

The Home Instruction Program for Preschool Youngsters (HIPPY)

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Abstract

The Home Instruction Program for Preschool Youngsters (HIPPY) is a two-year home-based early education intervention program designed to help parents with limited formal education prepare their four- and five-year-old children for school. This article begins with a brief overview of the HIPPY program and then presents the findings from a series of interconnected research studies, including a two-site, two-cohort evaluation in New York and Arkansas, a one-site case study, and a three-site qualitative study.

With respect to program effectiveness, results varied across the New York and Arkansas sites and across participating cohorts at each site. For Cohort I, children who had been enrolled in HIPPY scored higher than children in the control/comparison groups on measures of cognitive skills (New York), classroom adaptation (New York and Arkansas), and standardized reading (New York); and more children were promoted to first grade (Arkansas). For Cohort II, comparison group children outperformed HIPPY children on school readiness and standardized achievement at posttest (Arkansas). Analyses to account for the differing results between cohorts were inconclusive.

Qualitative analyses revealed considerable variation in parent involvement in HIPPY. Program staff identified four patterns of attrition from HIPPY: (1) early attrition within the first month after enrollment, (2) attrition between the program's first and second years, (3) attrition due to changes in the life circumstances of participating families, and (4) attrition due to turnover among the home visitors. Families were more likely to participate in in-home than out-of-home aspects of the program (for example, group meetings), but different family characteristics were associated with participation in the in- and out-of-home aspects of the program.

The authors conclude with recommendations for future practice and research.

The Home Instruction Program for Preschool Youngsters (HIPPY) is a two-year home-based early education intervention program that aims to help parents with limited formal education prepare their four- and five-year-old children for school. Developed in Israel and brought

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to the United States in 1984, HIPPY now operates at more than 120 sites in the United States. This article begins with an overview of the HIPPY program model to place it in the context of early childhood intervention and family support programs. Then empirical data from three related studies of HIPPY in New York, Arkansas, and Michigan are used to discuss two important issues: (1) program effectiveness¹ and (2) variation in parent involvement in the program.

The three studies are:

(1) a qualitative study of HIPPY that focused on administrative and programmatic challenges in implementing HIPPY, employing interviews with HIPPY program coordinators and their direct supervisors in three HIPPY programs (in Arkansas, Michigan, and New York);²

(2) an in-depth case study of one HIPPY program in New York;³ and

(3) an experimental evaluation of HIPPY at the same New York program site, with a nonrandomized comparison group at the Arkansas site,⁴ to assess program effectiveness. At each site, two cohorts of families participated.

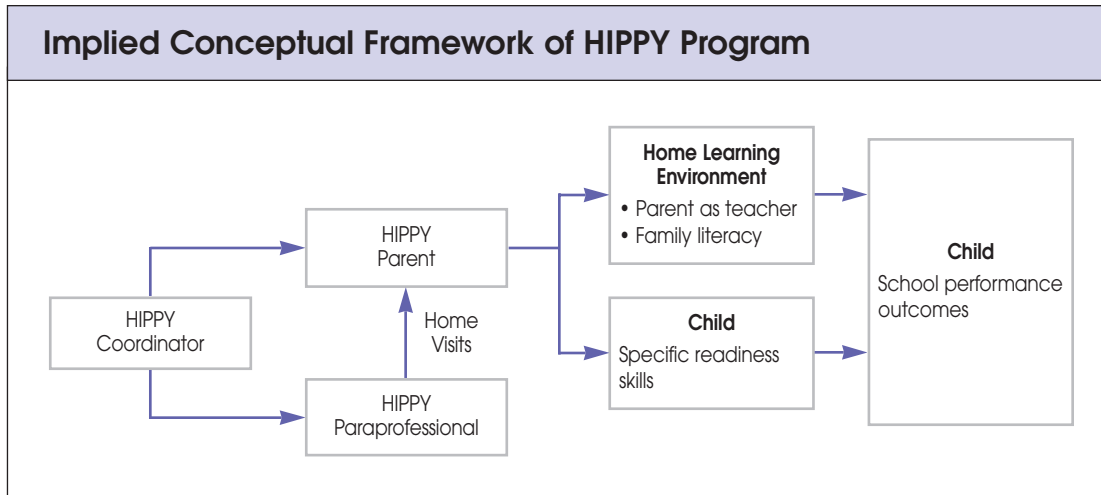
HIPPY: An Early Education and Family Support Program

HIPPY was developed in 1969 at the National Council of Jewish Women Research Institute for Innovation in Education, located at Hebrew University in Israel. Based on evidence that some early education intervention programs could help prepare children from low-income families to succeed in school, the program was created to respond to the low educational achievement of immigrant children in Israel. It was grounded in the recognition that the family plays a significant role in young children's learning. Specifically, HIPPY was developed to prepare children for school by enhancing the home literacy environment, the quality of parent-child verbal interaction, and parents' ability to help their children learn.⁵ Figure 1, developed by the authors, depicts the implicit conceptual framework of the program.

In addition to serving as an early education program, HIPPY incorporates features of family support programs.⁶ For example, HIPPY is based on an ecological approach⁷ that recognizes children's development as powerfully influenced by the families, communities, and societies in which they live. HIPPY therefore aims to create greater continuity between home and school by enhancing children's home learning environments. HIPPY programs are typically funded and administered by local agencies (usually public schools or community-based organizations), which work to develop community support and connections to other community-based organizations. (See the articles by Olds and colleagues, by Duggan and colleagues, and by St.Pierre and Layzer in this journal issue for descriptions of other programs that are at least partly based on ecological models.)

