

## Research Brief #1

# Summary of Home Instruction for Parents of Preschool Youngsters (HIPPY) Child Outcome Research

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## Background

**Home Instruction for Parents of Preschool Youngsters (HIPPY)** is an evidence-based home visiting program focused on parent-involved learning for preschool age children. HIPPY programs aim to prepare children for long-term school success starting at kindergarten entry by empowering parents as their first and most important teachers. It was developed for families who have risk factors associated with lower academic achievement including economic disadvantage, limited English language proficiency, and social isolation. HIPPY was established in Israel in 1969 and is currently implemented in 13 countries. HIPPY programs were established in the United States in 1984 and now serve more than 15,000 economically disadvantaged families across 21 states and the District of Columbia.

All HIPPY programs share the same four core components: a standard developmentally appropriate school readiness curriculum, role-play as method of instruction, peer home visitors, and home visiting as the service delivery method. Community based home visitors meet with parents in their homes to role-play early education curricular activities one hour a week for thirty weeks per program year. Parents then spend approximately 15 to 20 minutes per day with their children using the reviewed HIPPY books and activity packets. In addition to home visits, programs also have regularly scheduled parent group meetings.

**The National Research and Evaluation Center (NREC)** at the University of South Florida (USF) is the national research center for HIPPY USA. The purpose of the NREC is to advance the evidence base for HIPPY and support the research and evaluation efforts of HIPPY programs across the United States.

## Participation in HIPPY Has Been Positively Related to School Outcomes

One of HIPPY's primary goals is to prepare children for long-term school success beginning in kindergarten. Over the past thirty years, several benefits from family program participation have been documented for children in local, state, national, and international evaluations. HIPPY graduates have demonstrated higher scores on standardized pre-academic, language, and cognitive direct assessment measures. Teachers and parents have rated HIPPY children higher on measures of school readiness dimensions such as adaptability to the Kindergarten classroom and observed end of the academic year curriculum mastery. Longer-term benefits associated with academic achievement have also been found in national and international studies. For example, studied groups of HIPPY graduates scored higher on standardized state mandated academic tests in reading and math during elementary and middle school compared to matched samples of students. This is particularly important given the population served, who experience circumstances that are often considered to place them at risk for lower educational performance and school readiness including economic disadvantage, English as a second language, and minority background. There is also emerging evidence that the HIPPY program also benefits children's school-related behavior associated with school success including higher attendance rates, quality of peer interactions, enjoyment of reading, academic self-esteem, and initiative.



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## School Readiness Outcomes

### HIPPY helps children enter school ready to learn

The HIPPY model targets parent involvement to enhance positive child development and provide opportunities for children to build foundational skills and knowledge that will facilitate early and long-term school success.

### HIPPY supports school readiness for children at risk for poor educational outcomes

Several factors have been identified in the literature as associated with educational performance. Risk for lower educational performance at school entry includes economic disadvantage, limited English proficiency, and children born to adolescent mothers. HIPPY program participation has also been shown to reduce or negate consequences of these risk factors.

