Creating Opportunities for Occupation: An Intervention To Promote the Self-Care Independence of Young Children With Special Needs

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Key Words: developmental tasks • developmental therapy

Objective. The relationship between opportunities for occupation and the skill performance of young children with special needs was explored, using a multiple baseline across subjects design.

Method. Three caregivers self-monitored the frequency with which they were able to create opportunities for their child to practice emerging self-dressing or self-feeding skills.

Results. Two caregivers quickly promoted self-care independence in their child by restructuring daily routines to provide more opportunities for the child to independently engage in the targeted occupation. One caregiver was unable to use the intervention techniques effectively.

Conclusion. Opportunity for occupation can influence the child's skill performance and can be used as a treatment modality by some families.

In the current health care arena, outcomes research that documents the efficacy of occupational therapy is needed to justify these services (Ellenberg, 1996). Wood (1996a) advocated that occupational therapists verify the effectiveness of intervention in a way that is congruent with the principles that frame the profession. One cornerstone in the practice of occupational therapy is the philosophy that engagement in meaningful occupation facilitates the adaptive process, thereby promoting health and well-being (Burke, 1996; Nelson, 1996; Wood, 1996b). However, can the construct of meaningful occupation be actualized in an intervention setting? This study examined an intervention that promoted the opportunity to engage in occupation as a method of enhancing the self-care skills of young children with disabilities.

The Development of Self-Care Occupations

Participation in self-care activities or occupations depends on two primary components: ability and opportunity. Self-care ability can be seen as the first and critical step toward independence in that skill domain. Traditionally occupational therapy services have sought to promote the client's ability to perform an activity of interest. Self-care tasks, in particular, have been a focus of occupational therapy practice because of the pivotal role they play in everyday life. Independent engagement in self-care occupations can foster self-reliance; self-esteem; and, for socially oriented occupations such as mealtimes, a sense of continuity and belonging (Frank, 1994). In this respect, intervention geared toward the ability to engage in self-care occupations frequently ensures that the treatment goal will have meaning and value for the participant.

The opportunity to perform self-care is as important a contributor to these tasks as the ability to perform. There is a reciprocal relationship between knowing how to perform an occupation and the opportunity to perform that occupation in everyday life. Skills are shaped and perfected in an environmental context. Increasing the opportunity for self-care occupations can create environmental press, which in turn promotes skill performance. Therefore, the end product of the relationship between ability and opportunity is engagement in occupation. In turn, engagement in occupation provides the practice essential for the emergence, refinement, and eventual maintenance of skills necessary to function independently in society.

For young children, the link between ability and opportunity for occupation is made salient by the nature of the developmental process. As the child matures, skills emerge and unfold, building, in part, on genetic encoding and biological drive. However, despite the child's wide repertoire of potential ability, only certain develop-
mental avenues come to fruition, shaped by the environmental demands that occur simultaneously with emerging skill. For example, the infant has the innate ability to speak and comprehend any language. However, the time frame in which the child learns language, the physical mannerisms associated with speech, and the very language the child eventually will speak are determined by environmental forces (Siegelman & Shaffer, 1995).

Everyday environmental demands also form a compelling and efficient method of transmitting cultural values and practices (Harkin & Super, 1996). The child's development is "canalized" in the direction of those tasks that are culturally meaningful to the family (Valsiner, 1985). As a consequence, the child has more opportunity for skill development in areas valued by the society in which the child lives. This socialization process has a strong influence on young children in particular because they frequently rely on the support of others for opportunities to practice newly learned or emerging skills.

The self-care occupations of young children are primarily carried out as a component of the daily routines of the home. Within these everyday activities, young children are taught to independently eat, dress, bathe, and carry out tasks concerned with their health and hygiene. The nature and timetable for self-care occupations can vary, depending on family and cultural practices. In Western society, the mastery of some self-care skills can be a prerequisite for participation in mainstream society. For example, many preschool programs for children who are typically developing require that the child be able to use the toilet and eat fairly independently before admission. Therefore, some preschool placements may be delayed or unavailable altogether for the young child without these self-care skills (Lamorey & Bricker, 1993).

Although most families spontaneously construct daily routines that facilitate their child's development (Weisner, Matheson, & Bernheimer, 1996), this is not the case for all families. The child's daily routines and interactions also can be negatively affected by variables such as the family's socioeconomic status (Bond, Belensky, Weinstock, & Cook, 1996) and the child's characteristics (e.g., responsiveness, beauty, communication skills) (Garber, 1988). Therefore, one cannot necessarily assume that children will be afforded opportunity for occupations within their ability during the course of everyday life. This is a particularly important issue for children with special needs because they may require increased repetition in order to reinforce learning (Brown et al., 1991).

