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ABSTRACT

This paper focuses on parents' play routines as an aspect of home intervention programming and explains the effects of such routines on the imaginative play behaviors of developmentally delayed youngsters. The paper is divided into four main sections. First, in order to understand the potential effects of parent play routines, the contributions of the three mainstreams of child development research to home intervention and play programs are surveyed. Second, selected methods and procedures of a particular parent-child-play program as used with low income parents and their mildly retarded children are explained. Third, the results of the study are presented. Finally, the results of the study, the limitations of the play program and possible modifications to it are discussed. (Author/MP)

EFFECTS OF PARENTS' PLAY ROUTINES ON IMAGINATIVE PLAY BEHAVIORS OF THEIR DEVELOPMENTALLY DELAYED PRESCHOOLERS IN HOME SETTINGS

by

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Effects of Parents' Play Routines on Imaginative Play Behaviors of Their Developmentally Delayed Preschoolers in Home Settings

Introduction

This paper focuses on parents' play routines as an aspect of home intervention programming and explains their effects on developmentally delayed youngsters. And, it describes the goals of a particular parent-child-play program which are to: (a) work with parents on a weekly basis, (b) show them how to work on imaginative play with their youngsters in home settings, and (c) evaluate these parent's and their children's performance compared to similar others in the control group using selected assessment measures. Showing parents how to work systematically with their own children in home settings and evaluating their performance effects on their children's development was begun in the Head Start decade of the mid-sixties.

Fanned by results of Head Start and minority-group political pressures, funding for intervention projects focusing on low income families and their children was expanded to include handicapped and bilingual populations in the decade of the 1970's and in the beginning period of the 1980's (Yawkey & Prewitt-Diaz, 1982). Parent intervention programs in home settings with handicapped, bilingual and low-income children rest primarily on the results of three mainstreams of child development research: effects of parenting/parent education, and the importance of the child's formative years (Yawkey, 1982). Contributing significantly to parent intervention programs in home settings is a third and more contemporary mainstream of research: play

as development and learning (Yawkey, 1982). As a contributing mainstream, the third is an outgrowth of the increasing interest in infant's and child's play and in results of recent studies on pretend play as a separate area and as a related one to cognition (Feitelson & Ross, 1973; Nicolich, 1978).

Examining the significance of parents' play routines as an aspect of home intervention programming of play behaviors, this paper is divided into four main sections. First, in order to understand the potential effects of parent play routines, the contributions of the three mainstreams of child development research to home intervention and play programs are surveyed.

Second, selected methods and procedures of a particular parent-child-play program as used with parents and their youngsters are explained. Third, part of the data results showing the effects of parent's play routines on their preschooler's imaginative play behaviors are examined. And, finally, discussion and results of the play program, limitations and possible modifications and uses of parent-child-play are discussed.

Parenting/Parent Education

The first mainstream provides a rationale for parent-child-play as intervention programs in home settings. It is composed of studies on the effects of the parent (i.e., mother and/or father) and child on parent-child interactions in the family (e.g., Cohen & Tomlinson-Keasey, 1980; Cox & Campbell, 1968; Eckerman, Whatley & Kutz, 1975; Vandell, 1979) and on training parents systematically in home settings as their youngster's most important teacher (e.g., Madden, Levenstein & Levenstein, 1976; Schaefer, 1972).

The effects of parent-child interactions in the family are of particular importance to development and learning. Reciprocal interactions or simply the interchanges that take place between the child and parent and parent and child evolve over time and provide emotional attachments (Bronfenbrenner, 1975) and intellectual and emotional stimulation and growth (Bee, Van Engeren, Streissguth, Nyman & Lechie, 1975). The parent acts as a filter and mediates between the youngster and his outside world. And, through reciprocal interaction within the family, the benefits and limitations of emotional and intellectual resources are passed on and become the foundation for the child's feelings, aspirations and attitudes. Piers & Landau (1980) and Pulaski (1980) note that this reciprocal interplay between parent and child occurs and is symbolized through play. Cohen & Tomlinson-Keasey's results show that the parent-child interactive condition facilitated the highest level of exploration of toy objects for boys and girls compared to other conditions such as toddler alone and toddler and peer. In similar fashion, Cox & Campbell (1968) conclude that talking, movements, and playing with toys in strange situations increased when mothers were present with the toddlers and preschoolers; these same actions decreased when mothers were absent. The reciprocal interactional systems of parent-child play that are at work in the family contribute to the youngster's development and learning and the complexity of his play with objects. White (1975, p. 4) feels that these systems arising in the family have ". . . more of an impact on a child's total . . . development than the formal educational systems."

