets, molds, and cups</li> </ul>	<ul style="list-style-type: none"> <li>• Sidewalk chalk for drawing</li> <li>• Easels and paints</li> <li>• Music panel—a table with different types of music producing devices that can be sounded with stick placed at different heights (Schleifer, 1990)</li> <li>• Musical instruments for a “pretend” band</li> </ul>	<ul style="list-style-type: none"> <li>• Bike trail or paved area set aside for riding vehicles</li> <li>• Wagons, blanket, or sheets so typically developing children can pull children with motor impairments (Sheldon, 1996)</li> <li>• Scooter boards, tricycles, and adaptive tricycles (Sheldon, 1996)</li> </ul>
	<ul style="list-style-type: none"> <li>• Large and small blocks</li> <li>• Large boxes (Lowenthal, 1996)</li> <li>• Wooden packing crates</li> <li>• Blocks with interlocking pieces</li> </ul>	<ul style="list-style-type: none"> <li>• Steering wheel attached to a post (Schleifer, 1990)</li> <li>• Gas station</li> <li>• A household area or play house</li> <li>• Boats with steering wheels</li> </ul>	<ul style="list-style-type: none"> <li>• Hoes and trowels, and other child-sized implements</li> <li>• Watering can or hose</li> <li>• Seasonal plants or seeds</li> <li>• Have children work in teams to do gardening tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Retreat area/quiet area</li> <li>• Shady area</li> <li>• Blanket or hammock</li> <li>• Picnic table</li> </ul>

scenarios that have roles for all children. Research has indicated that specific centers, toys, and materials may promote cooperative play between children in classrooms and on playgrounds (Beckman and Kohl, 1984; Guralnick and Groom, 1988; Nabors *et al.*, 1999; Quilitch and Risley, 1973).

Playground toys and materials should be safe, durable, versatile, and accommodate different ages, abilities, and interests (Goldstein, 1991). To foster cooperative interactions between children on playgrounds, they should be provided with toys that encourage social interactions rather than those that encourage solitary play (Beckman and Kohl, 1984; Martin *et al.*, 1991). Examples of toys that encourage social interactions include: balls, wagons, dress-up clothes, puppets, and toy vehicles. (Refer to Table I for specific suggestions regarding materials that may be used.) Toys found to encourage solitary play include puzzles, peg boards, art materials, and books (Martin *et al.*, 1991).

When designing playground centers and activities and selecting toys and materials, it is important to consider safety guidelines. Guidelines issued by the American Society for Testing and Materials (1993) and from the United States Consumer Product Safety Commission (1991) should be referred to when considering safety issues for the playground. Hudson *et al.* (1997) also provided information useful for establishing guidelines for safety on the playground. General guidelines for the physical layout for centers and materials include providing closed space areas that promote closer proximity and encourage more interactions (Lowenthal, 1996; Wardle, 1997), and open spaces that encourage more gross motor play. Additionally, educators need to consider the quality and amount of adult supervision required to facilitate cooperative interactions between children with and without special needs and barriers to accessing the playground and different activities for children with special needs (Nabors *et al.*, 1999; Goldstein, 1991).

## TEACHER-MEDIATED INTERVENTIONS

Studies conducted in integrated classrooms have indicated that teacher-mediated play facilitates cooperative interactions between children with and without special needs (DeKlyen and Odom, 1989). Teacher-mediated play may be defined as play that is structured and simplified by teachers. That is, teachers do not lead or direct play, but develop interventions designed to increase cooperative play between children with and without special needs. These interventions also may involve instructing typically developing children to act as “peer buddies” for children with special needs. For instance, teachers can enhance cooperative social exchanges between children by designing activities in which several children can participate, such as working

**Table II.** Teacher-Mediated Interventions to Improve Cooperative Playground Interactions

*Group affection activities* (Lowenthal, 1996): Modify familiar songs and games to include showing affection. Examples: "If you're happy and you know it hug a friend;" have children seated in a circle pass around soft fuzzies.