HIPPY programs provide support for families in a way that is designed to recognize and respect family needs and values, another

Figure 1



common feature of family support programs.⁶ For example, HIPPY paraprofessional home visitors live in the same neighborhoods as the parents with whom they work, because program designers assumed that paraprofessionals who shared similar backgrounds and lifestyles with the families would be nonjudgmental of the parents, better able to deliver the program materials in a way that was consistent with the lifestyles and cultural belief systems of the families, and better able to establish rapport with families—which in turn would encourage the families to learn and use the skills that were taught.⁵

Finally, HIPPY, like all family support programs, respects the cultural diversity of the families it serves. HIPPY books and activity packets have been revised significantly during the past five years to make them more appropriate for America's ethnically and culturally diverse families.⁸

HIPPY diverges from some other family support programs, however, in using a structured approach with parents, with set lesson plans designed to enhance children's cognitive skills. This approach contrasts with the more individualized nature of many family support programs.⁹

The HIPPY Program Model: Features and Rationale

HIPPY has undergone significant modification of its curriculum and program design in the United States since the studies reported here were conducted.⁸ (See Appendix D in this journal issue for a description of the changes.)

The following overview describes the HIPPY model as it was developed by the program's founder, early childhood researcher Avima Lombard,⁵ and as it was implemented when these studies were conducted.

The core elements of the program were bimonthly home visits by paraprofessionals, supplemented in alternate weeks by group meetings with parents and paraprofessionals led by professional HIPPY program coordinators. Lombard selected home visiting as the program delivery method to (1) ensure that parents' ability to participate was not inhibited by difficulties in traveling to center-based programs; (2) enable some individualization in the delivery if not the content of the lessons for each parent; and (3) establish personal relationships between the paraprofessional home visitors and the parents that she hoped would provide support to the parents as well as helping them feel comfortable with the HIPPY materials.

At the time of the research, HIPPY was a two-year program that spanned the transition from preschool to formal elementary school. Most children were four years of age at the beginning of the program and attended kindergarten as five-year-olds during its second year. Each year, there were 30 weeks of activities, scheduled to coincide with the school year. During the home visits and group meetings, parents learned through role playing how to use HIPPY storybooks and educational activities. Parents were then expected to teach their children themselves by using the storybooks and engaging in the educational activities



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with their children for 15 minutes every day. At the group meetings, HIPPY parents also participated in enrichment activities.

Home Visits

In HIPPY, home visitors did not work with children directly, and indeed, many home visits occurred when the children were not even at home. Instead, home visitors used role playing to teach parents how to use the storybooks and activity sheets that formed the core of the program. During the home visits, which typically lasted 30 to 60 minutes, parents took the roles of the children and paraprofessionals took the roles of the parents. Lombard believed that, through role playing, parents could learn how to be teachers of their children in a relaxed and nonthreatening atmosphere, and if they continued to apply the teaching skills they learned, they could help their children to succeed academically long after the completion of the two-year program.

Content of the Materials

During the course of the program, parents were given a series of books and activity packets developed for HIPPY. They were asked to read to their children from one of the books and work on one set of activities each day, using approximately two to three pages of instructions. The materials were designed to help children develop the age-appropriate language, sensory and perceptual discrimination, visual-motor, and problem-solving skills they needed to succeed in school. Activity packets reinforced

language and critical thinking skills such as listening, asking and answering questions, talking about a text, picture reading, story creation, and vocabulary building. The packets included questions the parents were to ask the children, along with possible responses, drawing or crafts activities for the children, and learning activities based on the storybooks. Thus, the HIPPY activities were structured like detailed lesson plans to enable parents to work on the activities with their children without the help of program staff. The materials were arranged in increasing levels of difficulty so that parents and children could have successful teaching and learning experiences as they progressed through the program.

Group Meetings

Group meetings were held every other week with HIPPY parents, home visitors, and program coordinators. At each meeting, parents were introduced to the next week's activity packet, mingled with other HIPPY parents, shared concerns and questions, and participated in enrichment group activities such as arts and crafts projects, presentations by school officials regarding school policies, or discussions about child-rearing practices. The enrichment activities were planned by local program coordinators to respond to parent needs.

Staffing

HIPPY home visitors were paraprofessionals, typically individuals recruited from the same pool of families as those who were later

clients served by the programs. Some had high school degrees, but few had any college experience. Full-time home visitors had case-loads of 20 to 25 families. The paraprofessionals' relative lack of training was balanced by a professional program coordinator at each site (typically an individual with a background in early childhood education, social work, or social service administration), who provided them with training and supervision.

Assessing Program Effectiveness

The first major focus of research regarding the HIPPY program was to assess the effects of participation in HIPPY on children's school functioning: Did participation in HIPPY improve children's cognitive skills, performance on standardized school achievement tests, or adaptation to the classroom? Two cohorts of HIPPY children and control/comparison group children were followed from the beginning of the program until one year after program completion at two HIPPY sites.⁴

Results of the two-cohort randomized experimental study conducted at the New York site are described first.⁴ At the New York site, families were randomly assigned to the HIPPY program or the control group. Cohort I began HIPPY in the winter of 1990, and Cohort II began HIPPY in the fall of 1991. All families—HIPPY and control group—participated in a high-quality, full-day preschool program during the first year of HIPPY and kindergarten during the second year. Thus, this study assessed the impact of HIPPY over and above the impact of the preschool.

Results of the Arkansas quasi-experimental study, in which HIPPY families were compared with families drawn from the community and matched on several key characteristics,¹⁰ are reported last. The results of Cohort I at this site partially replicate the results in New York.