The effects of educating parents in a systematic fashion for working with their children in home settings maximize their "teaching" potential.

The fact that parents have the earliest, greatest and longest influence on their children emphasizes the importance of training them to work directly with their own youngsters in home settings (Madden, Levenstein & Levenstein, 1976; Schaefer, 1972). This parent education and involvement maximizes teaching-learning potential in a number of ways. First, the results of studies by Madden, Levenstein & Levenstein, and Schaefer, as examples, show impressive, consistent, and sustained cognitive and language gains ranging from three to five years in young children as characteristic of parent home training programs. Second, Bronfenbrenner (1975) feels that parents, trained in home settings to vary their roles, help to enrich their child-rearing repertoria and ultimately exert greater control over their children's cognitive and emotional development compared to using the same role in all situations. In agreement, Schaefer says that parents in home intervention programs should be trained to use the roles of teacher, decision maker and socializing agent. Third, Yawkey & Prewitt-Diaz (1981) report that parents and their children involved together in home intervention programs develop significantly greater positive attitudes toward themselves compared to others not involved in these programs.

Both the family comprised of parent-child reciprocal interactions and parent involvement programs in home settings significantly affect cognitive, social and emotional development and learning of young children.

Early Years

This second mainstream basic to home intervention and play programs emphasizes the time at which these programs should begin in order to affect the child. To have maximum benefit for children, these programs

should start as early as possible. The formative or the early years of the young child range from birth through eight. During this age range, the basic concepts fundamental to thinking and communicating initially develop and evolve. From physically involving himself with objects and actions in order to conceptualize to thinking without having to use objects and physical actions the formative years illustrate clearly the child's cognitive transition toward more advanced levels of adult reasoning.

During the formative years, the youngster develops several important cognitive and language abilities; they become benchmarks in cognitive progress and illustrate the maxim that "intervention at an early age is best." By the age of two, for example, several of these cognitive benchmarks include the ability to: discriminate between familiar objects, people and situations, coordinate eye-hand-body movements and use of intention for these actions, and arrive at solutions to simple problems by mentally representing the object-problem solution (Peters, Neisworth & Yawkey, 1983). By the end of age five or six, the youngster can usually (Peters et al., 1983):

- see a situation, event or person from another's perspective (i.e., being nonegocentric)
- understand logical connections between a series of perceptual events that are related (i.e., transform)
- identify salient rather than superficial aspects of objects (i.e., decenter)
- develop a line of reasoning from one point to another and back again to the first point (e.g., reverse)

- conceptualize that the amount or quantity of a matter remains the same regardless of qualitative changes made on its shape or position (i.e., conserve)

By showing parents how to work with their child at an early age when intellectual and attitudinal patterns have not yet been set, home intervention programs can have great impact on both youngster and parent. The formative ones are the most adaptive and open years and home intervention programs aimed at the early years can promote systematically sound development and learning in children.

Imaginative Play

The third mainstream focuses on the medium of play between parent and child as a basis for home intervention programs. It is a most natural medium to use for parent and child in these programs; play is quite common to households, although parents may not understand its value for development and learning (Singer, 1973). Bruner (1972) and Singer feel that play, as a medium for development, encourages novel cognitive actions; Piaget (1962) notes that, within the formative years and between the ages of two through six, symbolic or pretend play reaches its maximum potential. After the formative years, child's play loses much of its pretend and imaginative elements and becomes more realistic.