*Cooperative activities*: "Provide organized games that focus on cooperative goals rather than competition (Murphy *et al.*, 1983; Bay-Hinitz *et al.*, 1994). Examples: cooperative musical chairs—each time a chair is removed, more children need to share a chair instead of competing for a chair, have children work in teams, have children form a pretend marching band with toy instruments.

*Modeling*: Demonstrate appropriate social interactions (McEvoy *et al.*, 1990). Example: Initiate a game of "Ring Around the Rosie" with a child who is excluded from play. After modeling, invite other children to join the game.

*Teacher prompts*: Use verbal cues or gestures, special hand signals, to help children interact.

Example: Tyeshia, standing in the house area watching other children play, can be encouraged to ask if she can be the sister. A useful technique for buddy systems is to encourage typically developing children to interact with peers with special needs. Cues can be faded as behaviors generalize. (Lowenthal, 1996; McEvoy *et al.*, 1990).

*Positive reinforcement*: "Use praise or incentives to reinforce appropriate interactions.

Example: allow Jane to be the line leader for inviting Tyeshia to come and play house with her. (Lowenthal, 1996; McEvoy *et al.*, 1990). Try to "catch" children being good and praise them for playing well together. Children can be rewarded with tokens that allow them to enter into a weekly raffle (Roderick *et al.*, 1997).

*Sociodramatic play scripts*: Teacher develops a scenario, such as going to the store. Have children practice roles (e.g. stockperson, customer, salesperson). Later, the teacher prompts the children to enact a script on the playground. (Goldstien, 1993).

*Reinforce social skills*: Teach children social overture and group-entry skills including: (1) making offers and requests to share, (2) offering play suggestions, (3) offering and requesting help, (4) showing affection, and (5) giving complements. Teach children with special needs about how to: (1) make eye contact when conversing with peers, (2) initiate joint play (e.g., "Let's play house"), and (3) respond positively to play overtures made by classmates (Goldstein, 1993; Kohler and Strain, 1993).

<sup>a</sup>Indicates techniques useful for decreasing aggression.

in a garden or building a city in the sand box. Putnam and Spenciner (1993) provide an excellent summary of cooperative activities to promote inclusion that can be used to promote cooperative interactions between children with and without special needs on playgrounds. Additionally, the social skills training activities reviewed by Odom and Brown (1993) can be adapted for use on playgrounds. Strategies for teachers that may promote inclusion of children with special needs in playground interactions are presented in Table II.

### Incidental Teaching

The playground is an ideal setting for incidental teaching (Hart and Risley, 1975). In fact, incidental teaching may be the premiere coaching role for teachers on playgrounds. Incidental teaching occurs when teachers capitalize on naturally occurring situations that allow a particular skill

to be taught or reinforced. Interventions are not planned, but are taught “in vivo” as opportunities arise that promote their ecological validity. More information is needed, however, on generalization of this type of training.

Field notes from our previous research provide excellent examples of teachers using playground situations for incidental teaching to help typically developing children understand the behaviors of and limitations faced by children with special needs on the playground (Nabors and Badawi, 1997; Nabors *et al.*, 1999). Observers recorded how teachers used incidental teaching to explain the behaviors of children with special needs to typically developing children. For instance,

Jamaal (a preschool-age boy with cerebral palsy) is holding your arm for balance so he can get on the tire swing too. He does not want to pull you off, but wants to get on to ride with you. Can you let him hold your arm so he can get on? Then, you can get on and swing too.

When they understood the limitations being faced by their peers with special needs, typically developing children usually were eager to help their peers become involved in play. They truly exhibited a spirit of “noblesse oblige” in ensuring that their classmates with special needs were included in group activities (Ebert, 1977).

