A Play-Focused Intervention Involving Mothers of Preschoolers

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Objectives. This study examined the effect of an occupational therapy intervention program for mothers of preschoolers. It was designed to enhance mother–child interaction through play, reduce mothers’ perceived stress, and increase mothers’ knowledge about child development.

Method. Maternal causal attributions for parent–child interaction outcomes, stress, self-concept as educator, and children’s temperament and behavior were measured with standardized questionnaires before, after, and at 18 months follow-up to the intervention program. The intervention comprised a 2.5-hr, 10-week activity-based program that involved 35 mothers and their 2-year-old to 3.5-year-old children in toy making and toy demonstrations. Subjects were assigned to two intervention program (experimental) groups and one control group, which was administered questionnaires but whose members did not attend a program.

Results. No group changes were detected on conclusion of, or follow-up to, the program according to measures of attributions for parent–child interaction outcomes, perceived stress, self-concept as educator, or child temperament and behavior. However, some subjects had substantial score increases in their self-concept as educators of their children. Subjects’ evaluations for each session and the overall program were positive. Feedback from community nurses confirmed that several subjects subsequently used the skills they had learned through the intervention about use of toys and child development to conduct playgroups in the community. Previously undetected developmental or behavioral problems were identified for 8 (23%) of the 35 subjects.

Conclusion. Subjects’ positive responses to the program, the skills they acquired and shared, and identification of problems needing treatment supported the value of the intervention. Lack of quantifiable group changes suggested that qualitative, single-case design evaluations, or both may have been more appropriate methods to assess outcomes.

An occupational therapy intervention that emphasized the normal occupation of parenting was designed in response to previously expressed needs of mothers of preschoolers living in a multiethnic, industrial area of Melbourne, Australia, with a high incidence of child abuse (Esdaile, 1987, 1991; Esdaile & Sanderson, 1987b). This preventative approach that enhances parent–child interaction and child development had been used in other community-based programs (e.g., Daly Smith, 1982; Donoghue, 1986; Patush, Lapidot, Edelstein, & Tamir, 1987; Slaughter, 1984; Strom & Greathouse, 1974). Common features of all these programs were the attitudes of shared responsibility between parents and the professionals offering the programs, pre-
sentation of information on child development and play in a way that demystified the role of the so-called expert professional, and an experiential approach to using play and toys to facilitate subjects' learning about child development and discussions of their parenting (caregiving) needs.

These programs used activity-based, educational, and health promotional strategies in community-based, non-medical settings and addressed mothers' concerns about their children's development and education. The mothers' child-related concerns highlighted in these activity-based programs have also been the subject of research studies (Strom, 1984; Strom & McCalla, 1988). These studies demonstrated that mothers acknowledged their children's individual differences, found some children easier to manage than others, and became stressed by their children's problematic behavior (Richman, Stevenson, & Graham, 1982). It was also found that mothers sought reassurance and assistance with the occupation of parenting, which they frequently found challenging, especially when they perceived their children to have difficult temperament or problematic behavior (Prior, Sanson, & Oberklaid, 1989; Richman et al., 1982). Mothers of preschoolers were in particular need of support because a child's preschool stage of development is characterized by a challenging struggle for autonomy and an inability to delay gratification (Douglas & Richman, 1985). However, in the community where the intervention being reported was conducted, there were fewer resources available for preschoolers between 2 years and 5 years old than those for older or younger children and their families (Brownlee, 1989).

Professional literature affirms that occupational therapists share a concern about early intervention and mother-child interaction, taking into consideration both maternal and child-related factors (e.g., Grossman, 1991; Hinojosa & Anderson, 1991; Humphry, 1989; Pierce & Frank, 1992; Parush et al., 1987). Researchers also support an activity-based approach that values the importance of play (e.g., Bundy, 1993; Florey, 1981; Reilly, 1974). Despite challenges to prove cost-effectiveness, occupational therapy promotes a client-centered, prevention-focused model of practice, with its central core in meaningful occupations (Canadian Association of Occupational Therapists, 1991; Yerxa, 1994).