Play used as a medium for growth and learning has several other benefits in addition to novel actions. Pretend play, used as a base for preschool programs by Saltz, Dixon & Johnson (1977), helped decrease the amount of [illegible] in solving tasks with those children in the experimental or play group compared to the controls. Second, Smilansky's (1968) results show that children in sociodramatic play groups had significantly

greater mean lengths of sentences and more orally generated sentences than those in the control conditions. Third, Yawkey's (1981) results suggest that sociodramatic play can facilitate intellectual readiness in selected subject-content fields of reading and mathematics and in divergent thinking.

From the mainstreams of research on parenting/parent education, the child's formative years and play as development; the potential contributions of training parents in home intervention and using play routines is better understood. The following section describes selected methods and procedures of parent-child-play used in the home intervention program with parents and children.

Method and Procedures for Using the Parent-Child-Play Program

The parent-child-play program is based on particular methods and procedures in working with parents and children in home settings. Methods imply the individuals targeted for this play program and the materials used in it. Procedures refer to the parent play routines used in the program and how they were used with the preschoolers in home settings.

Methods

The adults targeted for the parent-child-play home intervention program were from poverty and low income populations. Second, the parents had at least one child of preschool age, and between three to five years old. The parents, identified through the Community Action Agency, were invited to join the home intervention program. A total of 32 families joined the initial program; 16 families for the experimental group who received weekly play training procedures and activities, and 16 for the control group who did not receive the training but were pre and post

tested. The racial make-up of the 32 parents are white, black and hispanic; the majority were single parent families and all lived within a 50-mile radius of an industrial city of 50,000 people. The preschoolers of the target families were mildly retarded as determined by I.Q. tests. All of the youngsters were developmentally delayed in cognitive and language abilities. There were two youngsters in the experimental group who showed limited English proficiency in language capabilities.

There are six types of materials developed and used with the target parents and children. The first was familiar toys and games common to the home setting; the parents were taught to use them in the play routines with their children. Play routines were taught to the parents on each visit; they showed them what to do and say with their child in imaginative play. The play routines are described in the following procedure section. The second material was 250 to 300 word abstracts of children's stories. They are also used in various play routines.

The third material used in this parent-child-play program is a one-page "reminder" for the parent summarizing the play routine and its uses covered in the session. They were given to the parent at the end of each session. The fourth type of material in this parent-child-play program was used to gather specific information on the parent's opinions and thoughts for future sessions. It consisted of questionnaires and other data gathering surveys.

The fifth type of material are simple activities for parents to do with their children at appropriate times throughout the day. The activities were used to extend the play routines; they could also be used separately and independently from them. Examples include "Simon Says" and "Twenty Questions." The sixth material was actually a written

summary of useful comments and statements the parent made during each of the home visits. These anecdotal sheets were completed immediately after the session by the home visitor.

Procedures

The parent-child-play program lasted for a period of six months. Procedurally, this program had two phases: assessment and implementation.

In the assessment phase, all 32 parents and their children were pre-tested and, at the end of the program six months later, were post-tested. The same tests were given in the pre and post assessments. The youngsters took the Parent-Child Perspective Taking: Child Scale (PCCS) and the PAAT Inventory: Child Form (PACF). These assessments were administered to determine changes in the level, quantity and quality of children's imaginative play and whether the home involvement program and parent-play-routines affected their play activities. The PCCS assessed the child's ideas about and the strength of imaginative play by determining the number of times the child performs particular imaginative play actions and activities. The youngster is read 20 statements and determines if he "never," "sometimes," or "always" performs that play action described in each of the items. The PACF assesses the youngster's ability to take the role of another in home and school situations. In asking him to perceive how his mother (or father) sees him, the child is read 20 questions and indicates feelings by pointing to a "happy," "sad" or "neutral" face after each one.

The parents were administered two tests: Parent-Child-Play Preference Inventory (PCPP) and the Parent-Child-Perspective Taking: Parent Scale (PCPS). The parents were given these assessments to determine changes in their performances, beliefs, and uses of imaginative

play actions and activities with their children as a result of the home intervention program. Containing 30 items, the PCPP determines the strength of the parent's views of the usefulness of the child's imaginative play as a tool for development and learning in home settings. The parents reacted to each item along a five-point dimension: "Never", "Occasionally", "Sometimes", "Often", and "Regularly". The PCPS evaluates the parent's ability to take the role of the child in real and fantasy situations at home and school. Containing 50 items, the parents responded to each of the items by stating whether they "Strongly Agree", "Agree"; "Disagree", or "Strongly Disagree" with it.