### Coincidental Teaching Sessions

Teachers also can plan to use “coincidental” teaching sessions. Rule *et al.* (1987) described coincidental teaching sessions as, “short programs designed to be delivered by the regular teacher . . . on occasions when a skill would naturally be applied” (p. 178). In contrast to incidental teaching, coincidental teaching sessions are planned interventions that are designed to turn naturally occurring play situations into active learning experiences mediated by teachers.

The need for coincidental teaching sessions became very apparent to the observers who recorded children’s behaviors in our previous research (Nabors and Badawi, 1997; Nabors *et al.*, 1999). For example, observers recorded several episodes of aggression between children with and without special needs. Most of these were initiated by children diagnosed with behavior problems. Coincidental teaching sessions focusing on social skills development in combination with time-out procedures could be implemented to reduce the aggression by children with behavioral problems on playgrounds. The structured nature of coincidental teaching sessions lends this method to empirical testing, and case studies can be conducted to record the effectiveness of these sessions. Results would provide information for developing hypotheses for additional research (Kazdin, 1982).

Teachers can also implement formal and informal “buddy systems” on playgrounds. Pairing sets of buddies occurs when teachers select and train a typically developing child to play with his or her classmate with special needs during play. This technique has been successful in enhancing cooperative play between children in inclusive settings (Fantuzzo *et al.*, 1987; Kotila and Saloviita, 1993; Storey *et al.*, 1993). When utilizing “buddy systems” with young children on playgrounds, teachers should select same gender age peers who tend to engage in similar activities. Typically developing children may require coaching about how to engage their buddy in play and how to interpret the behavior and communication style of their buddy. Also, both the typically developing child and her partner with special needs may require adult support, such as cues, prompts, and reinforcement, for engaging in play.

Another way to add structure to playground interactions is to develop cooperative activities, where children work together to complete a group goal (Putnam and Spenciner, 1993). Designing and implementing cooperative activities can foster coincidental teaching opportunities (Rule *et al.*, 1987). For instance, children can be grouped in teams to build or make things (e.g., sand castles or building a house using sticks, clay, and leaves). They also could work together to make a sculpture or plant a garden. As mentioned in Table II, children with and without special needs can learn scripts and role plays in the classroom that they can enact on the playground (Goldstien, 1993). Adults can be “pretend” audiences who can sit back and enjoy the show and congratulate all children in the group on their performances.

## **AGGRESSION ON THE PLAYGROUND**

Young children who exhibit aggressive behavior on playgrounds may require special interventions. Children who behave aggressively toward peers may need to be assigned a “playground helper” (e.g., teacher, parent, paraprofessional, or student teacher), who can help structure the nature of their play by involving them in organized games and prosocial interactions with peers. The helper can also be instructed in a time-out procedure for the playground. This type of intervention has been successful in reducing aggressive playground behaviors of young children (Murphy *et al.*, 1983). A less intensive intervention may be to train playground supervisors to implement a token system to “catch children being good” on the playground (Roderick *et al.*, 1997). This type of intervention might improve the playground behavior of all children. Games focusing on cooperation and group goals have been found to reduce aggression on playgrounds (Bay-Hinitz *et al.*, 1994; see Table II). For example, playing board games requiring cooperation and

teamwork may reduce aggressive behavior on playgrounds. Another activity that might be successful is a game of “cooperative musical chairs.” To play this game, each time a chair is removed, children work together to share the remaining chairs. This is a modification from the way the game is typically played—children compete for chairs as chairs are removed and children are considered “out” and therefore removed from the game. Modifying other competitive games (e.g., Duck-Duck-Goose) so that all children can win promote cooperation and reduce aggression on playgrounds.

Probably, some combination of each of these interventions will be successful in reducing episodes of aggression exhibited by children on playgrounds. Aggression on the playground is a negative experience for both the aggressor and victim. Immediate, intensive interventions should be developed to reduce the frequency of these episodes.