Conceptual Framework
This article describes an intervention program for mothers of preschoolers that is designed to reduce their perceptions of stress and increase a sense of efficacy as educators of their children. In this framework, the reasons (causation) mothers ascribed for parent-child interaction outcomes and child temperament and behavior were seen to have a reciprocal effect. Thus, mothers' experience of parenting stress and self-concept as an educator of their children were conceptualized as variables that could be influenced by their children's temperament and behavior (see Figure 1). The activity-based program involved mothers in toy making and toy demonstrations and aimed to increase their understanding of parent-child interaction and play development to enhance their sense of efficacy and thereby reduce their perceptions of parenting stress.

A Mother-Focused Perspective
One of the reasons for maternal stress is a feeling of incompetence that is generated by the unrealistically high expectations of parenting competence placed on mothers in western society by idealized portrayal in mass media (Murdoch, 1993). These feelings of incompetence can be exacerbated by intimidation from experts, who appear in every generation, telling mothers how to bring up their children (Hardyment, 1983). Frequently, these experts contradict their colleagues of the previous generation, thus predisposing inexperienced mothers to separate from the support of the older women in their families who hold child-rearing beliefs of a different generation (Phillips, 1985).

A more positive attitude toward mothering is expressed by educators who emphasize the importance of enhancing parents' self-confidence (Hess & Holloway, 1983; Strom & McCalla, 1988). They acknowledge that parents are their children's first teachers and, thus, play a critical role in fostering their children's education, achievement motivation, and behavioral adjustment. This educational perspective fosters collaboration and shared responsibility between parents and the professionals who work with them.

Causal Attributions and Mother-Child Interactions
The ways that mothers attribute causation for mother-child interaction outcomes affect the quality of their relationships with their children. The concept of causation is an essential component of human understanding and social behavior (Bandura, 1989; Rotter, 1990). The most commonly researched and cited dimensions of causal attributions are internal and external loci of control (Rotter, 1990). However, the importance of loci of control is determined by other individual and environmental factors and by the total framework of a person's causal attributions for outcomes of events in their lives. Thus, causal attributions may lead to competent or adaptive behaviors, or they may lead to maladaptive behaviors.
Parents’ causal attributions for their children’s behaviors are influenced by the degree to which they perceive children to be in control of the situation in which the behavior occurs as well as the degree to which they attribute responsibility to the child or to themselves for the outcome. Parents’ causal attributions also have an affective component. If a task is perceived as difficult, failure can be acceptable. If it is perceived as easy, failure can be stressful and lead to loss of self-confidence and self-esteem (Dix & Grusec, 1985). These factors influence parents’ responses to a child’s problematic behavior. Some parents may perceive the parenting of a child with problematic behavior as potentially easy, others as potentially difficult. These differing perceptions will influence how parents view the outcomes of their parenting interactions (Bugental, 1993).

Bugental and colleagues examined mothers’ interaction with noncompliant children who were seen as difficult by mothers or other caregivers (Bugental, 1987, 1993; Bugental, Blue, & Cruzcosa, 1989; Bugental & Cortez, 1988; Bugental & Shennum, 1984). They found that the most adaptive mother–child relationships occurred among mothers who attributed credit for positive interaction outcomes to themselves as well as to the children with whom they interacted, whether their own children or another’s. The authors (Bugental, 1993; Bugental & Shennum, 1984) suggested that a mother’s sense of powerlessness (attributions of low power to self) in mother–child interactions acts as a concave lens to exaggerate the behavioral effects of the child, whereas a sense of personal power (high power attributions to self) acts as a convex lens to reduce child behavior-related effects. Positive correlations were found between mothers’ attributions of low power to self and physically abusive child rearing (Bugental & Cortez, 1988; Bugental et al., 1989). The outcomes of this study suggest that mothers who feel powerless and perceive their children as having power may interpret immature behavior more negatively than is appropriate, thus putting the child at risk of abuse (Bugental, 1993).
Child Variables: Temperament and Behavior

