Play Deprivation in Children With Physical Disabilities: The Role of the Occupational Therapist in Preventing Secondary Disability

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Self-initiated free play experiences are vital for the normal growth and development of all children. In this paper, children with physical disabilities who are deprived of normal play opportunities are viewed as having a second disability that hinders their potential for independent behavior and performance. Physical, social, personal, and environmental barriers that may limit the play experiences of children with physical disabilities are delineated. Studies of the interactions of these children during play are discussed, and a case is made for the promotion of active, free play in the home, the school, and the community. As facilitators of this process, occupational therapists must consider a variety of factors, including the unique capabilities of the child, the influence of parent–child and peer relationships, the role of other caregiving adults, the adaptation of toys and materials, and the impact of the environment and setting.

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Occupational therapists are unique in their emphasis on productive activity. A primary productive activity for young children is play (Bundy, 1989). In therapy, we frequently use play activities to achieve treatment objectives such as fine motor skill development, postural control, and concept development. This widely accepted use of toys and playful activity can be contrasted with another less evident function of play: the value of free play for its own sake. Rast (1986) noted, "Play and therapy almost appear to be mutually exclusive. A child's play is an intrinsically motivating activity done voluntarily and for its own sake; therapy proceeds according to the therapist's plan to achieve definite treatment objectives" (p. 30). If we consider play to be the primary productive activity for children, then the development of play skills becomes, in itself, an important goal for therapeutic intervention. Play acts as an antecedent for work and adult recreation and also serves to develop competence. We need to concern ourselves with play skills and also with the child's playfulness and motivation to engage in play.

In this paper, literature is used to demonstrate the purpose and benefit of free play experiences and to outline some of the barriers to free play that may be encountered by children with physical disabilities. The role of occupational therapists working with parents in preventing play deprivation and secondary disability is explored.

What Is Play?

Play is a complex, multifaceted behavior that is relatively easy to observe and describe but difficult to define theoretically (Rubin, Fein, & Vandenberg, 1983). Two characteristics that would be considered by most to be essential to the construct of play are that it be intrinsically motivated and that it be pleasurable (Ellis, 1973; Lindquist, Mack, & Parham, 1982; Mack, Lindquist, & Parham, 1982). In an occupational behavior framework, play is considered to be the primary activity of the child, a prerequisite to competence in occupational roles later in life (Reilly, 1974). Play has an exploratory component that is engaged in for its own sake and a competency component that results from an inner drive to master the environment (Reilly, 1974). Work and play are viewed along a developmental continuum, with play continuing to serve an adaptive function in adulthood (Kielhofner & Barris, 1984; Matsutsuyu, 1971). Sheridan (1975) elaborated on this work–play distinction by defining *play* as "eager engagement in pleasurable, physical or mental effort to obtain emotional satisfaction" (p. 5). *Work*, in contrast, is defined as "voluntary engagement in disciplined physical or mental effort to obtain material benefit" (p. 5).

The benefits of play are well-established (Ayres, 1981; Ellis, 1973; Erikson, 1963; Garvey, 1977; Gralewicz,

1973; Kielhofner & Barris, 1984; McHale & Olley, 1982; Piaget, 1951, 1952; Reilly, 1974; Vandenberg & Kielhofner, 1982). During play, children have the opportunity to discover what effect they can have on objects and people in their environment and to develop and test social and occupational roles. As children move around and explore their world, they receive information through their senses, gain knowledge about the nature and properties of objects, and develop rules about their own location in time and space (Robinson, 1977). The skills that are developed during play permit children to interact with and respond to the demands of their environment (Anderson, Hinojosa, & Strauch, 1987). This, in turn, leads to perceptual, conceptual, intellectual, and language development and, it has been argued, to the eventual integration of cognitive abilities (Levitt, 1975; Weininger, 1979, 1980, 1988; Weininger & Fitzgerald, 1988).

