Strengthening Home Visiting Through Research

Measuring Program Quality

Positive Effects of Universal Access

Home Visiting to Promote School Readiness

Exploring Family Risk Factors and Program Outcomes

Also in This Issue:
Federal Initiatives to Support Home Visiting
The passage in July 2010 of the Patient Protection and Affordable Care Act established a federal grant program for home visiting services. The large federal investment underscored the need to expand the knowledge base around high-quality, evidence-based home visiting programs. Since that time, efforts are underway to advance the understanding of effective home visiting practices across the country. This issue of Zero to Three presents a collection of articles that share new findings from the Pew Home Visiting Campaign, a project of the Pew Center on the States. With funding from the Doris Duke Charitable Foundation and the Children’s Services Council of Palm Beach County (Florida), the Pew Home Visiting Campaign commissioned a variety of research projects to investigate critical questions regarding program design and implementation. The five research projects featured in this issue explore various aspects of evidence-based programming that lead to success. Two additional articles share efforts related to the Maternal, Infant, and Early Childhood Home Visiting (MIECHV) Program, part of The Patient Protection and Affordable Care Act that provides $1.5 billion over 5 years to states, territories, and tribes. A goal of the MIECHV program is the integration of home visiting services into a high-quality, comprehensive early childhood system that promotes health and well-being for pregnant women, parents, caregivers, and children from birth to 5 years old. In addition to the feature articles, this issue offers two “Perspectives” columns: one explores the relationship between home visiting staffing patterns, training, and outreach activities and maternal program involvement; the other discusses the value of reflective practice for home visitors and the families they serve.

Stefanie Powers
Editor

Monica Herk and Andrea Hewitt
Guest Editors

This issue of Zero to Three also marks a milestone as we launch a new digital edition of the Journal. The digital version provides many benefits and features: you can easily search for topics of interest; access the Journal from wherever you are; store your library of back issues; and much more. Subscribers to Zero to Three will have free access to the digital edition through your email address, so it’s important to make sure your records are up-to-date. To update the e-mail address we have on file for you, please call 1-800-899-4301 or email 0to3@presswarehouse.com.

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Effectiveness of Home Visiting as a Strategy for Promoting Children’s Adjustment to School

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There is a growing body of evidence suggesting that involving families in home visiting services early promotes positive experiences within the home during the initial years of life. Home visiting presents a unique opportunity to forge enduring relationships with families at a time when parents are vulnerable and the developmental path of the newborn is particularly malleable. Home visits provide a forum for encouraging healthy prenatal behaviors and parenting attitudes, engaging infants in play, modeling a positive adult–child bond, promoting self-sufficiency skills, and facilitating linkages to supportive services. Indeed, studies have documented the ability of home-based services to effect positive changes in parenting behaviors, such as the ability to set appropriate limits (Mitchell-Herzfeld, DuMont, Lee, & Spera, 2005) and engage in responsive and cognitively engaging parenting strategies (Rodriguez, DuMont, Mitchell-Herzfeld, Walden, & Greene, 2010). Positive outcomes have also been identified for children, including lowering rates of low birthweight babies (Lee et al., 2009), producing gains in intellectual functioning during the first 2 years of life for children (Caldera et al., 2007; Landsverk et al., 2002; Olds, Robinson et al., 2004), and reducing problem behaviors through age 2 years (Caldera et al., 2007; DuMont et al., 2005; Landsverk et al., 2002).

Abstract
A growing body of evidence suggests that involving families in home visiting services promotes positive experiences during the initial years of a child’s life; however less is known about whether or not the benefits continue to accrue after a child enters school. This article describes the results of a study examining the effectiveness of an evidence-based home visiting program in promoting children’s academic adjustment. The findings suggest that home visiting programs can produce positive effects on children’s academic adjustment and that changes in earlier parenting practices may play an important role in explaining how home visiting influenced these later outcomes.
During these early years, the home is the child’s primary developmental context.