The active child is an integral part of any family system and the influences within this system. The temperament of the child and the attributions of the mother have a reciprocal effect on each other (Hinde & Stevenson-Hinde, 1987). Temperament is commonly defined in terms of behavioral style—how a person behaves rather than why he or she behaves in certain ways or what is involved in the behavior (Chess & Thomas, 1986). Temperamental characteristics have a constitutional basis and exhibit stability over time relative to other aspects of behavior. The concept of difficult temperament, which is characterized by a reactive, non-self-regulating behavioral style, and its relationship to development and behavioral adjustment have been of interest and concern to clinical psychologists, pediatricians, psychiatrists, educators, and theoreticians in the field of temperament research (Goldsmith et al., 1987). Extremely difficult temperament can be a predictor of problems in psychological adjustment; therefore, it needs to be considered in clinical intervention (Prior, 1992; Prior et al., 1989). Thus, the issue of temperamental variability is also an important area of concern for occupational therapists because children with difficult temperament are not able to regulate their activity and respond appropriately to environmental and interpersonal demands (Olson, 1993).

Difficult temperament needs to be differentiated from problematic behavior. Children identified as difficult exhibit common problems that put them at risk for poor behavioral adjustment, child abuse, and poor scholastic achievement. These problems are most often described as overreactivity and lack of self-regulation. The development of difficult temperament may be associated with problematic behavior. However, positive environmental and parenting factors may mediate against the child with difficult temperament developing problematic behavior (Carey, 1990; Chess & Thomas, 1986; Prior, 1992; Prior et al., 1989; Richman et al., 1982). Chess and Thomas (1986) described the goodness-of-fit model of temperament in the context of behavioral adjustment. In this model, a child's difficult temperament may be modified by positive, appropriate parenting and exacerbated by inappropriate parenting. They emphasized the need for identifying and managing children whose temperament may place them at risk of developing behavioral problems, which thereby could affect their health and scholastic achievement.

The child's temperament and the parents' management of the child are factors that affect the family's involvement in the child's treatment. Therefore, it is important for occupational therapists to consider these factors. Additionally, persons who have different relationships to a child, for example, teachers or nurses, do not always share the same perception of that child. There may be congruence between mothers' and fathers' perceptions of their own children, but these children may be perceived differently by other caregivers (Esdaile & Greenwood, 1990).

An Activity-Based Approach

Play is an important factor in enhancing positive mother–child interactions and child development (Barnett, 1991; Florey, 1981; Lear, 1993; Slade & Wolf, 1994; Sylva, 1993). Bundy's (1993) comment that “without playfulness, all activities can become work” (p. 217) reiterates the concepts of earlier writers (e.g., Huizinga, 1979; Reilly, 1974). Given the demands of parenting young children, this comment is directly applicable to mother–child interactions. Through enhancement of mothers’ play interactions with their children, as part of their caring role, full engagement, or flow experience, can be encouraged (Csikszentmihalyi, 1990), and through this experience, the positive aspects of play may be maximized for both mothers and children.

Thus, it is important to involve mothers in their children’s play from both the adult and child perspective. A high level of playfulness throughout life is an important human trait that fosters both learning and cultural creativity (Huizinga, 1979). Through play, the consequences of real-life experiences are suspended, and opportunities can be provided for increasing the elements of social cohesion related to nonwork experiences (Slade & Wolf, 1994). The central elements of play—self-forgetfulness and absorption in the activity itself—transcend the critical aspects of self-scrutiny (Barnett, 1991; Florey, 1981; Reilly, 1974) and thus promote spontaneously joyful interactions between parents and children. Learning enhanced through play is supported by a large body of literature (Barnett, 1991; Bronfenbrenner, 1986; Gilfoyle, Grady, & Moore, 1990; Lear, 1993; Slade & Wolf, 1994; Sylva, 1993; Vandenberg & Kielhofner, 1982). Through interaction with others in play (especially with the adult caregiver for infants and preschoolers), children learn to express affection and experience trust, learn about basic communication and reciprocal interchange, and have the opportunity to explore in a safe environment and learn through the adults' modeling of behavior and the adults' positive reinforcement of their play explorations and achievements (Barnett, 1991; Bronfenbrenner, 1986; Slade & Wolf, 1994). Parental knowledge about, and attitudes toward, play are important factors in child de-
An activity-based intervention is central to occupational therapy practice (Kielhofner, 1985; Reilly, 1974). In the current intervention, play-focused activity, namely toys and toy making, was used to assist mothers concerned about their children's development and behavior. This activity provided a focus for discussions through which change and the acquisition of knowledge about child development and behavior were facilitated. The use of purposeful activity in occupational therapy is based on a number of assumptions about the meaning and use of activities. Among these is the assumption that the development of competence, self-esteem, and self-value can be enhanced through achievement in, and mastery of, tasks or activities that are valued by the person and the society in which he or she lives (Bruner, 1990; Fidler, 1981). The aims of toy making and toy demonstration were to facilitate skill acquisition and, thus, were perceived to be outcome variables that could be related to an output or performance component of a human system as outlined in the Model of Human Occupation (Kielhofner, 1985).