**Intervention Using Daily Routines**

Many studies report using daily routines as a vehicle for therapy specifically aimed at increasing the skill ability of the child with special needs (Rainforth & Salisbury, 1988; Stremel et al., 1992). However, intervention that requires changes in the home environment poses a challenge for those working with these children. Many parents have difficulty incorporating structured regimes into daily routines (Crowe, 1993; McConachie, 1991). The situational constraints incorporated in meeting the basic needs of the family have also been associated with decreased probability that parents will carry out professionally prescribed, child-level interventions (Brotherson & Goldstein, 1992). These results have been reported across socioeconomic groups and parental locus of control (Gajdosik, 1991; Gajdosik & Campbell, 1991). In general, families appear to seek flexibility in the ways in which therapy goals are incorporated in the home environment. In one study of eight families with young children with cerebral palsy, Hinojosa and Anderson (1991) observed that "[while] mothers did not necessarily think they were implementing a home program, they did indeed implement many of the therapist's recommendations" (p. 278) but in an incidental fashion.

In contrast, relatively few studies have looked at intervention from the perspective of enhancing the opportunities for increasing skill ability of the child with special needs. Horner, Williams, and Knobbe (1985) examined the skills maintenance of high school students with severe disabilities in Oregon. During the course of one school year, the students met goals established by the individualized education program (IEP) teams. During the following year, these goals were deleted from the students' IEPs. This study monitored the opportunities to perform the newly learned skills present in the everyday school environment during the second year. Results indicated that students were more likely to maintain those skills for which there were a higher number of opportunities for engagement. After examining the results of the study, many school districts in the state of Oregon adopted a policy of "maintenance" under which previously learned IEP objectives were reinforced for an additional year through regular engagement in the newly learned skill (R. H. Horner, personal communication, May 1994).

The generalization literature also provides examples of intervention to increase the opportunities for engagement in activities as a way of improving skill performance. Traditionally, generalization refers to the transfer of behavior learned in one setting to a similar, related situation. For example, if a child learns to wash his or her hands in the classroom and later spontaneously washes his or her hands in the home, the skills taught in the classroom are said to have generalized. For the most part, development depends on the application of skills and abilities across settings. However, generalization of skills can be particularly prob-
The basic assumption of most strategies to promote generalization is that the child needs additional intervention to exhibit the desired skill in a different setting. A wide variety of strategies to promote the child's skill ability have been reported in the generalization literature (Horner, Dunlap, & Koegel, 1988). However, the skills training approach to generalization differs from the opportunities for skill development advocated in this article. Lack of generalization may be equally due to the lack of sufficient opportunity to engage in the desired skill. Therefore, the focus of intervention need not be on the child's ability to perform tasks under a variety of conditions, but on the structure of the environment that provides the context for development. Some generalization studies are consistent with this approach. For example, Horner (1971) successfully used the notion of opportunity for occupation to facilitate the ambulation skills of a 5-year-old boy with spina bifida. The intervention was designed to increase the child's opportunities to ambulate with crutches by enlisting the caregivers to refrain from offering the use of the wheelchair.

Over the past several decades, difficulties with the generalization of skills have been viewed primarily as a problem with the transfer of skills from a clinic setting to the natural environment (LeLaurin, 1992). However, as integrated settings become more and more commonplace, it is apparent that the generalization of skills within and across natural settings continues to be problematic for some children with disabilities (Bazyk, 1989; Brinker, 1992; Schreibman, Kaneko, & Koegel, 1991). The notion of restructuring a person's environmental opportunities as a way to facilitate generalization is supported by those who suggest that broader, more holistic treatment approaches are needed to address these concerns (Warren & Horn, 1996).

**Examining the Role of Opportunity To Engage in Occupation**

The present study uses the idea of restructuring the environmental opportunities of children with special needs as a means to promote opportunities for engagement in self-care skills. These children had exhibited the ability for self-care in an early intervention clinic environment but did not generalize these skills to the home setting. This study sought to foster the children's skill development at the level of the home environmental structure by facilitating everyday opportunities for their newly learned and emerging skills. The research question was, "Does increasing opportunities to engage independently in self-care occupations promote the skill development of young children with disabilities?"