Although these early experiences may kindle skills that play a protective role later in the child’s life (Englund, Luckner, Whaley, & Egeland, 2004; Reynolds, Ou, & Topitzes, 2004), results from the few studies that have examined home visiting’s impacts on children’s cognitive or academic functioning during the preschool, elementary, and adolescent years suggest that the long-term benefits of these early gains tell varying stories. For example, Landsverk and colleagues (2002) and Olds and colleagues (1994; Olds, Robinson et al., 2004) found that home visiting’s effects on cognitive functioning (regardless of the model implemented) attenuated by 3 years old, while another study found that effects of nurse home visiting services on intellectual functioning emerged for the first time at 6 years old (Olds, Kitzman et al., 2004) but dissipated by 9 years old (Olds, Sandler, & Kitzman, 2007). DuMont and colleagues (2011), using maternal reports of children’s functioning at school around the time they were 7 years old, found that a significantly higher percentage of children who received home visiting services participated in gifted programs and fewer received special education services compared to children in the control group. In contrast, the researchers detected no significant differences in receipt of remedial services or receptive vocabulary.

Equally important to children’s success at school are behaviors that promote learning, such as their ability to follow rules, to listen, to organize their belongings, and to cooperate with peers (Alexander, Entwisle, & Dauber, 1993; Duncan et al., 2007; McClelland, Morrison, & Holmes, 2000). However, the home visiting literature provides few assessments of and mixed results for these behaviors during and following the transition to school. One home visiting program reported fewer behavior problems in the borderline or clinical range by 6 years old (Olds, Kitzman et al., 2004), but other studies reported no early or lasting effects on behavior (DuMont et al., 2011; McCarton et al., 1997; Olds et al., 2002).

Perhaps one of the most direct influences parents can exert on children’s academic adjustment is by supporting their attendance at school. However, competing demands of work, inadequate child care, other siblings, limited financial resources, poor nutrition, illness, and nonresponsive school policies may overwhelm or undermine parent’s efforts or skills and result in unacceptable levels of absenteeism (Durham & Plank, 2010). Chronic absenteeism, which is characterized by missing 18 days or more (or about 10% of the school year; Romero & Lee, 2007) is often a symptom of neglect and has direct implications for a young child’s potential to connect with peers, learn daily routines, benefit from direct instruction, promptly hand in or receive feedback on homework, and participate in special activities. These factors in turn affect children’s subsequent rates of absenteeism, adjustment to school, and academic achievement (Romero & Lee). As approximately 15% of low income children nationally (e.g., those typically targeted by home visiting programs) are absent 18 or more days during a school year compared to less than 5% of children living with families having incomes at or above 3 times the level of poverty (Romero & Lee), home visiting stands to play a substantial role in facilitating children’s academic adjustment if the early positive changes it effects can be translated to this period of a child’s life. A search of the literature revealed no evaluations of home visiting’s impact on reducing rates of chronic absenteeism.

Over the past 40 years, research has generally identified grade retention as having little or no benefit—and even being harmful in the long run—to the academic and socio-emotional adjustment of children (Jimerson, 2001). However, the numerous methodological limitations inherent in the literature have made it difficult to identify the true relationship between retention and academic achievement. Studies using more advanced methodological and statistical techniques suggest that any benefits of retention are short-term and appear to diminish over time (Alexander, Entwisle, & Dauber, 2003; Wu, West, & Hughes, 2010). Few home visiting studies have had the longevity to examine the effects of home visits on children’s retention in grade. One study of a nurse home visiting program found no significant differences between the nurse-visited and control groups in the percentage of children who were ever retained in grades 1 to 3 (Olds, Kitzman et al., 2007) or through grade 6 (Kitzman et al., 2010). Thus the body of evidence regarding the ability of home visiting programs to impact children’s adjustment as they transition to school remains unclear.