Summary of Conceptual Framework and Aims of the Intervention

This intervention program was designed to examine and enhance mothers' interactions with their preschool children. The enhancement of mothers' sense of competence and effectiveness in their parenting role and reduction of their perceived parenting stress were important considerations in this program, particularly through the encouragement of shared problem solving while engaged in activity to increase their understanding of the ways they attributed reasons (causation) for mother-child interaction outcomes. Although deskilling by professional experts in early childhood development who do not acknowledge mothers' parenting skills is now considerably diminished since earlier generations (Reiger, 1986), their authoritative attitudes still exert an influence on mothers' sense of competence (Ochiltree, 1991), which supports the relevance and need for a mother-focused intervention program.

Method

Subjects

One hundred one mothers of 2-year-old to 3.5-year-old first or only children were recruited for the program through maternal and child health centers in Melbourne, Australia. From this group, subjects were selected for two experimental groups (n = 14 and n = 12) and a single nonintervention control group (n = 12). The Easy–Difficult Subscale (EDS) of the Short Temperament Scale for Toddlers (STST) was administered to the recruited mothers. On the basis of the EDS scores, 25 mothers whose children had the most difficult temperament and 13 whose children had the most easy temperament were selected for the study. The subjects were sequentially allocated into either an experimental or control group on the basis of their EDS scores, so all groups comprised subjects with children with both easy and difficult temperament, with difficult temperament being in higher proportion. Allocation into either experimental group was based on the location of the group sessions and convenience of the time the groups met. All three groups comprised both boys and girls and their mothers. Two subjects whose children had difficult temperament, one from each experimental group, and one subject from the control group whose child had easy temperament were not able to complete the program. Therefore, 35 subjects completed the intervention component of the study.

The average age of the subjects was 28.4 years, and the average age of their first or only child was 27.7 months. Their socioeconomic status was measured by summing the scores for education and occupation from the method adopted by the Australian Temperament Project (Broom, Lancaster Jones, & Zubrzycki, 1976; Prior et al., 1989). The subjects' socioeconomic status ranged from professional to unskilled, with a higher proportion in the mid-socioeconomic to lower socioeconomic range. The majority of subjects (81.6%) were born in Australia and were living with the child's father at the time of the study. Those not born in Australia had attended elementary school, high school, or both in Australia and were able to speak and understand English fluently.

Instrument

Five standardized, self-report questionnaires were used in the study. Temperament was assessed using the STST (Prior et al., 1989), which consists of 30 items derived from the Toddler Temperament Scale (Fullard, McDevitt, & Carey, 1984). The STST measures seven temperament factors: approach–adaptability, cooperation–manageability, irritability, persistence, rhythmicity, distractibility–soothability, and activity–intensity. Three of these factors, approach–adaptability, cooperation–manageability, and irritability, form the EDS. Prior and colleagues (1989) reported the overall test–retest reliability coefficient of the STST as .86.

Child behavior was measured using the Behaviour Check List (BCL) (Richman et al., 1982). The BCL consists of 12 items of behavior that in their extreme mani-
festations may give rise to caregiving problems with young children. Richman and colleagues (1982) reported the test–retest reliability coefficient of the BCL as .82.

Maternal stress was assessed with the Parenting Stress Index (PSI) (Abidin, 1990). The PSI yields a total score and two subscale scores that relate to stress in the child domain (CDOM) and stress in the parent domain (PDOM). Abidin reported the test–retest reliability coefficient of the PSI as .95 for the total score, .89 for the CDOM, and .93 for the PDOM.