### Higher academic achievement in kindergarten and successful adaptation to school

- A randomized control trial (RCT) study was conducted in New York to examine program effects on measures of early school success (Baker, Piotrkowski, & Brooks-Gunn, 1998). This study assessed the impact of HIPPY as a home-based program over and above the impact of pre-kindergarten and shared classroom experiences for two cohorts of children. HIPPY children from Cohort 1 displayed more school success at entry and after their first and second years. HIPPY graduates had better academic performance and higher teacher ratings for classroom adaptation using the Child Classroom Adaptation Index (CCAI). They performed significantly better on a standardized measure of cognitive skills (i.e., the Cooperative Preschool Inventory, CPI) at the end of Kindergarten and performed significantly higher on a measure of mastery of school curriculum (Metropolitan Readiness Test) in kindergarten and first grade. Children in Cohort 1 in the New York experimental study were also rated by teachers as significantly higher than the control group at the start of first grade and kindergarten in classroom adaptation.
- Concurrent with the NY experimental study, a two-cohort quasi-experimental study was conducted in Arkansas yielding a similar pattern of findings for early school outcomes (Baker et al., 1999). Children in the Arkansas Cohort 1 were rated significantly higher by teachers in second grade on a standardized measure of classroom adaptation (i.e., the CCAI). Children were also more likely to be promoted to first grade compared to a matched sample of peers.
- Kindergarten teachers have rated HIPPY graduates as ready to learn. In a two-site quasi-experimental study in Texas, researchers asked teachers to rate unidentified target students who had participated in a HIPPY program relative to classroom peers on adaptation and verbal behavior using the Kindergarten Teacher Survey (KTS). Johnson, Martinez-Cantu, Jacobson, and Weir (2012) found children who had been enrolled in HIPPY scored higher than children in the control groups on measures of classroom adaptation. Moreover, they had higher attendance rates, higher prekindergarten enrollment, and were more likely to be promoted to first grade compared to other kindergartners in the school district. Teachers rated the majority of HIPPY children as ready for school in classroom adaptability (93.5%) and verbal behavior (89.1%). These positive findings were noted to be particularly important because most of the children in the study were living in low-income households and English Language Learners (ELL), or from an ethnic minority.
- In a quasi-experimental study conducted in Texas, the majority of children from immigrant Spanish speaking low income families who participated in HIPPY were rated as ready for school by their kindergarten teachers (Johnson et al, 2011).

### HIPPY helps builds important pre-literacy skills and promotes cognitive development

- HIPPY participation has a positive impact on literacy skills. In comparison to a matched group, HIPPY children in Arkansas scored significantly higher on a standardized measure of reading one year after graduating from a HIPPY program (Baker et al., 1999).
- Children who participated in HIPPY scored significantly higher on a standardized measure of cognitive skills at the end of Kindergarten after two years of program participation compared to a randomly assigned control group of peers (Baker et al., 1998).
- The effect of HIPPY participation on children's early literacy and language skills was examined with Mexican-American immigrant families (Necoechea, 2007). A randomized control trial (RCT) design was used to assess emergent literacy and language development after 15 weeks participation in a HIPPY program; results confirmed a significant positive effect of program participation on expressive language.
- Children who participated in HIPPY have outperformed peers on measures of school readiness and reading abilities, specifically in areas of reading vocabulary, word recognition skills, and concepts of print (Barhava-Monteith, Harré, & Field, 1999). A process and outcome evaluation conducted in New Zealand compared school outcomes for HIPPY graduates from five program centers with a matched sample of students from the same schools. Performance on two standardized measures of reading was examined from data available in school records.

HIPPY students scored significantly higher than peers on three of the six subtests, and had consistently higher mean scores on all six reading subtests. Specifically, at age six, children exhibited significantly higher scores in measures of concepts of print, word recognition, and reading vocabulary, or better ability to read aloud a list of common site words.

## School Success

### HIPPY supports later academic achievement

Several studies examined the longer impact of HIPPY program participation on school outcomes. HIPPY has been positively associated with success in reading, math, language arts, and cognitive functioning. Benefits extend beyond academic achievement to include important learning behaviors and social skills that contribute to positive educational outcomes including school attendance, academic self-esteem, and enjoyment of reading.

- A study of the long-term benefits of the HIPPY program on school outcomes in Arkansas revealed several positive outcomes. Bradley and Gilkey (2002) used a post-hoc quasi-experimental study design to compare academic performance of HIPPY graduates to two separate within-classroom matched groups of students (i.e., those with no preschool and those with “other” preschool) in both third and sixth grade. They found significant and sustained moderate positive effects of HIPPY program participation on school achievement. Students who participated in HIPPY had significantly higher grades, better teacher-reported classroom behavior, higher achievement scores, and a lower number of school suspension in third and sixth grade.
- A recent study conducted in Texas compared standardized achievement scores in math and reading for third grade students who participated in a HIPPY program with a demographically matched sample (Johnson et al., 2012). HIPPY graduates scored significantly higher on the math test compared to non-HIPPY peers.
- HIPPY participation has been associated with higher academic achievement for children from language minority backgrounds. Garcia (2006) conducted a quasi-experimental study to examine academic impact of HIPPY participation for Hispanic English Language Learners (ELL) students in elementary school. Scores from state mandated reading and math academic achievement tests administered in third grade were compared for HIPPY graduates and a matched comparison group of students. Children who participated in HIPPY scored higher on academic tests compared to peers. The results indicated a statistically significant difference in reading, language, mathematics composite scale scores and

total composite scale score gains between the children who participated in HIPPY and those who did not participate.