Occupational therapists working within sensory integrative, neurodevelopmental, occupational behavior, and developmental perspectives have recognized the sensorimotor, social, and constructive benefits of play and have justified its wide use in therapy as a treatment modality (Anderson et al., 1987). It is important for us, as therapists, to examine whether or not the benefits that may be attributed to the playful use of activity can be equated to the definition of play as a pleasurable activity that is emotionally satisfying. The distinction between the two forms of play can be highlighted by referring to the latter form as *free play*. In contrast to planned therapy sessions that are designed to produce specific responses through play, free play is spontaneous, intrinsically motivated, and self-regulated and requires the expressive personal involvement of the child (Calder, 1980; Garvey, 1977; Gunn, 1975; Yawkey, Dank, & Glossenger, 1986).

Primary and Secondary Forms of Play Deprivation

The designation, *children with physical disabilities,* is used in this paper to refer to children with sensory impairments, multiple handicaps, or limitations in voluntary movement or mobility. The impact of any of these disabilities can range from mild to severe in the degree to which the disability interferes with the child's ability to function independently. A child with mild cerebral palsy may have poor hand function, limiting his or her ability to manipulate a toy as desired; a child with a more severe impairment may be unable even to communicate his or her interest in a toy. Regardless of the individual circumstances, Mogford (1977) has proposed that the ability of children with physical disabilities to "explore, interact with, and master their environment is impaired with a consequent distortion or deprivation of normal childhood experiences" (p. 171).

The deprivation described by Mogford can be considered from two perspectives. First, a physical disability often implies an absence of, or deficiency in, sensory and motor information being received by the child. A child will inevitably be deprived of the play experiences that cannot be made available to him or her due to the disabling condition. For example, a child with a visual impairment will not be able to experience directly the effect of play with lights or colors, nor will a child with a hearing impairment have the opportunity to play with voices and musical sounds. Alternative forms of play can be substituted, but this primary form of deprivation will remain unchanged.

Second, the occupational therapist is concerned with the secondary disabilities that may arise as an indirect result of play deprivation. Children with physical disabilities are often more dependent on their caregivers and other people than are nondisabled children (Rubin et al., 1983). Brown and Gordon (1987), in a study of the activity patterns of children with physical disabilities, found that disabled children spent more time in self-care and passive activities in their own homes than did nondisabled children. The child who is unable to experience normal childhood play because of a physical disability may encounter secondary social, emotional, and psychological disabilities. Examples of this form of play deprivation are children with visual impairments who are not permitted to climb monkey bars because they might fall, children with hearing impairments who are not allowed to play outside because they might not hear a car, and children in wheelchairs who are unable to cross the street to get to a park.

Free play provides a forum for children to explore their own capacities, to experiment with objects, to make decisions, to understand cause-and-effect relationships, to learn, to persist, and to understand consequences. This type of play also fosters creativity and allows a child to develop social skills when the play involves peers. Cotton (1984) suggested that, in addition to developing competence through play, the child also learns to cope with anxiety, frustration, and failure.

If children with physical disabilities are deprived of the opportunity to regularly engage in free play, it seems plausible that particular types of secondary disabilities are likely to result. Increased dependence on others, decreased motivation, lack of assertiveness, poorly developed social skills in unstructured situations, and lowered self-esteem are a few of the difficulties that may be experienced by children with disabilities (Clarke, Riach, & Cheyne, 1977/1982; Levitt & Cohen, 1977; Mogford, 1977; Philip & Duckworth, 1982). These secondary disabilities have an impact not only on the child's play and development, but also on later functioning in the school setting, the community, and the workplace. It is in the prevention of secondary disabilities that the role of the occupational therapist becomes important.

Barriers to Free Play

Play deprivation, primary and secondary, may occur as a result of many different forms of barriers. For children with physical disabilities, the areas that have been addressed most frequently in the literature are limitations imposed by caregivers, physical and personal limitations of the child, environmental barriers, and social barriers.

Limitations Imposed by Caregivers

Children need the freedom to initiate and engage actively in activities, the chance to make decisions and take risks, and the opportunity to master their physical selves or to accomplish a task they have chosen (Diamond, 1981). Well-meaning parents and teachers frequently overprotect children who have disabilities and may not permit their participation in normal activities (Calder, 1980; Hewett, Newson, & Newson, 1970; Philip & Duckworth, 1982; Williams & Matesi, 1988). Whether due to fear of injury, pity, compassion, or lack of knowledge about a child's abilities, adults may intervene too quickly and may unnecessarily limit the child's opportunity to play (Diamond, 1981; Levitt, 1975). In addition, concern for the child's physical development and progress may lead caregivers to fail to appreciate his or her need for play, with the result that free time may be used for therapy or for catching up on schoolwork (Calder, 1980; Mogford, 1977).