The Revised Parent Attribution Test (RPAT) (Bugental & Shennum, 1984) was used to assess the extent to which each subject credited herself as being responsible for favorable outcomes of mother–child interactions (self-credit) and how much credit was allocated to the child (child credit). Similarly, the amount of blame the subject allocated to herself (self-blame) and to the child (child blame) for negative interaction outcomes was assessed. Test–retest reliability coefficients are not reported for this instrument.

The Parent as a Teacher (PAAT) Inventory (Strom, 1984) was used to assess each subject’s perception of her ability as an educator of her child. This instrument consists of 50 items that are divided into five subsets—creativity, control, play, and teaching learning—in relation to parents’ confidence in, and enjoyment of, interactions with their children. In a study of 377 Australian mothers of 3-year-old to 6-year-old children, Strom (1984) reported the test–retest reliability coefficient of the PAAT as .83. In preparation for the study, the five standardized questionnaires were pilot tested with 19 mothers of preschool children in three maternal and child health centers (Esdaile, 1991).

A questionnaire that I developed to evaluate a previous intervention program (Esdaile, 1987) was used to evaluate the subjects’ perceptions of eight sessions (Sessions 2 to 9 inclusive) of the intervention program (the first session was used to introduce the program). Subjects were asked to rat on a 5-point, Likert-type scale the organization and usefulness of material and information presented to them; the relationship of the intervention program to their parenting objectives; how they rated opportunity for participation and interaction within the group; the time allocation for the sessions (too long, too short, or right length); and whether they considered the information too advanced, just about right, or too basic. Subjects were also invited to make additional comments.

A 28-item summative evaluation questionnaire was developed for the study and administered at the final session. Twenty-seven items invited responses on the 5-point Likert-type scale; seven of these items were related to an overall evaluation of items that had been previously included in the session evaluation questionnaire. Twelve items sought responses regarding outcomes in terms of mother–child relationships and knowledge about child development and play as an outcome of the subject’s participation in the intervention. A general question regarding the subject's sense of her own competence as a parent was also added. Additionally, six forced-choice questions assessed the use of handouts distributed at each session. Two open-ended questions were included for feedback regarding the aspect of the intervention program the subjects found most useful or enjoyable and the aspect they would have changed. A request for additional comments was also included.

Procedure

All 35 subjects completed a full set of questionnaires: STST, BCL, PSI, RPAT, and PAAT. Members of the two experimental groups (n = 26) attended 10 weekly sessions (2.5 hr for Group 1 and 2.0 hr for Group 2). As part of the program, child care was provided in adjacent playgroups conducted by caregivers who I had trained. Transportation to the sessions by community bus was provided, if required.

The intervention used toy making and toy demonstration as a focus for discussion and dissemination of information on play development and behavior of preschoolers. Subjects were given relevant handouts at each session. They completed a brief, seven-question session evaluation after Sessions 2 through 9. The sequence of the 10 sessions in the intervention program were as follows:

- Session 1 gave the aims and objectives of the program, and subjects completed the PSI, RPAT, and PAAT (the STST and BCL had been completed before commencement of the program).
- Sessions 2 and 3 focused on exploratory play and learning through play (Esdaile & Sanderson, 1987a, 1987b; Florey, 1981; Lear, 1993; Reilly, 1974).
- Sessions 4 and 5 focused on preschooler behavior and creative, imaginative play, including use of puppets (Esdaile & Sanderson, 1987a, 1987b; Hunt & Renfro, 1982).
- Sessions 6 and 7 taught subjects stress management and relaxation techniques and activities for adults and children (Esdaile, 1987).
- Sessions 8 and 9 focused on skill development and problem solving through engagement in the more challenging task of constructing wooden toys with power tools (Esdaile & Sanderson, 1987a; Fidler,
significant differences were found, with a Bonferroni correction between the two experimental groups' evaluations of the sessions.

The three groups' posttest scores on each of the variables evaluated were compared with a series of single-factor analyses of covariance. Because the subjects were not randomly allocated to groups (in the analysis of each variable), each subject's pretest score on each variable was used as a covariate, as was her score on the EDS of the STST. The following variables were analyzed: temperament (EDS of the STST); behavior (BCL); CDOM, PDOM, and total scores on the PSI; parenting self-concept as educator of the child (PAAT); and self-credit, child credit, child blame, and self-blame scores on the RPAT. In none of these analyses was the group effect significant. Thus, no evidence was found for changes in any of the variables in the experimental groups compared with the control group or for differences in response between the two experimental groups.