The New York Study: Participating HIPPY Program and Families

The participating HIPPY program was situated in a large city in New York State. The program became operational in 1989 as a parent involvement component of the city's public early childhood center. The center

provided an enriched, high-quality early childhood education setting for prekindergarten and kindergarten students.

All families enrolled in the prekindergarten of the agency sponsoring the HIPPY program were invited to participate in a lottery. For Cohort I, a total of 90 volunteer families (70.5% of all the families in the prekindergarten) were then randomly assigned into HIPPY (n=52) or a control group (n=38). Some families moved away before the program began or dropped out of the program within the first month, leaving 69 families in Cohort I: 37 families in the HIPPY group and 32 families in the control group. For Cohort II, 70 children were assigned to the HIPPY group and 87 to the control group. At the time of program start-up, 113 families remained in Cohort II: 47 in the HIPPY group and 66 in the control group. Thus, a total of 182 families in both cohorts were included in this study. Table 1 presents a description of the sample by group and cohort at pretest (not including families that moved away before the program began or that received less than one month of the program).

As can be seen from Table 1, about two-thirds of the New York families were from ethnic minorities, with primarily African-American and Latino backgrounds. One-third of the families reported that public assistance was their primary source of income. The sample was evenly divided between single-parent and two-parent families. While a substantial proportion of the families had postsecondary education, about 35% of parents did not speak English as their primary language.

Data Collection Procedures and Measures

Baseline data were collected during home visits conducted by trained research assistants not associated with the HIPPY program. For Cohort I (n=69), baseline data were collected in February 1991, as a result of delays in the beginning of the HIPPY program. Baseline data collection for Cohort II (n=113) took place at the beginning of the next school year (September 1991), which coincided with the beginning of the first year of the HIPPY program. Thus, while both baseline data collection sessions occurred at the beginning of the HIPPY pro-

Table 1

Baseline Characteristics of New York HIPPY Program Participants and Control Group				
Variables	Group^a			
	Cohort I		Cohort II	
	HIPPY (n=37)	Control (n=32)	HIPPY (n=47)	Control (n=66)
Ethnicity of Child				
African American	16%	37%	32%	20%
Latino	38%	28%	32%	29%
White	27%	13%	21%	30%, ns ^b
Other	19%	22%	14%	21%
Education of Adult				
Less than high school	35%	28%	28%	18%
High school	24%	44%	32%	35%
More than high school	41%	28%	40%	47%, ns
Household Composition				
Single adult alone	32%	25%	26%	21%
Single adult with family	14%	13%	8%	6%
Couple alone	43%	47%	60%	55%
Couple with family	11%	16%	6%	18%, ns
Percentage of Families Using Public Assistance as Income	38%	28%	34%	20%, ns
Percentage of Girls in Each Group	49%	59%	36%	46%, ns
Age of Child in Months	58 (3.1) ^c	59 (3.4)	54 (3.5)	54 (3.8) ^d
Baseline Score on Cooperative Preschool Inventory (CPI)	43.7 (11)	40.5 (9.7)	34.4 (15.3)	36.5 (14) ^e
^a Percentages may not total 100% due to rounding. ^b Not statistically significant. ^c Numbers in parentheses refer to standard deviation. ^d Cohorts I and II in the control group were significantly different in age (T (96)=6.27; p<.001). Cohorts I and II in the HIPPY group were significantly different in age (T (82)=5.21, p<.001). ^e Cohorts I and II in the HIPPY group were significantly different on CPI (T (82)=3.21; p<.005).				

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gram, Cohort I children were older at their baseline than Cohort II children were at their baseline.¹¹ This lack of comparability in the timing of baseline data collection necessitated that outcome analyses be conducted separately for each cohort.

To determine whether control group and HIPPY families were equivalent at baseline and to control for any preexisting dif-

ferences between the two groups, information about children's cognitive skills and family backgrounds was collected. Children's cognitive skills were assessed by the Cooperative Preschool Inventory (CPI),¹² a 64-item, individually administered assessment of preschoolers' cognitive achievement, which has been used extensively with low-income populations in preschool intervention evaluations.¹³

The National Evaluation Information System,¹⁴ a comprehensive family questionnaire, was used to gather information about family characteristics through parent self-reports. Information was collected regarding the children's ages and genders, adults' ethnicity and level of education, family structure, and household sources of income.

Children's cognitive skills were assessed at two points in time and with several measures. The CPI was administered at program completion, when children were approximately six years of age and completing kindergarten (n=153). Kindergarten and first-grade standardized achievement data

tors such as the child's enjoyment of books, listening and paying attention, task orientation, self-direction in learning, seeking and using assistance appropriately, curiosity, and initiative. The items were combined into a single index score.¹⁸

New York Study: Results

Analyses were conducted separately for each cohort, using a statistical technique called analysis of covariance. With this technique, results for the HIPPIY and control group families were compared, holding constant children's ages, parents' level of education and ethnicity, family structure, source of family income, and children's baseline scores on the CPI. Results are summarized in Tables 2 and 3.

In Cohort I, HIPPIY children outperformed control group children on measures of cognitive skills at the end of kindergarten, on measures of classroom adaptation at the beginning of the first and second grades, and on a standardized reading test at the end of first grade. None of these effects was replicated in Cohort II.

In Cohort I, HIPPIY children outperformed control group children on measures of cognitive skills at the end of kindergarten, on measures of classroom adaptation at the beginning of the first and second grades, and on a standardized reading test at the end of first grade. These differences were both statistically significant and large enough (ranging from about 0.56 to 0.76 in effect size) to be deemed important from an educational point of view.