This article presents the results of a 7-year randomized controlled trial of an evidence-based home visiting program to illustrate its effects on the academic adjustment of children following their transition to school. Given the important role played by the family in shaping children’s development and learning (Bronfenbrenner, 1979), the article will also describe the findings from a series of exploratory analyses that were conducted to assess the role played by early parenting practices in promoting children’s later achievement.

Healthy Families New York

Healthy Families New York (HFNY), which is based on the national Healthy Families America (HFA) model, is a community-based prevention program that seeks to improve the health and well-being of children by providing intensive home visiting services to expectant and new parents who are considered to be at high risk.
for child abuse and neglect. Specially trained home visitors provide families with support, education, and referrals to community services to: (a) promote positive parenting skills and parent–child interaction, (b) prevent child abuse and neglect, (c) ensure optimal prenatal care and child health and development, and (d) increase parents’ self-sufficiency. Participation in the program is voluntary. HFNY started in 1995 and now operates 36 programs throughout New York State.

**Screening**

Screening is used to target expectant parents and parents with an infant less than 3 months old who are deemed to be at risk for child abuse or neglect and live in communities that have high rates of teen pregnancy, infant mortality, welfare receipt, and late or no prenatal care. Parents who screen positive are referred to the HFNY program, and a family assessment worker (FAW) assesses parents for risk of engaging in child abuse and neglect using the Kempe Family Stress Checklist (Kempe, 1976). If parents score at or above 25 on the checklist, they are eligible for the program.

**Home Visitors**

After the assessment process is complete, a home visitor, also called a family support worker, is assigned to the family. Home visitors are paraprofessionals who live in the target community and share the same language and cultural backgrounds as program participants. Home visitors are selected primarily on the basis of personal attributes such as warmth, fondness for children, non-judgmental attitude, and belief in non-physical methods of disciplining children. Home visitors often are able to reach families who might not go to an office-based setting to receive services. Although home visitors are not required to have any post-secondary education, about 40% have taken courses at the post-secondary level and approximately one third of HFNY home visitors are college graduates.

**Training, Quality Assurance, and Supervision**

All new HFNY staff members attend a 1-week core training that is facilitated by a team of approved HFA trainers from Prevent Child Abuse New York. The goal of the core training is to teach the basic skills needed to perform home visits and assessments, including training on parent–child interaction, child development, and strength-based service delivery for home visitors; training in administering and scoring the Kempe (1976) for home visitors; and training for supervisors on their role in promoting quality services. Staff also receive intensive local “wraparound” training on a variety of topics such as domestic violence, abuse and neglect, well-baby care, and communication skills. Prior to visiting families, new home visitors shadow an experienced home visitor. Once in the field, home visitors meet with their supervisors for at least 1.5 hours each week and are observed on one home visit per quarter. Additional quality assurance measures include site visits, field observations, and attendance at state-sponsored bi-monthly meetings for program managers.

**Home Visits**

Home visits are scheduled biweekly during pregnancy and increase to once a week after the mother gives birth (Level 1), usually remaining at this level until the child is at least 6 months old. As families progress through the service levels, home visits occur on a diminishing schedule, from biweekly (Level 2), to monthly (Level 3), and then quarterly (Level 4). The program continues until the target child is either 5 years old or she enrols in kindergarten or Head Start. Home visitors typically carry a caseload of 15 when the home visitor is seeing families weekly and up to 25 cases when the families are visited less frequently. The content of the visits is intended to be individualized and culturally appropriate. During the prenatal period, home visits focus on promoting healthy behaviors, discouraging risky behaviors, coping with stress, and encouraging compliance with prenatal care. During subsequent visits, activities focus on supporting parents, improving the parent–child relationship, helping parents understand child development and age-appropriate behaviors, encouraging optimal growth, providing assistance with access to health care, working with parents to address family challenges, and developing Individual Family Support Plans to improve self-sufficiency and family functioning. Home visitors use HFA-approved curricula, as well as standardized instruments to assess children for developmental delays. Referrals to local early intervention programs or other community services are made as needed.