## CHALLENGES AND FUTURE DIRECTIONS

Several barriers may impede the implementation of interventions to encourage play between children with and without special needs on playgrounds. Some of these include the large, unorganized space and the fast-paced nature of play in this setting; unavailability of adults to provide supervision; lack of educational goals for fostering cooperative play between children in this setting; resistance to implementing interventions by teachers; and fiscal constraints. In this section, we provide suggestions for overcoming some of these barriers.

Developing centers, similar to those used in classrooms, may help to organize playground interactions (Yerkes, 1982). For instance, assigning children to each center for a period of time might help to organize groups of children in different areas so that interventions can be implemented. Centers or activity areas might include: sliding, bike paths, gardens, swings, and open play areas. Enclosing centers using shrubs or wooden fences also may promote interaction between children (Lowenthal, 1996).

Our recommendations for developing interventions may require significant efforts on the part of teachers and their assistants. To overcome possible resistance by teachers it may be important to conduct teacher in-services providing instruction and allowing for brainstorming on ways to bring their classroom lesson plans onto the playground. Increasing awareness of the playground as an arena for enhancing social development may increase teachers’ understanding of and improve their acceptance of using interventions to foster social development in this setting. Also, incorporating goals for facilitating cooperative play between children with special needs and their peers, and the methods for achieving this, should be incorporated

into IEPs for young children with special needs. This may ensure that interventions are implemented.

Further, although it may increase expenses, it may be beneficial for programs to consider hiring para- and non-professionals to implement playground interventions to encourage inclusion. Students, teachers, parents, or volunteers also can be trained to implement interventions on playgrounds. When additional adults are available, the necessary supervision to implement interventions and ensure the safety of all children in this setting is feasible. Also, increasing the assistance available to teachers may ensure the successful implementation of interventions.

Perhaps the greatest challenge to overcome is the belief that the playground is a free play setting in which cooperative interactions will naturally occur between children. Consistent with this idea, teachers have often conceptualized this period as a time of nondirected play in which children choose their own playmates and activities. Therefore, teachers may resist implementing "planned" interventions in this setting. Teachers need to examine their perceptions of their roles on playgrounds and their views about what types of interventions may be successfully implemented in this setting. When they begin to see this setting as one where they can intervene to enhance children's social development, they can overcome resistance and develop activities, centers, and plans for fostering inclusion.

Fiscal constraints have been a barrier to redesigning playgrounds to make them more user-friendly for children with special needs. However, the ideas suggested thus far require a relatively small financial investment. Many of the materials and toys presented in Table I can move from classroom to playground, therefore involving little or no extra expenditures. We recommend that "playground funds" be allocated so that materials, such as blocks with interlocking pieces, boats, gas stations, or houses, can be purchased to construct other areas that might promote cooperative play.

Research is needed to determine whether the ideas and interventions suggested in this paper will increase the involvement of children with special needs in cooperative interactions with typically developing classmates. The impact of interventions can be recorded using naturalistic observation, experimental, and ethnographic techniques, using either case study and group experiments. Researchers should consider the influence of child factors (e.g., gender, age, developmental functioning) and other context factors (e.g., types of materials and toys used in play, group size and composition, degree of adult involvement in play) when evaluating factors influencing inclusion on playgrounds (Beckman and Kohl, 1984; Cullen, 1993; Hinde *et al.*, 1983; Ladd and Price, 1986; Nabors and Badawi, 1997; Nabors *et al.*, 1999). Longitudinal, multi-site research will improve knowledge about the factors influencing the inclusion of children with special needs on playgrounds. It is

our hope that interventions to enhance the social development of children with special needs on playgrounds will play a significant role in future educational planning and research aimed at enhancing the lives of children with special needs.