(n=144) were collected from school records using scores on the Metropolitan Readiness Test in kindergarten (1976 edition) and the Metropolitan Achievement Test in first grade (fifth edition). Both tests are group-administered assessments of children's mastery of school curricula. The tests are divided into instructional subtests that measure facts, skills, and concepts and their applications in language, reading, and mathematics.

None of these effects was replicated in Cohort II (see Table 3). The next series of analyses was conducted to try to understand why the results were not replicated in Cohort II.

Children's classroom adaptation—their interest in learning and their behavioral and motivational readiness to learn—was assessed by teacher ratings on the Child Classroom Adaptation Index (CCAI)¹⁵ one month after the beginning of the first (n=146) and second grades (n=152). Teacher ratings have been shown to be a reliable and valid measure of children's functioning in the classroom¹⁶ and to be related to children's school performance.¹⁷ The CCAI is an 11-item teacher-report rating scale. Teachers were asked to rate each child on a scale from one (representing poor adaptation) to five (representing very successful adaptation) for fac-

Analyses were conducted to determine whether Cohorts I and II differed from each other in some way that might explain their different results. For example, had there been differential rates of attrition from the study? Did the program vary? Were families with and without posttest data different from one another in terms of a number of child and family background characteristics?

Unfortunately, none of these possible explanations was supported by the analyses.

The Arkansas Study: Design and Results

Concurrent with the evaluation in New York, an evaluation of HIPPIY was conducted in Arkansas, employing similar procedures and measures, with two notable exceptions. First, this was not a randomized trial.

Table 2

Overview of Outcomes for New York HIPPY Program Participants and Control Group (Cohort I)					
Variables	Group	Adjusted^a Mean	p value	D^b	
End of Program	Cognitive Skills	HIPPY Control	52.21 49.28	.04	.63
	Standardized Reading	HIPPY Control	47.58 41.59	.39	.28
	Standardized Math	HIPPY Control	52.03 43.66	.29	.34
	Classroom Adaptation	HIPPY Control	3.66 2.75	.04	.69
One-Year Follow-Up	Standardized Reading	HIPPY Control	54.25 38.08	.03	.75
	Standardized Math	HIPPY Control	55.59 48.57	.33	.39
	Classroom Adaptation	HIPPY Control	3.60 2.83	.02	.68

^a Covariates: child's age, parental level of education and ethnicity, family structure, source of income, and child's base-line scores on the Cooperative Preschool Inventory.

^b A statistic for calculating effect size.

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Second, none of the 121 HIPPY or 105 comparison group children participated in any other preschool programs during the first year of the HIPPY program, although most children (92%) were enrolled in kindergarten during the second year of HIPPY. Thus, the design of the Arkansas study was less methodologically rigorous than that of the New York study, and it examined HIPPY's effects separately from preschool enrollment. Once again, children's cognitive skills and classroom adaptation were assessed using the CPI and the CCAI, but a different standardized achievement test, the Stanford Early School Achievement Test (second edition), was administered and a new variable—timely movement through the grades—was assessed.¹⁹ An overview of the samples by group and cohort is presented in Table 4.

Despite these community context and design differences, results revealed a pattern of effects somewhat similar to the findings in New York (see Tables 5 and 6), at least for Cohort I in the Arkansas program.

As can be seen from Table 5, there was a trend (though not statistically significant) for HIPPY children to be rated as better adapted to the classroom in first grade than their peers who had not participated in HIPPY. By the beginning of second grade, this effect was statistically significant and large enough to be educationally meaningful in Cohort I (that is, it had an effect size of 0.59). In addition, at the time of the one-year follow-up posttest data collection session, 87% of the HIPPY children were in first grade, compared with only 69% of the comparison group—children in the comparison group were more likely to have

Table 3

Overview of Outcomes for New York HIPPY Program Participants and Control Group (Cohort II)					
Variables	Group	Adjusted^a Mean	p value	D^b	
End of Program	School Readiness	HIPPY Control	53.96 53.03	.33	.21
	Standardized Reading	HIPPY Control	44.16 45.79	.72	.09
	Standardized Math	HIPPY Control	46.79 51.30	.39	.22
	Classroom Adaptation	HIPPY Control	3.23 3.39	.32	.22
One-Year Follow-Up	Standardized Reading	HIPPY Control	52.35 50.91	.78	.07
	Standardized Math	HIPPY Control	56.49 58.33	.70	.10
	Classroom Adaptation	HIPPY Control	3.54 3.44	.60	.12
^a Covariates: child's age, parental level of education and ethnicity, family structure, source of income, and child's base-line scores on the Cooperative Preschool Inventory. ^b A statistic for calculating effect size.					

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been retained in kindergarten or enrolled in school a year behind their peers. However, there were no effects in Cohort I for the CPI or for standardized achievement.

In contrast, in Cohort II, the control group outperformed the HIPPY group on school readiness and standardized achievement at the end of kindergarten. There were no other significant group differences in Cohort II on any measure or at any posttest.

As was the case for New York, subsequent analyses could not account for the differences in results between the two cohorts in Arkansas.