Physical and Personal Limitations of the Child

The natural exploration of the environment observed even in infancy in nondisabled children may not be possible for the child with a physical disability. Lack of mobility, limited communication, difficulty with reach and grasp, and impaired sensory responses may all interfere with the child's ability to play with toys or household objects. Children with physical disabilities may not be provided with chances to engage in nonstructured forms of play, such as launching an assault on the kitchen cupboards, bouncing on the bed, roughhousing, and participating actively in the neighborhood, at the park, and on the playground (Levitt, 1975; Russell, 1978). Csikszentmihalyi (1975) stressed the importance of matching a person's skills to the challenges of the environment. In the case of the child with a physical disability, environmental challenges often exceed the child's skills, leading to anxiety and frustration.

In addition to the apparent physical and sensory limitations, a number of authors have suggested that there may be factors within the child that limit participation in play. Limited intrinsic motivation (Levitt & Cohen, 1977; Mogford, 1977), lack of drive and decreased concentration (Salomon, 1983; Sheridan, 1975), and withdrawal due to lack of skill or frustration (Calder, 1980) have all been proposed as problems that may be inherent in the disabled child. It is not possible to state with certainty whether these problems originate within the child or arise secondarily due to a lack of opportunity for participation in self-initiated play activities.

Environmental Barriers

Barriers imposed by the physical environment (e.g., steps, narrow doorways) may severely limit the disabled child's opportunities for free play. These barriers may be present in the home as well as in the community (e.g., schools, recreational facilities, and playgrounds). The physical structure of toys, materials, and equipment may limit children's ability to express themselves and to explore objects (Rubin et al., 1983). Changes within the child's home environment may have been made to suit the child's individual needs; however, in the authors' experience, these modifications are rarely extended to the broader community environment. For the most part, buildings and playgrounds have been constructed to meet the needs of the young person without physical disabilities. A safe environment that allows opportunity for freedom of movement and that is filled with familiar play materials is considered to be optimal for free play (Knox, 1989). How often is this type of environment available for the child with physical disabilities?

Social Barriers

Interaction with peers. Most normal free-play experiences center around interaction with peers. Parten (1932), in the now-familiar hierarchy of social interaction during play, described the increasingly complex stages of play ranging from parallel play to cooperation among players to achieve a common goal. Through these increasingly sophisticated interactions, the child learns societal norms and rules of behavior, is given the chance to experiment with different roles (e.g., leader, organizer), and models the social behaviors of other children. Children with physical disabilities are often limited in their interactions with other players due to both physical limitations and exclusion by their peer group. With decreased opportunities for interaction during the early years, the child with a disability may have a limited repertoire of social skills, which further increases his or her isolation. To illustrate this point, consider the presence of a child with physical disabilities in a mainstreamed kindergarten program. The child may not know how to initiate play with another child or how to join a group of children already playing at an activity center. It is no wonder that studies have repeatedly demonstrated that children with physical disabilities have poorly developed social skills (Clarke et al., 1977/1982; Philip & Duckworth, 1982).

Interaction with parents. The lack of playfulness present in many parental interactions is another potential

area of social deprivation during play (Kogan, Tyler, & Turner, 1974; Oster, 1984). Therapists may ask parents to become the child's teacher–therapist in the home environment. Although consistency and carryover of treatment ideas and approaches are beneficial to achieve therapy objectives, the question of the cost to the parent–child relationship must be raised. The interaction of a parent functioning as a therapist can be very different from normal parent–child interaction, and professionals have recently begun to question the effect of this interaction on the social development of the child with a disability (Rogers, 1988). It has further been proposed that the role of home therapist may produce an emotional conflict for the nurturing, accepting parent (Foster, Berger, & McLean, 1981). If parents are asked to follow a regimen established by a therapist, then their unique role and interaction with the child may be diminished (Kaiser & Hayden, 1984).