A comparison was made, using Mann Whitney U tests (Siegel, 1956), between the responses of the two experimental groups and each of the seven session evaluation questions answered after Sessions 2 through 9. No significant differences were found, with a Bonferroni correction alpha of .001. Thus, there were no major differences between the two experimental groups' evaluations of the sessions.

The responses to the items on the session evaluation questionnaires were generally positive, with the majority (76% to 89%) of responses occurring in the two most positive response categories for each question on the 5-point rating scale. Additional qualitative responses were also positive. For example, one subject responded, "I find sessions are very confidence building and [they] give me [a] wider outlook on toddlers in general."

A similar result was found for the summative evaluation questionnaire. No major group differences were apparent, and responses remained generally favorable. For example, to a question on what was useful, enjoyable, or both in the program, one subject responded: "To discuss problems and issues and see if others experience the same and to do all the things we did, especially toy making."

Responses were received from 24 of the 35 subjects (69%) at the 18-month follow-up. Pretest, posttest, and follow-up scores were compared for the three groups with a two-factor, split-plot factorial analysis of variance (Keppel, 1982). Five variables were analyzed: self-credit, child credit, self-blame, and child blame from the RPAT and the PAAT. No significant group, stage, or interaction effect was found in any analysis.

Responses to the rated items on the summative evaluation questionnaire for the two experimental groups were compared using Mann Whitney U tests. None of these comparisons were significant. Wilcoxon signed rank tests were used to compare responses at follow-up to those given at posttest for each group separately. None of these comparisons were significant at the Bonferroni correction alpha of .001, and only 8 of the 44 comparisons were significant at alpha .05.

Although evaluation responses remained generally positive at follow-up, differences between the two experimental groups were still not apparent, nor was there any evidence of the subjects' evaluation having changed over time. Retrospectively, the subjects still stated that they had valued the intervention because it helped them to relax and cope with their children better.

Discussion

Toy use, toy making, and children's play development as a major focus for the intervention program was affirmed by the subjects' scoring of session and summative evaluation questionnaires and by their additional comments. They valued the opportunity to learn about children's development and needs in an experiential context as well as in the group discussions of child-related problems. These findings are congruent with the results of previously reported intervention studies that used play and toys with mothers who were experiencing problems with their child credit, child blame, and self-blame scores on the RPAT.
preschoolers (Daly Smith, 1982; Slaughter, 1984; Strom & Greathouse, 1974; Strom & McCalla, 1988). Additionally, the subjects who had attended the program made numerous toys outside and after the intervention sessions, which is further support of the intervention's rationale and the relevance of the activities from the subjects' perspectives.

The subjects also supported inclusion of stress management in the intervention program. They commented favorably about this element of the program, although it was evident from the follow-up questionnaire that the time spent on relaxation and stress management had not been long enough to produce lasting effects.

Subjects' positive responses to the intervention were not supported by empirical changes in quantitative outcome measures. Problems that relate to human issues (such as mother-child relationships) are not easy to quantify (Schön, 1987; Yerxa, 1991). Although data on the instruments used suggested that they were psychometrically robust and appropriate, it is possible that they were not sufficiently sensitive to measure the changes that occurred, given the relatively small size of the sample.

Not all subjects in the intervention program shared exactly the same problems. Therefore, it is unrealistic to expect to find changes on specific outcome measures for all subjects. The intervention was designed to include multiple components that were believed to be capable of addressing all of the specific difficulties the subjects were experiencing. However, comparisons of a particular outcome measure on pretest and posttest are unlikely to be significant if only a few subjects are changing on that variable. One solution to this limitation would be to study a large population, but this seems impractical. A more fruitful approach for future researchers may be to identify persons with specific problems and to evaluate, using a single-case approach, subgroups for change of outcomes measures related to the specific problem. Alternatively, in-depth qualitative analysis of subjects' comments before and after intervention may provide a solution to the difficulties of evaluating such an intervention.