Discussion of New York and Arkansas Evaluation Results

Findings from Cohort I in New York indicated that children who had participated in the

HIPPY program scored higher on important measures of school success than children in the control group, over and above the effects of a high-quality preschool program. There was some confirmation of the positive effects of HIPPY from the findings from Cohort I in Arkansas. Considering only Cohort I, results in both sites suggested that the HIPPY children had a more successful entry into elementary school, with better skills and better performance, and with higher assessments from their teachers. These findings are promising because children who perform well as they begin their school careers tend to continue to do so, while children who have poor starts tend to continue to do poorly in school.^{20,21}

Nevertheless, conclusions regarding HIPPY's effectiveness must be tempered, as these findings were not replicated in Cohort

Table 4

Baseline Characteristics of Arkansas HIPPY Program Participants and Comparison Group				
Variables	Group			
	Cohort I		Cohort II	
	HIPPY (n=58)	Comparison (n=55)	HIPPY (n=63)	Comparison (n=50)
Ethnicity of Child				
African American	93%	87%	97%	96%
White	5%	13%	3%	4%
Other	2%	0%	0%	0%, ns ^a
Education of Adult				
Less than high school	33%	42%	37%	38%
High school	64%	53%	49%	50%
More than high school	3%	5%	14%	12%, ns
Household Composition				
Single adult alone	38%	47%	48%	48%
Single adult with family	22%	22%	21%	20%
Couple alone	31%	27%	25%	28%
Couple with family	9%	4%	6%	4%, ns
Percentage of Families Using Public Assistance as Income	40%	45%	46%	38%, ns
Percentage of Girls in Each Group	48%	47%	59%	50%, ns
Age of Child in Months	57 (4) ^b	57 (3)	55 (4)	55 (4) ^c
Baseline Score on Cooperative Preschool Inventory (CPI)	36.5 (10)	33.4 (13)	35.4 (11)	29.8 (12) ^d

^a Not statistically significant.
^b Numbers in parentheses refer to standard deviation.
^c Cohort I children were older than Cohort II children (T (222)=3.9, p<.001).
^d Cohort II HIPPY children scored significantly higher than Cohort II comparison children on CPI (T (111)=2.72; p<.005).

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II in either site, and indeed, in Arkansas, control group children outperformed HIPPY children on two measures. Analyses revealed no differences between cohorts or in the program delivery that would explain the failure to replicate the results. These mixed results demonstrate the importance of replication studies and why caution is warranted before generalizing positive or negative results from single-sample, single-site evaluations.

Clearly, one important area in which the two cohorts might have differed is in their

level and type of involvement in the HIPPY program. The next section summarizes the results of extensive qualitative research conducted on HIPPY regarding variations in parental involvement in the program. This research supports the idea that differing levels of involvement in the program may well influence outcomes.

Although attempts were made throughout the Arkansas and New York studies to gather systematic, objective, and valid indices of the level of each family's involve-

Table 5

Overview of Outcomes for Arkansas HIPPY Program Participants and Comparison Group (Cohort I)					
Variables	Group	Adjusted ^a Mean	p value	D ^b	
End of Program	Cognitive Skills	HIPPY	56.37	.67	.10
		Comparison	56.96		
	Standardized Achievement	HIPPY	47.39	.41	—
	Comparison	41.11			
Classroom Adaptation	HIPPY	3.47	.08	.42	
	Comparison	3.08			
One-Year Follow-Up	Standardized Achievement	HIPPY	47.17	.64	.12
		Comparison	45.12		
	Classroom Adaptation	HIPPY	3.65	.02	.59
	Comparison	3.04			

^a Covariates: child's age, parental level of education and ethnicity, family structure, source of income, and child's baseline scores on the Cooperative Preschool Inventory.

^b A statistic for calculating effect size.

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ment in the HIPPY program, it was not possible to gather such data for a variety of programmatic and logistical reasons. How many home visits each parent received, how many group meetings they attended, and how many parent-child daily lessons they worked on could not be determined from available records. Without such data, it was not possible to determine whether the cohorts with positive outcomes were those that were more involved in the HIPPY program. Nevertheless, the qualitative research concerning parental involvement presented below indicates that such an idea might be plausible.

Understanding Variation in Parent Involvement in HIPPY

Research indicates that parents vary widely in their level of participation in home visiting programs such as HIPPY. Attrition rates from home visiting programs average 35% to 50%.²² For example, of the original 413 pregnant mothers starting the two-year home-based Maternal Infant Health

Outreach Worker Project in Tennessee, Kentucky, and West Virginia, only 35% continued until their children's second birthdays.²³ These high attrition rates are not limited to home visiting programs. In one two-year center-based program for adolescent parents, teen mothers averaged only 20 to 29 weeks of program involvement.²⁴

Even among families that remain formally enrolled in programs, some demonstrate low levels of enthusiasm, commitment, and effort. Evaluators of the seven Child Survival/Fair Start parent-education, early intervention, and home visiting programs begun in the 1980s noted, "It is one thing to join a program but another to engage in honest discussion, accept support, and take seriously its suggestions."²⁵ In a review of another 17 promising family support programs, researchers noted that program staff had developed a variety of creative strategies to sustain family participation. They concluded that the challenge of maintaining parent participation is greatest for programs that set out to create lasting change by establishing long-term relation-

Table 6

Overview of Outcomes for Arkansas HIPPY Program Participants and Comparison Group (Cohort II)				
Variables	Group	Adjusted^a Mean	p value	D^b
End of Program School Readiness	HIPPY	57.51	.06	.47
	Comparison	60.15		
Standardized Achievement	HIPPY	41.54	.01	.63
	Comparison	51.55		
Classroom Adaptation	HIPPY	3.04	.39	.22
	Comparison	3.29		
One-Year Follow-Up Standardized Achievement	HIPPY	37.36	.78	.07
	Comparison	38.86		
Classroom Adaptation	HIPPY	3.38	.61	.13
	Comparison	3.50		

^a Covariates: child's age, parental level of education and ethnicity, family structure, source of income, and child's baseline scores on the Cooperative Preschool Inventory.