**Method**

**Participants**

This study used a two-phase sampling procedure to select young children with disabilities for whom there appeared to be a discrepancy between self-care ability in the clinic as compared to the home. Participants were selected from a clinic-based early intervention program serving children with special needs. The center was located in a suburban area. The children attended this program twice weekly with a family member, and most also received individual occupational therapy, physical therapy, and speech therapy during the week. Twenty-six parents with children with disabilities (28 to 36 months of age) and the children's primary therapists agreed to participate in the study.

Parents and the primary therapists separately completed an identical 15-item questionnaire developed for this study. The tool was drawn from the Hawaii Early Learning Profile (Furuno et al., 1984). The questionnaire sampled self-care skills that would be appropriate for a child functioning between the ages of 15 and 36 months. Items on dressing, hygiene, eating, and clean-up tasks were rated on a five-point Likert scale indicating that the child never (1), seldom (2), sometimes (3), usually (4), or always (5) performed the task independently. Therapists' ratings depended on observations of the child's performance in the clinic, whereas the parents were instructed to keep both home and clinic settings in mind when rating their child's performance.

Completed questionnaires were examined first for general level of competence in self-care skills. Only those children scoring "sometimes" or above, indicating at least emerging self-care ability, were considered for participation in the study. Next, questionnaires were examined for discrepancies between therapist and parent reports of the child's ability for self-care occupations. Ten of the 26 cases had discrepancies, but because of the intensive time demands of this study, only the 6 cases with the greatest degree of discrepancy were invited to participate in the second phase of the sampling procedure.

The second phase of the sampling procedure used observations by an experienced pediatric occupational therapist of each child's self-care abilities in both the clinic and the home. Three children who demonstrated the ability to perform self-care skills in the clinic but did not do so in the home were selected for the study. All three had received a "sometimes" rating for independent self-
feeding and self-dressing tasks, indicating at least emerging ability. In addition, independent dressing and feeding were addressed as objectives on the individualized family service plan (IFSP) for each child preceding this intervention, indicating that these occupations were priority areas for both the family and the therapist. The three participating dyads were Allison and her mother, Paul and his mother, and Nathan and his maternal grandmother, his primary caregiver (see Table 1).

Procedure

This study used a multiple baseline across subjects design (Barlow & Hersen, 1984). All data were collected in the home setting during the time of day in which self-care activities naturally occurred and incorporated any person who was present. Each data collection session was videotaped in order to capture naturally occurring daily routines that incorporated the occupations of interest. Data were collected between one and four times weekly for a period of 3 weeks for each child. In general, data sessions lasted approximately 1 hr, with the intervention requiring an average of 40 min of that time. The length of the intervention and baseline phase varied according to the child’s position on the multiple baseline schedule and the degree of time required to establish a behavioral trend. Therefore, for the first participant, Allison, intervention lasted 19 days. Paul received 13 days of intervention, and Nathan received 11 days. In addition, one maintenance probe was conducted for each child approximately 3 weeks after the completion of the intervention phase. All three phases yielded 28 videotaped observations.

Baseline Phase

During the baseline phase, the caregivers were not told the specific purpose of the study in an attempt to keep the daily routines of the home as typical as possible. At the conclusion of the baseline phase and before the start of the intervention, open-ended interviews that also did not specify the purpose of the study were conducted with all three caregivers. Each reported that self-care independence was an important focus for her child at this time, establishing social validity for this intervention goal.

Intervention Phase

The intervention phase had two dimensions: the researcher’s intervention with the caregivers and the caregiver’s subsequent intervention with her child. The therapist presented the intervention information in a conversational format, focusing on four basic concepts: (a) independence in self-care skills is important; (b) to perfect self-care skills, your child needs to engage in the targeted occupation; (c) give your child the opportunity to practice the targeted self-care occupation; and (d) monitor your child’s progress. During a discussion of the intervention, the researcher involved each caregiver in choosing a target skill. Self-dressing was targeted for Allison and Paul, and self-feeding was targeted for Nathan.

The intervention used both facilitative strategies and self-monitoring as a way to empower caregivers to be the agent of change. This is in contrast to other types of intervention in which the therapist might be the change agent by constructing a treatment and training the family members to follow through. Facilitative strategies provide loose directives for achieving the desired goal, assuming that parents have natural strategies that can be harnessed to enhance their child’s development. The use of facilitative strategies has been advocated as a method of improving generalization from clinic to home setting (Fox & Westling, 1991). Thus, caregivers in this study were not given specific techniques to follow in order to achieve the desired outcome but were encouraged to facilitate their child’s independence in self-care occupations in whatever way they believed would work.