Although posttest group effects could not be detected in these quantitative measures, it was evident that four (17%, n = 24) subjects made significant gains in their self-concept as educators of their children, as measured by the posttest PAAT. These PAAT scores increased by a standard deviation, or more, above the mean for the four subjects, which suggests that for them, the intervention had been measurably effective. It seems that the basically nonthreatening nature of this type of intervention, which focused on toys and play rather than maternal inadequacy, could be used as a starting point for subsequent intervention programs. It is also clear that although the intervention program was beneficial to these four subjects, some of their problems required treatment through an occupational therapy program designed to meet their specific needs.

Two subjects who had stress scores well below the group mean (one of whom also had a pretest PAAT score above the mean) and who each had one child with easy temperament illustrate the outcomes of involving people with no stated problems in an intervention program. In feedback on summative and follow-up questionnaires, these subjects commented that they valued the information obtained and the interaction with the other subjects as much as the others who had more apparent problems. One of the subjects with a lower than average PAAT score showed substantial posttest gains on this measure and subsequently shared the knowledge she had gained in the program with other mothers in the community. It could be argued that involving mothers who are coping well in intervention programs can be an effective way to disseminate information to other mothers in the community. Additionally, they can provide appropriate role models for mothers who are experiencing problems. However, a consequence of involving such mothers may be that the chances of the experiment revealing quantitatively significant effects are reduced. Their inclusion in the groups may have obscured important changes in other group members and may explain the failure to find significant overall effects in the statistical analyses.

Conclusion

The intervention program was rated positively by the subjects but did not result in major group differences. However, within the groups, some subjects could be identified as having made substantial positive gains. Given the possible limitations of the instruments used, the fact that subjects' experiences with their children varied, and the inherent difficulties associated with measuring complex interactions such as mother-child relations, other methods of measure may have been more appropriate. The use of rigorous qualitative approaches to analyze outcomes involving complex interactional variables is supported and encouraged increasingly in relevant literature (Kretting, 1991; Yerxa, 1991). Thus, it may be argued that qualitative research methods may have been more appropriate for use in this study, and I would suggest their use for similar studies in the future. Another possible approach would have been to use a single-case method to measure postprogram outcomes for individual subjects with identified problems (Ottenbacher & York, 1984).
A number of outcomes that could be viewed positively were not formally evaluated. For example, the non-threatening nature of the program may have made it easier for some persons who are reluctant to seek help, or do not know where to seek it, to attend a program. In the community where this study was conducted, health professionals had found that mothers who had concerns about their children's development, or whose parenting was inappropriate, were often reluctant to be identified (Esdaile, 1991). Eight of the 35 subjects (23%) in the study who were experiencing various difficulties with their children or with their marital relationships (which were outside the scope of the program) sought further assistance. These subjects' problems were discussed with the members of the multidisciplinary allied health team at the office where the study was based and were referred to the appropriate team member (occupational therapist, physical therapist, psychologist, speech pathologist) or to other agencies such as a special needs playgroup. Allied health team members believed this process of identifying problems to be a positive outcome and an example of the prevention-focused community outreach that the allied health team members aim to foster.

Another outcome, which was not formally evaluated, was the effect on competent mothers who were not stressed. According to feedback from approximately 30 maternal and child health nurses, whose regional meetings I attended after the intervention, many mothers were able to use and share their enhanced skills very effectively with other parents, especially through setting up, or contributing to, playgroups. This ability of mothers to contribute to community development appeared to be a cost-effective way of disseminating community resources.

Community-based intervention programs for parents and those professionals working with them can be a non-threatening and well-being promoting, rather than disability-focused, means by which occupational therapists can enhance child development and parental health. They are also relatively low cost, compared with hospital-based programs, which further recommends them as an intervention approach when conducted in partnership with parents. However, given the limited availability of finances and occupational therapists, especially those with relevant pediatric expertise, it may be more realistic to suggest that certified occupational therapy assistants as well as parent volunteers be trained to provide this type of community outreach to parents, especially those in socially disadvantaged communities.

Occupational therapy can provide effective preventive programs for parents and children at risk. One of our major professional challenges for the future is to demonstrate that prevention costs less than treating the long-term outcomes of dysfunction. ▲

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