^b A statistic for calculating effect size.

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ships with families, because those programs require more commitment and typically recruit hard-to-reach families.²⁶

In other words, HIPPY, which aims to establish long-term relationships with hard-to-reach families, is exactly the type of program in which sustaining family involvement is likely to be challenging. By design, such family involvement is imperative for HIPPY's success—parents must be available for home visits, attend group meetings, and make time every day for the parent-child learning sessions. Indeed, because parents are the sole providers of the HIPPY program for their children, the impact of the program for children is mediated by the involvement of their parents. When parents are only minimally involved, even when remaining officially enrolled, the implementation of HIPPY is seriously compromised.

The following sections describe the results of two qualitative studies that focused specifically on implementation challenges and barriers for program sites in Michigan,

Arkansas, and New York.^{2,3} The studies involved interviews of three HIPPY program coordinators and their direct supervisors in three HIPPY program sites,² as well as interviews with 12 paraprofessionals at the New York site.³ The studies reveal significant problems of attrition and varying levels of parent involvement and describe the strategies employed by program staff to try to keep families engaged throughout the two-year program.

Patterns of Attrition from the HIPPY Program

Not all families that enrolled in the programs remained involved for the full two years. Program coordinators and home visitors identified four patterns of attrition.

Early Attrition

HIPPY program staff believed that parents were not always adequately prepared for the time commitment the program required. As a result, some parents left the program in the first month. Paraprofessionals said they were hesitant to fully describe the expected

time commitment when first introducing parents to the program, for fear that parents would not enroll. Instead, they minimized the time required in their descriptions and hoped that once parents were in the HIPPY program, they would become fully engaged participants. Undoubtedly, this process of engagement did occur for some parents but not for all.

Attrition Between First and Second Years

At the time these studies were conducted, the HIPPY programs followed the school calendar. Consequently, programs ceased operations for at least two months during the summer between the program's first and second years. Program coordinators identified this lapse in the program as a common time for losing families, whose attachment to the program diminished with lack of

Most families tended to participate more in the in-home activities than in the activities that occurred outside of the home.

contact. Other families did not return for the second year of the program because the parents believed that the HIPPY curriculum was redundant with kindergarten and kindergarten homework.

Attrition Due to Changes in Life Circumstances

Some parents ceased participation when their lives changed in ways that interfered with their ability to maintain their involvement. For example, one program coordinator noted that 45% of the residents in her community moved each year, and this was the primary contributing factor to the high attrition from her HIPPY program. Other parents left the program when faced with family illness or marital or other problems. Others left HIPPY when parents returned to school or entered the workforce.

Attrition Due to Turnover in Home Visitors

Some families left the program when the paraprofessionals with whom they had been working left. Some families left because their home visitors were close friends or relatives and had been the primary motivation for

their involvement in the program. Others left because there was a lapse in service before a new paraprofessional made contact with the family.

Patterns of Parent Involvement in HIPPY

The studies also revealed that not all families that remained in the HIPPY program were involved to the same degree. Maximum participation would have meant that families received 30 home visits and participated in 30 group meetings during the two-year course of the program. Not all families achieved that level of involvement. Some missed home visits or group meetings even though they did not officially leave the program. Most families tended to participate more in the in-home activities (home visits, role playing, and working on the materials with their children) than in the activities that occurred outside the home (attendance at group meetings and involvement with other parents in the program).

The uneven levels of involvement created problems for parents and home visitors. Parents had difficulty staying current with the lessons if they did not attend a group meeting to pick up the next week's packet of materials, because they then either had to do two weeks of lessons the following week or required an extra home visit from the paraprofessional to deliver the packet. By the middle of the HIPPY program year, home visitors were working with parents who were at many different points in the curriculum (that is, some parents were on the lessons for week ten, other parents were on week nine, and so forth). Home visitors then had the added tasks of tracking where each family was in the program, teaching lessons that they themselves had learned and reviewed several weeks earlier, and carrying several different sets of materials and books.

Self-report parent data from the Arkansas and New York program sites were used to examine variations in the levels of involvement in HIPPY,²⁷ and these results are reported in the following sections of this article. The data were used to explore three questions: (1) Which parents were most likely to report being involved in the in-home aspects of the program? (2) Which parents were most likely to report being involved in the out-of-home aspects of the

program? (3) How did involvement in the in-home aspects relate to involvement in the out-of-home aspects of the program?

Data came from two sources: (1) self-reports from parents in the New York and Arkansas programs, who rated their levels of involvement in the in-home and out-of-home aspects of HIPPY; and (2) information about the families that was collected (as part of the experimental and quasi-experimental studies of the New York and Arkansas sites) when families first enrolled in the programs, and was used to predict self-reported levels of in-home and out-of-home involvement two years later.

Patterns of Parent Involvement in the In-Home Component of the Program

As has been mentioned, HIPPY parents were expected to work on the storybooks and activity packets with their children for 15 minutes every day. Program staff suspected that some parents enjoyed and participated in the home visits and the group meetings for the social support they received but worked with their children on the parent-child lessons only minimally, perhaps because they were not able to organize their time and resources to implement the curriculum on a daily basis. Some home visitors tried to identify which parents were not fully working with their children (for example, by asking to see a page of the previous week's lesson packet), while others assisted parents with time management and organizational skills.

Nevertheless, parents reported that they were relatively involved in the home visits, in-home role playing, and HIPPY activities with their children.²⁷ Average scores for the four samples in the Arkansas and New York programs (that is, for the two cohorts at each of the two sites) ranged from 3.7 to 4.3 on a scale of one (low involvement) to five (regular and enthusiastic involvement). Still, there was variation among parents.