## REFERENCES

- American Society for Testing and Material. (1993). *Standard Consumer Safety Performance Specification for Playground Equipment for Public Use*, Author, Philadelphia, PA.
- Bay-Hinitz, A., Peterson, R. F., and Quilitch, H. D. (1994). Cooperative games: A way to modify aggressive and cooperative behaviors in young children. *J. Appl. Behav. Anal.* 27: 435–446.
- Beckman, P. J., and Kohl, F. L. (1984). The effects of social and isolate toys on the interactions and play of integrated and nonintegrated groups of preschoolers. *Educ. Train. Ment. Retard.* 19: 169–174.
- Buysse, V., and Bailey, D. B. (1993). Behavioral and developmental outcomes in young children with disabilities in integrated and segregated settings: A review of comparative studies. *J. Spec. Educ.* 26: 434–461.
- Cullen, J. (1993). Preschool children's use and perceptions of outdoor play areas. *Early Child Develop. Care* 89: 45–56.
- DeKlyen, M., and Odom, S. L. (1989). Activity structure and social interactions with peers in developmentally integrated play groups. *J. Early Interv.* 13(4): 342–352.
- Ebert, S. (1977). Paying deference to differences: A child's version of Noblesse Oblige? In Harmonay, M. (ed.) *Promise and Performance: Children With Special Needs*, ACT's Guide to TV programming for children, Vol. 1, Ballinger, Cambridge, Mass; pp. 78–83.
- Fantuzzo, J. W., Stovall, A., Schachtel, D., Goins, C., and Hall, R. (1987). The effects of peer social initiations on the social behavior of withdrawn maltreated preschool children. *J. Behav. Ther. Experim. Psychiat.* 18(4): 357–363.
- Frost, J. L. (1992). *Play and Playscapes*, Delmar Publishers, Albany, NY.
- Goldstein, D. (1991). *Physical Environment: Planning a Supportive Environment*, Kentucky Preschool Program Technical Assistance Paper No. 4, Kentucky State Department of Education, Frankfort, KY (ERIC Document Reproduction Service No. ED 379 102).
- Goldstein, H. (1993). Use of peers as communication intervention agents. *Teach. Except. Child.* 25: 37–40.
- Guralnick, M. J., and Groom, J. M. (1988). Peer interactions in mainstreamed and specialized classrooms: A comparative analysis. *Except. Child.* 54: 415–425.
- Hart, B., and Risley, T. R. (1975). Incidental teaching of language in preschool. *J. Appl. Behav. Anal.* 8: 411–420.
- Hinde, R. A., Easton, D. F., Meller, R. E., and Templin, A. (1983). Nature and determinants of preschoolers' differential behaviour to adults and peers. *Br. J. Develop. Psychol.* 1: 3–19.
- Hudson, S. D., Thompson, D., and Mack, M. G. (1997). Are we safe yet? A twenty-five year look at playground safety. *J. Phys. Educ. Recr. Dance* 68: 32–34.
- Jambor, T., and Gargiulo, R. (1987). The playground: A social entity for mainstreaming. *J. Phys. Educ. Recreat. Dance* 58: 18–23.
- Kazdin, A. E. (1982). *Single-Case Research Designs: Methods for Clinical and Applied Setting*, Oxford University Press, New York.
- Kohler, F. W., and Strain, P. S. (1993). The early childhood social skills program: Making friends during the early childhood years. *Teach. Except. Child.* 25: 41–42.
- Kotila, H., and Saloviita, T. (1993). Using peers to promote the social interaction of withdrawn children in a natural preschool setting. *Scand. J. Behav. Ther.* 22: 129–137.
- Ladd, G. W., and Price, J. K. (1986). Playstyles of peer-accepted and peer-rejected children on the playground. In Hart, C. H. (ed.), *Children on Playgrounds: Research Perspectives and Applications*, State University of New York Press, Albany, NY, pp. 130–161.