The implementation phase of the parent-child-play program began when the pre-testing was completed with parents and children, and it ended when post-testing commenced. The implementation phase of the program focused on the 16 families and their children and consisted of a home visitor working with each of the parents for one hour on a weekly basis for six consecutive months. Further, one additional goal of the parent-child-play program and its implementation phase was to show the parents how to work on imaginative play (and other areas, such as self help) with their youngsters in home settings.

The program used in instructional cycle composed of five parts (Yawkey & Silvern, 1977). The home visitor used the instructional cycle on each visit and followed it step-by-step in working with the parent; it takes approximately one hour to deliver. The parts of the instructional cycle of the parent-child-play program together with approximate times for each step are: (1) Summarizing and Reporting from the Previous Week (5 minutes), (2) Explaining the Current Session's Play Routines (10 minutes, (3) Describing the Play Routine for Home Settings (15 minutes),

(4) Role-Playing and Rehearsal of the Play Routine (15 minutes), and (5) Extending the Play Routine from Home to Other Settings (10 minutes). Each of the parts of the instructional cycle is explained.

Part 1. In summarizing from last week, the parent tells how she used the previous week's play routine with the child in home and other settings. This step gives the parent the opportunity to review her uses of the play routine from the previous week's session and provides the home visitor with the chance to see whether it was used and how it was used by her. Misunderstandings and errors are corrected in a sensitive manner.

Part 2. The objectives of the present session are explained in a clear and concise way. Each session may have one or two objectives. They are written in behavioral terms, focus on school-related outcomes for the child, and provide the parent with ways of evaluating outcomes of using the play routine with their youngster. And, concrete objects for implementing each of the objectives are used; these materials are common to the home. An example of one parent objective follows: "When you use the play routine explained in this session, your child will be able to point to three objects which are blue, green, and red, and name their colors in no more than 10 minutes. After using the play routine, can your child point to three objects and name their colors?"

Part 3. The home visitor describes the play routine. Each of the play routines tell the parent exactly what to do and say in guiding imaginative play of the child. Here, each play routine has specific sets of actions that parents do with their child in the play session. Each of these actions within a play routine are sequenced along a time continuua from introducing to completing the routine. Each routine and

its subactions can be repeated again and again, and the number of repetitions depends on the interests and attention of the youngster.

Examples of some of the play routines used by the parents in the parent-child-play program follow:

1. Join in and help your child play: (a) by talking to him as he plays, and (b) by praising his pretend actions and activities.
2. Join in and help your child at play: (a) by talking to him as he plays, (b) by praising his actions and statements after he responds to your talk, (c) by adding other objects to play activities that are related to the play theme, and (d) by praising his actions and statements after he uses the objects which are added.
3. Join in and help your child at play: (a) by reading or telling a favorite story while he listens to it, (b) by asking him to retell the story after he hears it so others can understand it, (c) by praising him after retelling each part of the story, and (d) by extending his oral description of the story after he retells each part.

After describing the play routine, the home visitor demonstrates and models its use with the parent. The toy objects used in the description and demonstration are found in and common to the home environments.

A more detailed example of describing and demonstrating one play routine with the parent follows. The example uses the above play routine of: "Join in and help your child play: (a) by talking to him as he plays, and (b) by praising his actions and activities." The actions of joining in, talking and praising are demonstrated by the home visitor

First, in modeling "talking actions," the parent is asked to prompt the youngster while at play by using open-ended comments or questions. The parent is taught how to observe the youngster at play and then offer prompts that are consistent with his play actions. For instance, a child is "playing house" and using a doll. The parent observes the child rocking the doll. And, the parent might prompt by saying: (a) "Does Dolly feel sleepy?---Why?", or (b) "How would Dolly feel if she is hungry and wants to eat?" After talking to the child and using prompts, the parent is asked to wait for the child to respond to them. This "wait time" is valuable; it provides the youngster with time to think about answering.