Of the 19 predictors of self-reported involvement examined,²⁸ four were significant in two or more of the four samples studied. Parents who (1) were not on welfare, (2) had more education, (3) had higher expectations of their HIPPY children's educational attainment, and (4) reported a greater number of educational materials in the home at pretest all reported more

involvement in the in-home portions of the program at the end of the two-year program. The latter three of these variables were significant predictors of self-reported in-home involvement in both the Arkansas and New York programs, despite the different populations that participated in those programs.

Patterns of Parent Involvement in the Out-of-Home Component of the Program

Attendance at the biweekly group meetings varied, but coordinators at all three program sites noted that typically only a small core group of parents attended these meetings. Coordinators responded by varying the schedules or locations of the meetings, offering child care, providing incentives such as raffles or door prizes, and experimenting with different content to keep the meetings fun and interesting for parents.

Coordinators' responses to low turnout appeared to be shaped by their vision of the purpose of the group meetings. One coordinator viewed group meetings as a way for the administering agency, the public school system, to demonstrate its commitment to

Only a small core group of parents attended the biweekly group meetings.

parents in the community, and she therefore maintained bimonthly group meetings despite limited turnout. A second coordinator viewed group meetings as a way to help parents build self-esteem, but because she did not believe that the meetings fulfilled this goal, she reduced the number of group meetings offered each month.

The data from the evaluation study are consistent with coordinators' reports. Parents in both cohorts of the New York and Arkansas programs reported relatively low levels of involvement in the out-of-home portion of the HIPPY program.²⁷ Means ranged from 2.2 to 2.9 on a scale of one (low involvement) to five (regular and enthusiastic involvement). Although there was inconsistency across the four samples, results indicated that families that were receiving welfare or had received welfare, were headed by a single parent, or had fewer

adults and more children in the household at pretest were all likely to report greater involvement in the out-of-home aspects of HIPPY at posttest. In other words, unlike in-home involvement, out-of-home involvement was associated with more rather than fewer difficult circumstances.

Comparing In-Home and Out-of-Home Involvement

By all accounts, parent involvement was not uniform across the different components of the HIPPY program. In all four samples (both cohorts in the New York and Arkansas sites), parents reported significantly greater involvement in the in-home than the out-of-home component of the HIPPY program.²⁷ (See also the findings concerning Parents as Teachers reported by Wagner and Clayton in this journal issue.) The correlation

considering the results of the studies intended to assess program effectiveness, and they clearly suggest that future research regarding the HIPPY program needs to carefully document each parent's level of involvement to accurately assess and understand program effects.

Directions for Future Practice and Research

Ten years of studying the HIPPY program have revealed that (1) evidence of HIPPY's effectiveness is mixed—in two sites, significant and meaningful effects of program participation were observed for the first cohort of families studied but not for a second cohort; and (2) HIPPY is not a homogenous or uniform experience for parents; great variability exists in all aspects of the program (for example, the number of home visits parents receive, the number of lessons completed, the nature of the relationship between the staff and parent, the number of group meetings attended, and the topics of those meetings). These findings suggest the following directions for future practice and research.

The HIPPY program needs to carefully document each parent's level of involvement to accurately assess and understand program effects.

between in-home and out-of-home involvement as reported by parents was statistically significant but not very large ($r=0.29$, $p<.01$), meaning that participation in one set of activities was only moderately associated with participation in the other set of activities.

Not surprisingly, therefore, analyses revealed that the predictors of in-home involvement and out-of-home involvement were not the same. Only 5 of the 19 variables predicted both types of involvement, and three of those five variables were correlated in the opposite direction. For example, being a single parent and having fewer adults in the home was positively associated with out-of-home involvement but negatively associated with in-home involvement.

Summary of Parent Involvement

In sum, the results indicate that few parents (and therefore few children) received the program at the full intended dosage. Parents received fewer home visits, participated in fewer group meetings, and probably spent less than the 15 minutes each day with their children that was intended in the model. These differences are important when con-

Practice

The observed differences in patterns of parent involvement suggest that no single strategy will increase engagement in HIPPY, but the following are some potentially fruitful approaches:

- At enrollment, program staff might discuss with incoming families the extent to which potential barriers to involvement (for example, the number of other children in the home, the family structure, and the financial resources of the family) are present in their lives. Staff could then anticipate early dropouts and/or low levels of participation, and could offer additional support and assistance to help families address those barriers or to help them prepare for home visits and for working with their children on the HIPPY lessons.

- The research indicated that families facing more difficult circumstances and having fewer resources participated more in the out-of-home aspects of HIPPY. Perhaps these parents sought out group meetings to receive assistance with the specific issues they faced. This suggests that staff might tailor

group meetings to address those issues—which might not be related to the HIPPY curriculum at all. Discussions with parents might identify clusters of families with similar concerns that could be addressed through programmatic modifications. For example, perhaps parents with many children and few adults at home could serve as baby-sitters for each other or could benefit from respite caregiving services provided by the HIPPY program. Other families might share an interest in furthering their skills and education (for example, their English as a Second Language skills), and classes could be scheduled before or after the regular group meetings.

Research

Clearly, further empirical research is needed to clarify the mixed results reported in this article. The next generation of HIPPY research needs to pay greater attention to documenting the extent and nature of variations in the delivery of the HIPPY program, including information about how faithfully parents worked with their children on their daily lessons. If HIPPY families did not implement the program as intended, comparisons with control group families may not have been a fair test of the program's effects. Eliminating all but full participants would increase the likelihood of detecting effects but would disguise important information about how the program operates in a real-world setting. Although attempts were made in these studies to gather implementation data from the program records of paraprofessionals and program coordinators, their reports were incomplete.