Caregivers were also asked to self-monitor their child’s performance during the targeted self-care occupation once daily for the duration of the intervention. Research has linked self-monitoring techniques to successful interventions, suggesting that recording some aspect of one’s behavior strengthens an intervention by making the behavior of interest salient (Kellegrew, 1992; Koegel, Koegel, & O’Neill, 1989; Sainato, Goldstein, & Strain, 1992). In this study, self-monitoring involved recording two types of information on a form developed for the study: (a) the number of opportunities their child had to independently engage in the two or three steps of the self-care occupation (two steps for self-feeding, three steps for self-dressing) and (b) the level of assistance the caregiver gave the child for each step of the task.

The self-monitoring process accomplished dual purposes: It recorded information about the child’s skills and reminded the caregiver to allow the child to perform the occupation independently. The researcher collected the self-monitoring forms during each videotaped session, making positive comments about the caregivers’ efforts to collect the data.

Table 1

<table>
<thead>
<tr>
<th>Participant</th>
<th>Family Members Living in the Home</th>
<th>Age (months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allison</td>
<td>Father, mother, younger sibling</td>
<td>32</td>
</tr>
<tr>
<td>Paul</td>
<td>Father, mother</td>
<td>28</td>
</tr>
<tr>
<td>Nathan</td>
<td>Father, mother, older sibling</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: All child participants have Down’s syndrome and are from white, middle-class families.

Data Analysis

All data points represented on the single subject design
graphs were taken from the videotaped observations. The videotape data were coded across two criteria. First, the level of caregiver assistance given the child for each step of the task was calculated. The steps of the task and the levels of assistance were identified using the same parameters specified on the self-monitoring form (i.e., independent, verbal assistance, physical assistance). Second, the total number of times the caregiver let the child independently attempt to perform the occupation was tallied for each step. These observations were called an “opportunity” for occupation. An opportunity to engage in occupation reflected only an independent attempt and did not have to result in independent performance of the task. For example, one opportunity would be scored if a child, with no caregiver intervention, pulled on the shirt to get it over his or her head, whether the shirt went over the head. In contrast, a caregiver’s verbal reminder to pull on the shirt would be scored as adult verbal assistance rather than as an opportunity to independently engage in the occupation. Multiple tallies for each step of the task were possible because all adult assistance and all child independent attempts were scored.

**Dependent Variable**

The dependent variable was a percentile representing the number of opportunities to engage independently in the self-care task divided by the total number of opportunities plus caregiver’s assists. This percentile was calculated for each step of the targeted occupation. The percentiles for each step were then added, averaged to give the dependent variable, and plotted as a multiple baseline.

The dependent variable represented both dimensions of the intervention, as it reflected the caregiver’s response to the occupational therapy intervention, recorded as the number of opportunities the child was given. In addition, the child’s subsequent response to the caregiver’s intervention was represented by measurement of the child’s independence in the targeted task when given an opportunity. A percentile was used because a myriad of factors, including the type of food offered or the type of clothing chosen, created variability in the number of opportunities to engage in self-care occupations on any given day. Therefore, other forms of measurement, such as a frequency count, would have been misleading.

**Interrater Reliability**

Interrater reliability was examined on 30% to 33% randomly selected videotaped data sessions of each child. These observations were conducted by the researcher and a university student familiar with children with disabilities who was blind to all aspects of the study. Interrater reliability, calculated using a percentage of agreement for the occurrence of the targeted occupation (Salvia & Ysseldyke, 1991), was .87 for Allison, .90 for Nathan, and .88 for Paul, indicating good correspondence between raters. A form of point-to-point agreement for each step of the targeted occupation was also examined. Reliability data calculated for the level of assistance required for each step ranged between .77 and 1.00, again indicating good interrater reliability.

**Self-Monitoring Forms**

The caregiver’s participation with the self-monitoring component of the intervention was calculated by noting the number of days per week that the self-monitoring forms were completed. Trends in participation with the self-monitoring program were tabulated.