Second, the parent is shown how to praise and reward the youngster's actions. Here, the home visitor demonstrates the second element of this play routine--i.e., "by praising his pretend actions and activities." By praising and rewarding, the parent shows her support and approval of the youngster's response to her cue. In rewarding and praising, parents are urged to use either tokens and tangibles, for example, food, or social rewards such as hugging, touching, and others (or both) if they prefer. In ending part three of the instructional cycle, the home visitor asks the parent to use this play routine over and over again throughout the week until the child tires, loses his interest, or doesn't want to play any longer.

Part 4. While the home visitor watches, the parent role-plays and rehearses the play routine described in part 3 of the instructional cycle. By role-playing, the parent shows how well she understands and uses the play routine. In rehearsing, the parent also uses the same home material in the play routine that was demonstrated by the home visitor. Errors and misunderstandings are corrected in a sensitive and genuine way.

After completing this step, the parent shows that she can understand and use the play routine in home settings.

Part 5. The play routine is introduced, demonstrated (see part 3) and then role-played (see part 4). Both the demonstrating and the role-playing of the play routine center on home settings. In this final part of the instructional cycle, the parent is shown how to use the same play routine in settings outside the home. From home to other settings such as driving in the car, going to the supermarket, visiting a relative's or friend's house and walking down a street, the play routine is generalizable, transportable, and usable. This part of the instructional cycle enables parents to see the general utility of the play routine and to employ it to guide learning and development in various settings.

The methods and procedures for using this particular parent-child-play program focus on low income families and preschoolers who are mildly retarded in language and cognitive abilities. The five parts or steps of the instructional cycle equip parents to work with their preschoolers in home settings and to use the play medium for development and learning.

Results

Pre-test scores of children and parents are separately analyzed. Comparing performances between individuals in experimental or play training and those in control groups on pre-tests showed whether differences between groups existed at the beginning of the program. To analyze pre-test performances of the children on PACF and PCCS and of the parents on PCPP and PCPS measures, one way analyses of variance as described in Myers (1979) were run.

For children, the results of the pre-test analyses on the PACF scores [F (1,15) = .35, $p > .05$ and on the PCSS measure [F (1,15) = 1.08, $p > .05$], and for parents, the PCPP measure [F (1,15) = 2.73, $p > .05$] and on the PCPS scores [F (1,15) = .38, $p > .05$] indicated no significant differences between experimental and control groups. At the beginning of the program, the performance between the children in the experimental and control groups on the quantity of imaginative play used by them (i.e., PCCS) and their abilities to take the role of another in home and school situations (i.e., PACF) were relatively similar. In addition, the performance between the parents in the experimental and control groups on beliefs about and usefulness of child's play as a medium for learning and development (i.e., PCPP) and their abilities to take the roles of their children (i.e., PCPS) were relatively homogeneous.

Using pre- and post-test scores, comparisons between individuals in experimental and control groups showed whether differences existed between testing and treatment groups and on interaction. To examine performance and group differences of the children on PACF and PCCS and of the parents on PCPP and PCPS scores, 2 (pre- versus post-tests) x 2 (experimental versus control groups) analyses of variance (ANOVA) as described in Myers were run.

For the children, the results using the PCCS scores indicated that: (1) post-test were significantly higher than pre-test scores, F (1,31) = 8.43, $p < .05$, (2) children in the experimental yielded significantly higher scores than those in the control, F (1,31) = 36.47, $p < .05$, and (3) a significant interaction occurred which indicated that experimental compared to control children yielded significantly higher scores and at post-test time, F (1,31) = 5.95, $p < .05$. On the PACF measure, the

results showed that: (1) mean post-test scores did not differ significantly from mean pre-test scores, F (1,31) = 3.70, $p > .05$, (2) children in the experimental did not differ significantly from those in the control on their capacities to take the roles of another, F (1,31) = 1.80, $p > .05$, and (3) no significant test x group interaction occurred, F (1,31) = 2.82, $p > .05$.