**The HFNY Randomized Controlled Trial and Year 7 Follow-up**

In 2000, a randomized controlled trial was initiated at three HFNY sites. Eligible families at each site were randomly assigned either to an intervention group that was offered HFNY services or to a control group that was given information on and referrals to other services. Baseline interviews were conducted with 1,173 women (intervention, n=579; control, n=594). Mothers were again interviewed around the time of the child’s 1st, 2nd, 3rd, and 7th birthdays. At Year 7, field staff completed 942 interviews with the original study participants, or approximately 84% of those still eligible for Year 7 assessment. Data on parenting attitudes, parenting practices, child behavior, access to health care, employment status, and mental health were gathered at the follow-up interviews. Child protective services reports, foster care placements, preventive services,
and federal and state supported benefits data were obtained from administrative sources. For the first time, field staff conducted interviews with the target children, completing interviews with 800 eligible target children. The target child interviews included measures of cognitive functioning, impulsivity and self-regulation, self-reported deviance, and peer relations.

**Obtaining the School Records**

During the Year 7 informed consent process, field staff obtained a release form from study mothers authorizing the researchers to request the target child’s first grade school records. Field staff obtained 766 complete releases. The researchers then sent the complete releases, with a letter explaining the study and the purpose of the request, to more than 175 different schools in 15 states.

There were several difficulties in obtaining the first grade records from the schools. One month after sending the releases, less than one third (31%) of the initial requests to schools had resulted in a record being returned or a notification to the researchers that a record was unavailable. In general, at least two or three follow-up phone calls were required to obtain outstanding records. A substantial number of schools sent report cards for the wrong grade, often the child’s current or previous grade. These schools were contacted to clarify the request for first grade records and determine their availability. One school district, accounting for a substantial portion of the sample, did not retain copies of children’s report cards. The researchers were eventually able to obtain copies of the cumulative record, which included first grade academic progress.

These efforts resulted in 577 useable first grade school records. An additional 14 records did not include academic achievement grades. Schools refused to provide records for 11 children and were unable to locate first grade records for 164 children who had moved to different schools with no records or forwarding information available. The overall school record sample was generally representative of the original baseline sample (Kirkland & Mitchell-Herzfeld, 2012).

**Coding the School Records**

The researchers developed a rubric and coding sheet to code each of the useable school records (Kirkland & Mitchell-Herzfeld, 2012). This task was especially challenging because most schools have their own systems for documenting students’ progress. Studies often use standardized test scores or numeric achievement grades to assess educational outcomes, but these measures are not often administered in first grade, nor are the same tests administered across schools. In the end, the researchers developed a rubric and coding sheet that considered students’ best and worst grades reported for each of several academic subject areas (e.g., reading, writing, math, physical education, music, art, science, and social studies) and for each of a number of behaviors that promote learning (e.g., working or playing cooperatively with others, following oral directions or classroom rules, listening attentively, organizing or managing personal belongings, working independently, and completing home or class work on time). Possible scores for each subject or behavior included above grade level (3), at grade level (2), or below grade level (1). In the early grades, teachers’ ratings of these areas may be particularly informative regarding students’ receptiveness or propensity to learn, as well as predictive of their later academic success (Masten et al., 1995). The researchers also extracted data on the number of days absent and tardy, grade retention and summer school recommendations, special education, remedial and other academic intervention services receipt, and disciplinary actions.

Because of the differences between the report cards and the cumulative records, as well as differences in the information provided by districts, a number of the outcomes the researchers thought they would be able to capture were not available systematically. They were able to collect remarkably complete data for the following elements: number of days absent, whether or not the child was retained in first grade, reading or language arts achievement, math achievement, working or playing cooperatively with others, following oral directions or classroom rules, and completing home or class work on time.

**Home Visiting and Children’s Adjustment to School**

The researchers chose to examine children’s first grade attendance and retention patterns separately from their academic grades because these outcomes are very important indicators of academic adjustment in and of themselves. Fortunately, the school records provided remarkably complete information for these outcomes.