- Landesman-Dwyer, S., and Berkson, G. (1984). Friendship and social behavior. In Wortis, J. (ed.), *Mental Retardation and Developmental Disabilities*, Vol. 13, Plenum Press, New York, pp. 129–154.
- Lowenthal, B. (1996). Teaching social skills to preschoolers with special needs. *Childhood Educ.* 72: 137–140.
- Martin, S. S., Brady, M. P., and Williams, R. E. (1991). Effects of toys on the social behavior of preschool children in integrated and nonintegrated groups: Investigation of a setting event. *J. Early Interv.* 15: 152–161.
- McEvoy, M. A., Shores, R. E., Wehby, J. H., Johnson, S. M., and Fox, J. J. (1990). Special education teachers' implementation of procedures to promote social interaction among children in integrated settings. *Educ. Train. Ment. Retard.* 25: 267–276.
- Murphy, S. (1988). Don't handicap play time for disabled children. *Sch. Bus. Affairs* 54: 48–53.
- Murphy, H. A., Hutchinson, J. M., and Bailey, J. S. (1983). Behavioral school psychology goes outdoors: The effect of organized games on playground aggression. *J. Appl. Behav. Anal.* 16: 29–35.
- Nabors, L. (1996). Are preschool children with special needs being accepted by their typically developing peers in inclusive child care programs? *Phys. Occup. Ther. Pediat.* 16: 55–71.
- Nabors, L. A., and Badawi, M. (1997). Playground interactions for preschool-age children with special needs. *Phys. Occup. Ther. Pediat.* 17: 21–31.
- Nabors, L., Willoughby, J. C., and Badawi, M. (1999). Relations among activities and cooperative playground interactions for preschool-age children with special needs. *J. Develop. Phys. Disab.* 11: 339–352.
- Odom, S. L., and Brown, W. H. (1993). Social interaction skills interventions for young children with disabilities in integrated settings. In Peck, C. A., Odom, S. L., and Bricker, D. D. (eds.), *Integrating Young Children With Disabilities Into Community Programs: Ecological Perspectives on Research and Implementation*, Brookes, Baltimore, MD, pp. 39–64.
- Parker, J. G., and Asher, S. R. (1987). Peer relations and later personal adjustment. *Psychol. Bull.* 102: 357–389.
- Putnam, J. N., and Spenciner, L. J. (1993). Supporting young children's development through cooperative activities. In Putnam, J. N. (ed.), *Cooperative Learning and Strategies for Inclusion*, Brookes, Baltimore, MD, pp. 123–143.
- Quilitch, H. R., and Risley, T. R. (1973). The effects of play materials on social play. *J. Appl. Behav. Anal.* 6: 573–578.
- Raupp, C. (1985). Approaching special needs children's social competence from the perspective of early friendships. *Topics Early Childhood Spec. Educ.* 4: 32–46.
- Roderick, C., Pitchford, M., and Miller, A. (1997). Reducing aggressive playground behavior by means of school-wide "raffle." *Educ. Psychol. Pract.* 13(1): 57–63.
- Rule, S., Stowitschek, J. J., Innocenti, M., Striefel, S., Killoran, J., Swezey, K., and Boswell, C. (1987). The social integration program: An analysis of the effects of mainstreaming handicapped children into day care centers. *Educ. Treat. Child.* 10: 175–192.
- Schleifer, M. (1990). The universal playground. *Except. Parent* 20: 26–29.
- Sheldon, K. (1996). "Can I play too?" Adapting common classroom activities for young children with limited motor abilities. *Early Childhood Spec. Educ.* 24: 115–120.
- Storey, K., Smith, D. J., and Strain, P. S. (1993). Use of classroom assistants and peer-mediated intervention to increase integration in preschool settings. *Exceptionality* 4(1): 1–16.
- U.S. Consumer Product Safety Commission (1991). *Handbook for Public Safety*, U.S. Government Printing Office, Washington, DC.
- Wardle, F. (1997). Outdoor play: Designing, building, and remodeling playgrounds for young children. *Early Childhood News* 9: 36–42.
- Yerkes, R. (1982). *A playground that extends the classroom*, Report No. RC 014 562, Department of Health, Physical Education, and Recreation, Oxford, Ohio (ERIC Document Reproduction Service No. ED 239 802).