**Results**

The baseline data points for all three children were zero or near zero, indicating that at the onset of the study, all children were consistently dependent in all steps of the targeted occupation and lacked opportunities to attempt the self-care task (see Figure 1). However, immediately following intervention, all children showed a marked increase in their independent engagement in the self-care occupation. For Allison and Paul, the first data point after intervention increased more than 50%. For Nathan, the first data point after intervention increased 20%.

Data points for Allison and Paul continued on an upward trend throughout the intervention phase. In addition, these two children maintained their high level of independence for the task of putting on their shirt after the intervention was discontinued (see Figure 1). Their caregivers required no additional training or intervention during the course of the study other than the initial training session.

Nathan also demonstrated a strong upward trend for the first two data points following intervention, indicating increased self-feeding independence. By the second data point following intervention, he was independently engaging in self-feeding for approximately 50% of the meal. However, by the third data point, a downward trend began. During the third data collection session, his caregiver was given additional verbal coaxing by the researcher to allow the child an opportunity to use the spoon independently. She inconsistently followed this advice. By the fourth data point, she simply did not allow Nathan to feed himself even when given verbal reminders by the researcher. Unfortunately, for a 2-week period following the fourth data point, Nathan’s sibling was ill, and direct observation of the intervention was suspended.
The research question for this study asked whether in­
creasing opportunities to independently engage in self-care occupations promoted the skill performance of young children with special needs. The results indicate that for two out of the three families, this intervention did corre­
spond to increased ability and eventual independence in the targeted skills. The relatively quick success of this intervention (3 weeks) is particularly important because up to the point of the intervention, Allison and Paul had exhibited only emerging self-dressing skills in the clinic setting as evaluated by the therapists’ questionnaire rat­
ings, even though this task had been targeted on their IFSPs. With the exception of the intervention in the home setting, there was no difference in the clinic program that could account for the change in self-dressing status for these two children. This illustrates the relation­ship between opportunity for occupation and ability for occupation: The opportunity for daily practice served as the catalyst for skill refinement.

These findings support the premise that a treatment modality can be conceptualized as providing an opportu­nity for occupation. In addition, facilitative strategies and self-monitoring contributed to the efficacy of the inter­vention. The caregivers were asked to modify their inter­actions and routines so that their child could independ­ently attempt self-care occupations. This change in daily routine was a complex shift, requiring different agendas or cultural scripts between caregiver and child during the self-dressing interchange. Allison’s and Paul’s mothers suc­ceeded in using facilitative strategies despite a marked variation in the style and structure of the dressing routines of these two families. For example, Allison completed her dressing tasks on a high dressing table, using clothes select­ed by her mother. Paul was given a choice of clothing and dressed on the floor of his bedroom. These two mothers’ consistent participation in the monitoring part of this inter­vention suggests that self-monitoring was an important component in the success of the intervention.

For Nathan this treatment was not effective. Despite good initial progress, his independence in self-feeding occupations did not progress or maintain. During the first week of intervention, the completion rate for the self-monitoring form was the highest, and Nathan demon­strated the greatest amount of progress. Whether the primary source of this initial progress was the grandmoth­er’s enthusiasm for a new intervention or the effective use of the self-monitoring tool is not known. One point was consistently obvious from a critique of the videotapes; Nathan was able to independently attempt and complete steps of the self-feeding task when given the opportu­nity—he continued to demonstrate self-feeding ability in the early intervention setting. Therefore, Nathan’s self-feeding performance in the home was due to lack of oppor­tunity rather than lack of ability to perform the task. This finding illustrates the reciprocal relationship be­tween adult-structured opportunity for occupation and the skill performance of young children.

Most importantly, Nathan’s case raises intriguing questions about the nature of daily routines. Why did his caregiver not structure daily routines that promoted skills within his capabilities? Ecocultural theory can provide a useful framework for this inquiry. Ecocultural theory proposes that only those routines that are congruent with both the cultural values of the family and the ecological realities will maintain and endure (Gallimore, Weisner, Kaufman, & Bernheimer, 1989). In this case, both moth­er and father had expressed a strong desire for Nathan to be independent in self-care skills. In particular, self-feed-
ing was important to this family because the process of feeding Nathan was a time-consuming part of their busy weekends. However, Nathan was fed all meals, 5 days a week, by his grandmother while both parents worked. During the initial interview, the grandmother also agreed with the parents about the value of self-feeding; however, it became apparent that Nathan's self-feeding was not important to her at this time. The grandmother's comments, taken from videotaped excerpts, illustrate this point. She stated, "He is still a baby" and "I fed all my children until they started school."