The researchers then created a series of variables that they thought best characterized two groups of children on the basis of the information available from their first grade school records: those who were excelling academically and those who were doing poorly academically. They defined “excelling academically” as scoring above grade level at their best on both reading and math or scoring above grade level at their best on all three behaviors that promote learning for which the researchers had fairly complete information: working or playing cooperatively with others, following directions or classroom rules, and completing home or class work on time. Approximately 24% of the school records sample fell into this category. Because this variable included both academic subjects and behaviors that promote learning, the researchers also created a separate variable for just the academic subjects, called “excelling in reading and math,” which accounted for 17% of the sample, and...
one for just the behaviors that promote learning, called “excelling on all behaviors that promote learning,” which accounted for 11% of the sample. These separations allowed a better understanding of where children were excelling, because it is possible for a child to excel in both academic subjects but not all three behaviors that promote learning (or vice versa), in addition to excelling in all areas. Very few children excelled in every area (4%).

Use of a similar procedure created the variables that defined the group of children who were doing poorly academically except, in this case, the researchers were most interested in instances in which a child was performing poorly in any subject. Thus they defined “doing poorly academically” as at the child’s best scoring below grade level on any of the following: reading, math, working or playing cooperatively with others, following directions or classroom rules, or completing home or class work on time. Of the sample, 32% were doing poorly academically in at least one of the academic subjects or behaviors that promote learning. To be consistent with excelling, the researchers also broke this category out into a group who scored below grade level on reading or math or “doing poorly in reading or math” (24% of the sample) and a group who scored below grade level on any of the behaviors that promote learning (working or playing cooperatively with others, following directions or classroom rules, or completing home or class work on time) or “doing poorly on any behaviors that promote learning,” approximately 17% of the sample.

Next, the researchers analyzed the data to determine whether there were any differences between the HFNY and control groups on the following outcomes: retention in first grade, number of days absent, excelling academically overall, excelling in reading and math, excelling in all three behaviors that promote learning, doing poorly academically overall, doing poorly in reading or math, and doing poorly on any behaviors that promote learning (Kirkland & Mitchell-Herzfeld, 2012). As shown in Figure 1, significant differences between the two groups were identified for the percentage of children who were retained in first grade and increased the percentage of children who were excelling on all three behaviors that promote learning (Kirkland & Mitchell-Herzfeld, 2012). After considering the literature that suggests home visiting programs have the largest and most consistent effects in the area of potential causal pathways (or mediating mechanisms) suggested that the home visiting program supported children’s learning and development by providing parents with the knowledge and skills necessary to be their child’s first teacher.

### Understanding HFNY’s Impact

Given the potential importance of these findings, the researchers conducted a series of analyses to examine factors that might explain how home visiting reduced the percentage of children who were retained in first grade and increased the percentage of children who were excelling on all three behaviors that promote learning (Kirkland & Mitchell-Herzfeld, 2012). After considering the literature that suggests home visiting programs have the largest and most consistent effects in the area of potential causal pathways (or mediating mechanisms) suggested that the home visiting program supported children’s learning and development by providing parents with the knowledge and skills necessary to be their child’s first teacher.

![Figure 1. Effect of Home Visiting on Children’s Adjustment to School](image-url)

- **Children receiving Healthy Families New York home visits**
- **Control group**

<table>
<thead>
<tr>
<th></th>
<th>HFNY</th>
<th>Control Group</th>
</tr>
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<tbody>
<tr>
<td>Retained in 1st grade</td>
<td>3.5%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Excelling on all behaviors that promote learning</td>
<td>7.7%</td>
<td>13.2%</td>
</tr>
</tbody>
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(DuMont et al., 2008). Similarly, more HFNY mothers were found to engage in responsive and cognitively engaging parenting strategies than control mothers during observations of parent–child interactions at Year 3 (Rodriguez et al., 2010).