A number of studies performed in recent years have addressed this issue through an examination of the play of mothers with children who have physical disabilities. In contrast to nondisabled children, results suggest that mothers of disabled children perceive play and teaching situations as similar (Oster, 1984); show more negative affect and perceive the play situation as unrewarding (Kogan, 1980; Kogan et al., 1974); and are more directive and controlling (Brooks-Gunn & Lewis, 1982a, 1982b; Crawley & Spiker, 1983; Cunningham & Barkley, 1979; Hanzlik, 1989; Hanzlik & Stevenson, 1986; Oster, 1984). Many parents have expressed concern about the "one good hour" that they may have with their child: Their desire to simply cuddle and play with the child is rapidly extinguished when they recall the necessity to perform a home program (Kaiser, 1982). Similarly, several adults with cerebral palsy reported to Kibele (1989) that therapy had a negative effect on their relationships with their mothers. The demands of home programs limited their leisure time and, in some cases, led to the impression that they were disappointing their parents, particularly when skill development did not improve. It is essential for a parent to have positive interactions with his or her child, yet it is also important for the child's development to be stimulated whenever possible. Free play, not disguised therapy, may achieve similar objectives with less stress on the family.

Overcoming Barriers to Play: The Role of the Occupational Therapist

Occupational therapists may be in an ideal position to develop and maximize the free play opportunities of the child with physical disabilities in many settings. As professionals who are concerned with the child's development in the areas of self-care, productivity, and leisure, occupational therapists have the opportunity to work with the child in the home, in a treatment facility, or in a wide variety of community settings. Awareness of the barriers that the child frequently encounters and an understanding of the child's capabilities may facilitate the consultative process.

Assessment

Naturalistic observation and appraisal of a child's developmental play level is as essential to an occupational therapy assessment as evaluation of other activities of daily living. The play history, the types of play engaged in (e.g., active, exploratory, imitative, constructive, dramatic), the stage of play (e.g., solitary, independent, parallel, associative), and the developmental progression of object play (e.g., functional, relational, symbolic, combinatory) may all receive consideration. (Good reviews of these areas can be found in Behnke & Fetkovich, 1984; Florey, 1981; Kielhofner & Barris, 1984; Sheridan, 1975; and Sparling, Walker, & Singdahlsen, 1984.) Other important parts of a complete assessment are the frequency of play times, the variety of toys available, the physical location, and the opportunities for social interaction with peers and caregivers during these times.

Intervention

Providing opportunities for free play. Children with physical disabilities often have much less time available for play than do their nondisabled peers, in part due to the time spent in therapeutic programs (Brown & Gordon, 1987). If play is believed to be an important component of the child's life, then time must be built in to allow for free play experiences in the classroom, the therapeutic setting, the home, and the community.

In any play situation, a child needs to have the opportunity to choose, to explore, to create, and to respond to change if the result is truly to be called free play. Consideration can be given to the play space, recognizing the child's need for both personal play space and free-ranging space in contact with other people (Stout, 1988). Whenever possible, caregiving adults can be encouraged by the therapist to let the child explore and interact independently. Numerous studies have indicated that adults working with physically disabled children tend to intervene too quickly, with the result that the children become highly dependent on this intervention during play (Federlein, 1979; Field, 1980; Field, Roseman, de Stefano, & Koewler, 1982; Levitt, 1975).

Consultation with parents. The therapist's expectations of, and recommendations to, the parent in the home environment must be thoughtfully considered. Parental participation in a child's play is not only positive but may be essential for children with more severe impairments. Many parents view this play time, however, as a time to "learn to use materials and to learn to use them correctly" (Oster, 1984, p. 156). To maximize play oppor-

tunities, parents may first need to be convinced of the importance of free play to the total health and development of the child. Understanding the educational value of play as well as the sequence of development that occurs in play may help parents view play as more than a pastime. Henderson and Bryan (1984) have suggested that parents must believe that self-direction is important and must trust their child's ability to learn from his or her own play experiences. The parent–child relationship is reciprocal, and parental expectations and beliefs will have an impact on the quality of the play. In addition, some of the apparent benefits of play—increased motivation, improved self-concept, and more active participation—may be viewed negatively by parents. For example, children who were previously satisfied with the vicarious experiences provided by television may become more demanding in their desire to have an active play life. In these instances, increasing the involvement of siblings or peers at home or in a play setting may be beneficial.