Ecocultural theory also maintains that when persons are faced with everyday challenges, ecological pressure will frequently modify values and beliefs (Gallimore, Weisner, Bernheimer, Guthrie, & Nihira, 1993). In follow-up interviews after the study, Nathan's mother acknowledged that she knew that her mother did not value Nathan's independence to the same extent that she did, but because she depended on her mother's assistance, she accepted that part of the child-care arrangement.

One other consideration is that, unlike the other two mothers, Nathan's grandmother needed additional redirection from the researcher to allow Nathan to independently attempt the task. When the other mothers initially began to allow their children opportunities for self-feeding, they frequently offered verbal encouragement to the child at the onset of the occupation. This is a natural facilitative strategy parents may use to bridge the gap between emerging skill and independence. Both Allison's mother and Paul's mother attended the early intervention program with their child and seemed to use the clinic-based occupational therapist's intervention as a model for their own efforts.

In contrast, Nathan's grandmother did not seem to have effective facilitative strategies to encourage Nathan to persist in his self-feeding efforts, frequently feeding him at any sign of reluctance on his part. Nathan's mother also attended the early intervention program with her son. In contrast, the grandmother rarely participated in the early intervention program, despite providing primary care for this child. Consequently, Nathan's grandmother did not have the early intervention personnel as a resource. In addition, she had not had contact with children with disabilities before the birth of her grandson. This suggests that in order to use facilitative techniques, caregivers must first have at their command a repertoire of effective strategies to deal with the child's behavior and actions. In addition, some children's disabilities may require an additional knowledge base not provided through experience with children without disabilities. Therefore, family training in specific techniques may also be needed for treatment to be effective for some children.

Implications for Occupational Therapy

This study also has implications for occupational therapists working primarily in clinic settings. Lack of knowledge about the child's routines and skills in the home can limit the therapist's ability to provide appropriate care. It was apparent that these children did not generalize the skills trained in the clinic to the home setting, yet few of the therapists of the children anticipated this outcome. Children who have the ability to engage in self-care occupations but do not lose valuable opportunities to practice and refine these skills. This study indicates that for some families, a home-based intervention component that supports the clinic program can be an effective way of promoting the child's development in the natural environment. However, to facilitate this generalization, the occupational therapist must first be aware of what types of opportunities to use newly learned and emerging skills are present in the daily routines of the home.

Limitations

As with any research, there are limitations to this study. Although a single subject design can provide a valid method of empirically testing intervention, it frequently has the disadvantage of sample size. Because only three families participated in this study, application of these results to the general population is limited. In particular, this study specifically selected children whose ability for the self-care occupations had been demonstrated and observed in the early intervention setting by a professional team member, and emerging ability was a minimum prerequisite for participation. It is highly probable that children who do not show the ability to perform self-care occupations will continue to be unable to perform tasks even when given the opportunity to do so. Some children's lack of skill performance may be due to some difficulty, such as limited dexterity in a child with cerebral palsy. Other children may be unable to perform consistently and may need additional structure of the occupation, such as children with autism.

For these study participants, the targeted self-care occupation was identified by the parents as a valuable skill worthy of intervention. Because of the complexity and difficulty associated with restructuring a family's daily routines, the need for parental support is paramount. Therefore, one requirement for this intervention is that the identified occupation must not only include the child's emerging skill ability, but also be identified by the family as an occupation of value.

Conclusion

This study empirically documented that occupational therapy intervention can efficiently promote the self-care
The skill proficiency of young children with disabilities. In this study, caregivers were encouraged to become change agents by structuring daily opportunities for their children with special needs to practice and strengthen emerging skills. Although this intervention was conducted in the home and would be useful to any home-based practice, it can also be used to supplement a clinic-based setting. Study results suggested that although these caregivers appeared to benefit from the training provided in the early intervention setting, they also clearly needed a home-based intervention to prompt changes in the daily routines that supported their child's skill development.

The findings strongly suggest the need for further inquiry. These caregivers did not necessarily use their child's skill ability as a barometer of readiness that required changes in their daily expectations for their child. This leads one to question how mothers determine when their child is ready for independence in a particular occupation. Exploration is also needed of the types of early intervention experiences that encourage developmentally supportive parenting practices. In this study a top-down approach to treatment was used, indicating that for some families, intervention can be approached from the level of the environmental structure. Empirical studies that further explore the use of environmental opportunities as a way of promoting occupation are also in order. ▲

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