As the first step in this exploratory analysis, the researchers examined the strength of the relationships between the significant outcomes (e.g., retention in first grade and excelling on all three behaviors that promote learning) and each of the possible mechanisms (e.g., limit setting, frequency of neglect, and responsive and cognitively engaging parenting strategies). Limit setting and neglect at 2 years old, and responsive and cognitively engaging parenting strategies on the delay task at 3 years old were strongly related to retention in first grade. Similarly, limit setting at 2 years old, and responsive and cognitively engaging parenting strategies on the delay task at 3 years old were strongly related to excelling on all three behaviors that promote learning.

The researchers then conducted a series of analyses to assess the degree to which each of the potential mechanisms changed the effect of HFNY on retention in first grade or excelling on all three behaviors that promote learning (Kirkland & Mitchell-Herzfeld, 2012). These analyses suggested that one or more of these potential mechanisms plays a role in explaining, at least in part, how HFNY influences children’s academic adjustment. Although more sophisticated analyses will need to be conducted to better understand the actual relationships, statistical analyses of potential causal pathways (or mediating pathways) suggested that the home visiting program supported children’s learning and development by providing parents with the knowledge and skills necessary to be their child’s first teacher.
Conclusion

The results of this study suggest that home visiting programs do have the capacity to produce positive effects on children’s academic skills when they enter school. Furthermore, data from the HFNY longitudinal study suggest that the changes in parenting practices initiated early by the home visiting program are likely to have played an important role in influencing these later outcomes. The finding related to retention in first grade is especially important because negative outcomes in this domain can contribute to poor outcomes later in life. Children who are retained in grade are at risk for a variety of poor outcomes including lower academic achievement (Jimerson, 2001), increased symptoms of depression and anxiety (Wu et al., 2010), and dropping out of school (Alexander et al., 2003). These negative outcomes may in turn influence children’s later employment and earnings, receipt of welfare, and incarceration rates (Bowman, 2005).

The fact that a greater percentage of home visited children were excelling on all three behaviors that promote learning not only has the potential to reduce a host of negative experiences, but may even promote positive outcomes. In addition to affecting levels of classroom participation and early literacy skills, children’s aggressive and disruptive classroom behaviors also influence their likelihood of acceptance by teachers and peers. Over the long term, studies have shown that children who are rejected by peers are at increased risk for lower academic achievement, grade retention, dropping out of school, and engaging in delinquent and criminal activities (Raver, 2002). Additional studies have shown that behaviors that promote learning, such as attentiveness, organization, and task persistence, are significant predictors of children’s early academic achievement, even taking into account early math and reading achievement (Alexander et al., 1993; Duncan et al., 2007).

Given the previous findings from HFNY-based programs that showed home visiting’s ability to improve parenting outcomes (DuMont et al., 2008; Mitchell-Herzfeld et al., 2005; Rodriguez et al., 2010) and even reduce early problem behaviors in children (Caldera et al., 2007, DuMont et al., 2005; Landsverk et al., 2002), it is likely that this early intervention produced some lasting change on children’s adjustment. This hypothesis is partially supported by the findings from the exploratory analyses that suggest that engagement in positive and appropriate parenting strategies may explain, at least in part, how home visiting influences children’s later academic adjustment.

More practically speaking, the transition to school is likely easier for children of mothers who were offered HFNY services, because these mothers were more likely to set appropriate limits and proactively respond to their children’s needs, all factors that promote behaviors similar to those that are required for success in school settings. These parenting behaviors are similar to those of authoritative parents, who display high warmth and high limit setting in their interactions with their children (Baumrind, 1967). In fact, children whose parents use authoritative parenting strategies have been shown to have more positive outcomes in a variety of domains, including academic achievement (Maccoby & Martin, 1983; Steinberg, Elmen, & Mounts, 1989).

As the field moves forward in gaining a better understanding of the impact that home visiting has on the lives of children and families, it is important to remember that understanding how these programs achieve their outcomes is just as essential. By identifying and integrating activities into practice that are known to produce results, programs become more effective, which in turn promotes better outcomes for the families being served.

References


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