Better documentation of each parent's involvement in the in-home and out-of-home components of the program—for example, through daily diaries—would allow researchers to address issues such as how much of the program, and which aspects of it, are necessary for positive effects to occur, as well as which families are most likely to benefit from it.

Greater attention to the level of parent involvement would also allow for a systematic examination of the predictors of participation in different aspects of the program. Information from such an examination could be used to improve service delivery by targeting for extra support those parents

who were identified as at risk for dropping out or for participating only minimally.

Future research should also focus on testing the explicit and implicit theories of change underlying the HIPPY model. Questions to be addressed include: How do parents with limited literacy work with the HIPPY materials? Do parents understand the larger concepts being taught to children through the HIPPY lessons, and to what extent do they generalize the skills they

Perhaps no single program could be expected to change the lives of children without simultaneous support from other community institutions.

learn to other settings and other children? Understanding the processes by which participation in HIPPY positively affects parents and children is an important avenue for future researchers to undertake to increase program benefits for families.

Research regarding multiyear programs for hard-to-reach families is especially difficult because attrition from the programs and from the studies compromises the internal validity of evaluations. In these evaluations of HIPPY, a number of mechanisms for maintaining contact with families were instituted so that many who left the programs or the areas were found. Nonetheless, attrition from the studies ranged from 12% to 21%. Although these numbers were well within the norm for the field, this attrition still threatened to compromise the validity of the evaluation. Future researchers should, at a minimum, collect more information at baseline with which to compare the samples available for posttest.

Finally, researchers face a challenge in keeping up with changing programs such as HIPPY. Since this research was undertaken, HIPPY has undergone many modifications, including an extension to three years rather than two. Future researchers need to address the question of whether classic experimental and longitudinal designs are best for studying the effectiveness of dynamic, “living” programs such as HIPPY.

The Challenge for Policy

It is difficult to generate policy recommendations based on this research. The findings are mixed, and coherent patterns are absent. Nevertheless, policy will continue to be formed, as it often is, even when sound scientific evaluations are entirely lacking. Indeed, HIPPY and many other home visitation programs have blossomed without a great deal of supportive research.

This research may signal a note of caution about the challenges any program faces in serving families. Perhaps no single program, including HIPPY, could be expected

to change the lives of children without simultaneous support from other community institutions. For example, it is probable that children's performance in school reflects their families' involvement as well as the quality of their schools, and that good early childhood education policy must be connected to good school policy.

The HIPPY studies reported in this article should not be interpreted as a signal that nothing works. Rather, they demonstrate the complexity inherent in trying to serve families, and they suggest that the most successful policies will be those that reflect that complexity.

1. This article does not present research about the HIPPY program in the United States conducted by other researchers (see, for example, Cates, K.K. Early intervention of at-risk children: Effects on academic performance. Dissertation for the University of Arkansas at Little Rock, 1995; Bradley, R.H., and Whiteside, L. *Evaluation of HIPPY program: A look at outcomes for children at the end of second grade*. Little Rock, AR: University of Arkansas at Little Rock Center for Research on Teaching and Learning, 1995; and Rebello, P.M., Griffin, T., and Brooks-Gunn, J. Book reading styles in families headed by poor, African American teenage mothers. Presentation given at the Center for Young Children and Families, Columbia University Teachers College, New York, 1997), or evaluations of HIPPY programs in other nations (see, for example, Adams, I., Skuy, M., and Fridhjon, P. Effectiveness of a home-based program for preschool children in disadvantaged South African communities. *International Journal of Cognitive Education and Mediated Learning* (1982) 2:6–12; Eldering, J., and Vedder, P. *OPSTAP: Ein Opstap Naar Meer Schholsuccess? Amsterdam, Netherlands: Swetz and Seitlinger B.V., 1992; and Kagitcibasi, C., Sunar, D., and Bekman, S. Comprehensive preschool education project: Final report*. Ottawa, Canada: International Development Research Centre, 1987).
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6. For general descriptions of family support programs, see Dunst, C. *Key characteristics and features of community-based family support*. Chicago: Family Resource Coalition, 1998; and Kagan, S., Powell, D., Weissbourd, B., and Zigler, E., eds. *America's family support programs*. New Haven, CT: Yale University Press, 1987.
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10. The variables used to match the two samples were the ethnicity of the child, the educational level of the parent, the family structure, whether the family reported government assistance as the primary source of income, the preschool experience of the child, the age of the child, and the child's preschool readiness. At baseline, the groups in Cohort I were equivalent on all measures. The two groups in Cohort II were equivalent, except on one measure: the HIPPY children scored higher on preschool readiness than did the comparison group children.

11. Although the starting points during the year were different, each cohort received the same number of HIPPY lessons.
12. Educational Testing Service. *Cooperative Preschool Inventory*. Princeton, NJ: ETS, 1974.
13. See, for example, Laosa, L. Psychometric characteristics of Chicano and non-Hispanic white children's performance on the Preschool Inventory. *Journal of Applied Developmental Psychology* (1982) 3:217–45; Lee, V., Schnurr, E., and Brooks-Gunn, J. Does Head Start work? A 1-year follow-up comparison of disadvantaged children attending Head Start, no preschool, and other preschool programs. *Developmental Psychology* (1988) 24:210–22; and Powers, S., and Medena, M. Factorial validity of the Cooperative Preschool Inventory for English- and Spanish-speaking Hispanic children. *Journal of Psychology* (1985) 119:277–80.
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