Consultation with teachers and caregivers. When therapists talk to teachers or caregivers about play and make recommendations for toys and play activities, the specific barriers that may limit the child's play in that setting must be addressed. The limitations imposed by caregivers are usually grounded in a genuine concern for the safety and welfare of the child. It is important for the therapist to acknowledge these concerns and to discuss with caregivers or teachers the extent to which their fears are realistic. Suggestions can be provided regarding the child's optimal positions for play and the extent to which he or she may need assistance. The child's capabilities, not limitations, should be stressed for two reasons: First, a child can demonstrate unique abilities and be remarkably creative when motivated to move or perform an activity, and second, a child needs to be enjoyed as a child, not as a child with a disability. Free play periods may offer this opportunity.

Integrated preschool and school settings offer ideal opportunities for peer interactions. Both the therapist and the caregiver should maximize the child's opportunities to be involved with his or her peers, without interfering with the spontaneity of these situations. Children with physical disabilities may need assistance with mobility, positioning, and access to playthings and equipment in order to allow them to participate to their maximum potential; however, dependence on the presence of an adult should be discouraged. The child may need some instructions on how to enter a play group, but this skill can also be learned from peer models. The role of the adult is to structure the environment, both physically and socially, and then allow play to happen.

Recommendations about playthings. The toys and activities that are made available for the child will influence both the type and quality of play. Sensitivity must be shown to social, emotional, physical, and educational needs and also to the interests of the child. A toy that is suitable for one child may be extremely unsuitable for another because of differences in temperament, motivation, and previous life experiences. To maximize the play experience, careful consideration must be given to the child's current developmental level. Toys of intermediate novelty are usually optimal: A toy should have an element of familiarity to the child but be sufficiently novel to induce exploration. Gradual pacing of activities will encourage the child to experiment and take risks but will ensure that the resulting information can be integrated into knowledge acquired previously. For example, familiarity with pouring water from cups into the bathtub might lead to the introduction of a funnel, a sieve, or a can with holes punched in it. The same items carried to the sandbox will produce entirely new results for the child. As a guideline for the development of intrinsic motivation, Ellis (1973) proposed that activities should be paced to the next developmental level, possess sufficient complexity to require investigation, be manipulable and responsive, and pose questions to be pondered by the child.

Advances in technology and computer applications have opened up a new world of play for even the most severely disabled child. Langley (1990) provided a thorough review of many toys that are suitable for children with physical disabilities. More traditional toys and materials, however, may still require modification by the occupational therapist (Lemire, 1988). The size, shape, weight, and consistency of materials may need to be adapted to suit the individual child (Anderson et al., 1987). A toy library may be helpful, allowing parents to borrow the more expensive electronic toys or to test adapted toys on a trial basis. Equipment modifications (e.g., an adapted playground, foot straps and back rests for a tricycle) may also serve to make an out-of-bounds activity accessible to the child. The "toys" that normal children discover in cupboards, basements, and backyards (e.g., pots and pans, insects, cardboard boxes, sticks) must not be overlooked for the child with a disability. As Diamond (1981), a physically disabled adult, pointed out, spitting 3 ft away and playing in the mud are also accomplishments for the child.

Summary

Free play has been proposed in this paper as a vitalizing element in the development of the whole child. The experiences derived from childhood play include exploration, mastery, decision making, achievement, increased motivation, and competency—qualities that will eventually help children to develop occupational roles and to become more productive members of society (Bundy, 1989). Children already restricted by physical limitations who are not given adequate opportunities to engage in free play may be acquiring secondary disabilities, including diminished motivation, imagination, and creativity; poorly developed social skills; and increased depend-

ence. The occupational therapist may be able to prevent some of these secondary problems by enhancing free play opportunities for the child who has a physical disability. ▲

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