For the parents, the results for PCPP measure indicated that: (1) post were significantly higher than pre-test scores, F (1,31) = 9.96, $p < .05$, (2) the parents in the experimental yielded significantly higher scores than those in control, F (1,31) = 214.00, $p < .05$, and (3) a significant interaction occurred between test x group, F (1,31) = 7.95, $p > .05$. On the PCPS measure, the results showed that: (1) post were not significantly higher than pre-test scores, F (1,31) = .24, $p > .05$, (2) the parents in the experimental scored higher than those in the control, F (1,31) = 9.55, $p > .05$, and (3) no significant interaction was observed between test x group, F (1,31) = 1.72, $p > .05$.

The means and standard deviations per measure for children and parents appear in Table 1 below.

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Discussion and Conclusions

The major result of this parent-child-play program shows that parents trained in using play routines can significantly affect their children's imaginative play behaviors. More specifically, the youngsters in the play training group on the Parent-Child Perspective Taking: Child Scale (PCCS)

showed significantly greater quantities of imaginative play activities in home and school situations. And, scores on the PCCS were significantly greater at the end than at the beginning of the program. More importantly, these youngsters in the play trained group showed significantly greater numbers of imaginative play actions than those in the control on these behaviors and at the post-test time. The ability to play imaginatively is significant and necessary for cognitive growth (Piaget, 1962) and can be nurtured by adults working with young children and by school programs and philosophies (Saltz, Dixon & Johnson, 1977; Smilansky, 1968). The results of Cohen & Tomlinson-Keasey show that the greatest quantity of exploratory play developed in parent-child interactive settings compared to other settings such as child alone. Further, these results support those of Cox & Campbell (1968) which show that parents present and interacting with children in play settings compared to settings where they are absent can significantly increase the quantity of their youngster's play with toys and body movements and talking used in playing.

In addition, to affecting children's play, the results of parent-child-play programming also modified those parent's opinions and actions who were tutored in the play routines (Bee, Van Engeren, Streissguth, Nyman & Lechie, 1975; Madden, Levenstein & Levenstein, 1976). In this regard, parents who were tutored compared to those who weren't tutored to use play routines, with their children in imaginative play, had significantly more positive opinions and beliefs about the usefulness of play as a tool to assist development and learning in home settings. And, the post-test scores were significantly higher than pre-test scores on the Parent-Child-Play Preference Inventory (PCPP). More importantly, parents taught to use play routines with their children showed positive

attitudes and opinions about play to a significantly greater degree and at the end of the program compared to the control parents. The parent's onstructive views about play and its effects on growth and learning, as spin-offs from this parent-child-play program, are related to the results of educating parents to work with their own youngsters in home settings. Parent's positive attitudes and opinions about working with children using play in home settings can increase their feelings of adequacy in child-rearing and the control they feel they can exercise over their own children's learning and development (Bronfennbrenner, 1975).

There are two additional results of interest. First, parent's play routines had no significant effect on the child's ability to take the role of another in home and school situations as measured by the PAAT Inventory: Child Form (PACF). The young child of three to five may not have sufficiently developed the cognitive capacity to view situations and events from differing perspectives and he may have lacked the experiences necessary to respond to the situations and events used in the test (Piaget, 1962). Second, the play routines raught to and practiced by the parents did not significantly affect their ability to take the role of their children in various settings at home and school as measured by the Parent-Child Perspective Taking: Parent Scale (PCPS).

The results of parent-child-play are limited to low-income populations and parents who volunteered to enroll themselves and their children in its experimental and control groups. In addition, the results of the program are limited to the use of the rive-part instructional cycle. The parent-child-play routines can be modified in several ways. First, they can be adjusted in scope to fit the goals and objectives of many parent-child intervention programs in home settings. Second, the five-part

instructional cycle can be changed to better mesh with differing performance levels of parents and home visitors.

References

Bee, H. L., Van Engeren, L. F., Streissguth, A. P., Nyman, A. P. & Leckie, M. S. In U. Bronfenbrenner & M. A. Mahoney (eds.), Influence in human development. Hinsdale, Illinois: Dryden, 1975, 110-131.

Bronfenbrenner, U. Is early intervention effective? In U. Bronfenbrenner & M. A. Mahoney (eds.), Influences in human development. Hinsdale, Illinois: Dryden, 1975, 47-89.