- Positive study results documenting higher math achievement in elementary school for children in Texas who participated in HIPPY were confirmed in two similarly designed studies. A third grade follow-up study of HIPPY graduates from Spanish speaking homes examined performance on reading and math state-mandated achievement tests (Nievar, Jacobson, Chen, Johnson, & Dier, 2011). Results from the post-hoc quasi-experimental study showed that HIPPY graduates scored significantly higher on the math subsections of the standardized test. In addition, a follow-up study of HIPPY graduates enrolled in third grade in 2007-2008 documented significantly higher scores on the math subtest of the Texas Assessment of Knowledge and Skills (TAKS) compared to a matched sample of students from similar economic (60.18% qualified for free lunch; 2.78% qualified for reduced lunch) and ethnic backgrounds (85.19% Latino, 12.04% African American, 2.78% Caucasian) (Johnson et al., 2012).

### HIPPY participation supports behaviors associated with school success

Several family and student behaviors that support school success have also been examined in recent studies of HIPPY program effectiveness.

- HIPPY graduates have been found to attend kindergarten more regularly compared to a comparison group of peers (Johnson et al., 2012).
- Teacher interviews conducted when HIPPY graduates were in the third and sixth grades consistently rated HIPPY students as significantly higher than their peers in areas of enjoyment of books, listening and paying attention, task orientation, self-directed learning, initiative, and interest in school work (Bradley & Gilkey, 2002).
- Teachers have also rated HIPPY students as better adjusted in measures of academic self-esteem (Barhava-Monteith et al., 1999). Turkish researchers have found that HIPPY children have shown better social adjustment and integration skills as well as scoring higher on measures of socio-emotional wellbeing (Kagitcibasi, Sunar, & Bekman, 2001).
- Children who participated in HIPPY have scored higher on socio-emotional measures and parent reported positive peer relations. A recent national evaluation in Australia led by Barnett, Roost, and McEachran (2012) asked parents to rate their children’s ability to relate to peers on the Self Description Questionnaire (SDQ). Compared to a matched national sample, HIPPY graduates were rated to have significantly higher scores suggesting that program participation may also

be related to positive social-emotional development and more positive peer interactions, which is a core component of school adjustment and social competence.

### HIPPY Effects on School Success

The results of the studies published examining HIPPY effects on child outcomes document positive benefits for young children with both immediate and longer-term impact. Research suggests that participation in HIPPY is a promising intervention for improved school readiness as well as longer-term educational performance in elementary and middle school. Children have shown enhanced skills that facilitate successful entry into the formal school environment in kindergarten. Documented benefits associated with stronger school readiness include enhanced cognitive, language, literacy, and social skills. Former HIPPY program participants have also performed higher on academic achievement in elementary school, with multiple studies finding significantly higher scores on standardized math tests for children from language minority backgrounds. Immediate and lasting benefits related to positive school functioning also include classroom adaptation, less school suspensions, lower retention rates, better school attendance rates and positive peer interactions.

### Limitations and Future Direction

The results highlighted in this research brief must be considered relative to the research design used for each study. For a review of impact studies used to establish HIPPY as evidence based home visiting model see (<http://homvee.acf.hhs.gov/>). While only positive findings were identified in this brief, some studies have found mixed results for child outcomes. For example, the significant positive school outcomes for the experimental study conducted by Baker et al., (1998, 1999) were not replicated with a second cohort of children. A follow-up qualitative study suggests that differences might have been due to variation in parent involvement and participation in the program. Limitations in conclusions about effectiveness support the need for more rigorous research across programs and with diverse populations served by HIPPY programs in the United States. The variability in early intervention program service delivery for families across program sites and communities provides opportunities to investigate key factors and issues that influence different program effects. Future NREC research will seek to contribute to the evidence base of HIPPY on program effectiveness for child outcomes and school success using randomized control trial study designs and investigate key implementation and process variables to better understand who benefits most under what circumstances.

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