Bruner, J. The nature and function of immaturity. American Psychologist, 1972, 43, 1-7.

Cohen, N. L. & Tomlinson-Keasey, C. The effects of peers and mothers on toddlers play. Child Development, 1980, 51, 921-924.

Cox, F. N. & Campbell, D. Young children in a new situation with and without their mothers. Child Development, 1968, 39, 123-131.

Eckerman, C. O., Whatley, J. L. & Kutz, S. L. Growth of social play with peers during the second year of life. Developmental Psychology, 1975, 11, 42-49.

Feitelson, [redacted] & Ross, G. S. The neglected factor-play. Human Development, 1973, 16, 202-223.

Madden, J., Levenstein, P. & Levenstein, S. Longitudinal I.Q. outcomes of the mother-child home program. Child Development, 1976, 47, 1015-1025.

Myers, J. Fundamentals of experimental design. Boston: Allyn and Bacon, 1979.

Nicolich, L. Beyond sensorimotor intelligence: Assessment of symbolic maturity through analysis of pretend play. Merrill-Palmer Quarterly, 1977, 23, 89-99.

Pearson, P. H. General principles in the management of the developmental disabilities. In D. H. Pearson & C. E. Williams (eds.), Physical therapy services in the developmental disabilities. Springfield, Illinois: Charles C. Thomas, 1972, 5-15.

Peters, D. L., Neisworth, J. T. & Yawkey, T. D. Early childhood education: Theory and practice. Monterrey, California: Brooks-Cole Co., 1983, in press.

Piaget, J. Play, dreams and imitation in childhood. New York: W. W. Norton Co., 1962.

Piers, M. W. & Landau, G. M. The gift of play. New York: Walker & Co., 1980.

Pulaski, M. A. Understanding Piaget. New York: Harper & Row, 1980.

Saltz, E., Dixon, D. & Johnson, D. Training disadvantaged preschoolers on various fantasy activities: Effects on cognitive functioning and impulse control. Child Development, 1977, 48, 367-380.

Schaefer, E. S. Parents as educators: Evidence from cross-sectional longitudinal and intervention research. In W. W. Hart (ed.), On the young child: Reviews of research, 2nd vol. Washington, DC: National Association for Young Children, 1972, 147-172.

Singer, J. (ed.). The child's world of make-believe. New York: Academic, 1973.

Smilansky, S. The effects of sociodramatic play on disadvantaged preschool children. New York: Wiley & Sons, 1968.

Vandell, D. L. Effects of a play group experience on mother-son and father-son interaction. Developmental Psychology, 1979, 15, 379-385.

White, B. L. The first three years of life. New York: Avon Co., 1975.

Yawkey, T. D. Parenting and playing in home settings. In L. Hanson (ed.), Parent involvement in early childhood. Provo, Utah: The Brigham Young University Press, 1982, 7-29.

Yawkey, T. D. Sociodramatic play effects on mathematical learning and adult ratings of playfulness in five year olds. Journal of Research and Development in Education, 1981, 14, 30-39.

Yawkey, T. D. & Prewitt-Diaz, J. Increasing minority parent's abilities in self help, play and language growth of their young handicapped children in home settings. In W. Bell-Taylor (ed.), Special education in action. Washington, DC: International Business Machines, Inc. and The U. S. Bureau for the Education of the Handicapped, 1982, 4-16.

Yawkey, T. D. & Silvern, S. B. Toward a comprehensive model for developmental curriculum and service evaluation in early development and education of minority, handicapped and other special needs children: Some working hypotheses. The Wisconsin Department of Public Instruction, Madison, Wisconsin: Unclassified Report for Dr. Sara Sherkow, 1977, 1-125.

TABLE 1

MEANS AND STANDARD DEVIATIONS FOR CHILDREN'S AND PARENT'S TESTS BY GROUP

	Children's Tests				Parent's Tests			
	PACF		PCCS		PCPP		PCPS	
Group	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.	$\bar{x}$	S.D.
Experimental	28.69	6.68	43.38	8.05	89.00	15.88	174.88	13.38
Control	27.19	6.44	36.88	5.78	73.06	18.80	160.75	31.19