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Results from a randomized trial of the Healthy Families Oregon accredited statewide program: Early program impacts on parenting

Beth L. Green [a,*], Jerod M. Tarte [b], Paige M. Harrison [b], Margaret Nygren [a], Mary Beth Sanders [b]

[a] Center for Improvement of Child and Family Services, Graduate School of Social Work, P.O. Box 751, Portland State University, Portland, OR 97207-0751, United States
[b] NPC Research, 5100 SW Macadam Ave., Ste. 575, Portland, OR 97239-3867, United States

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ABSTRACT

Home visiting programs are a promising early prevention model for improving parenting and reducing children's risk for child maltreatment. However, randomized studies of widely implemented (scalable) home visiting models targeting infants and toddlers remain relatively scarce. Moreover, few studies provide much-needed information about whether home visiting services may be differentially effective for families with different social, demographic, and other characteristics. As part of a larger randomized study of the Healthy Families America home visiting program being conducted in Oregon (Healthy Families Oregon, HFO), we conducted a telephone survey with a randomly selected group of mothers to assess early outcomes at children's 1-year birthday. Eight hundred three first-time mothers (n = 803, 402 randomly assigned to receive the HFO program and 401 control) were interviewed by telephone to assess the effects of the program on service utilization and on early parenting and child risk and protective factors associated with abuse and neglect. Results found that mothers assigned to the Healthy Families program group read more frequently to their young children, provided more developmentally supportive activities, and had less parenting stress. Children of these mothers were more likely to have received developmental screenings, and were somewhat less likely to have been identified as having a developmental challenge. Families with more baseline risk had better outcomes in some areas; however, generally there were not large differences in outcomes across a variety of subgroups of families. Implications of these results for understanding which short-term program impacts are most feasible for early prevention programs, as well as for understanding how these services might be better targeted are discussed.

1. Introduction

Home visiting has become increasingly accepted as an effective strategy for supporting healthy development of infants and toddlers, improving parenting practices, and reducing family and child risk factors associated with child maltreatment, juvenile delinquency, and other negative outcomes (Doggett, 2013; Peacock, Konrad, Watson, Nickel, & Muhajarine, 2013). Federal support for home visiting has greatly expanded the reach of these services through the Maternal, Infant, and Early Childhood Home Visiting initiative (MIECHV, U.S. Department of Health and Human Services, Health Resources and Services Administration, 2013), which has provided over $1.5 billion in funding for home visiting programs nationally. At the same time, however, scholars have repeatedly noted that the outcomes of home visiting programs are modest in magnitude, as well as inconsistent in demonstrating positive outcomes (Daro, 2006; Gomby, Culross, & Behrman, 1999; Howard & Brooks-Gunn, 2009).

The Healthy Families America (HFA) program, although it is widely implemented nationally and one of 13 home visiting models identified as meeting federal criteria for "evidence based" home visitation services, has a history of inconsistent evaluation results, and poses particular challenges in terms of cross-study synthesis of findings. The model, by design, allows considerable local variability in terms of such key program components as target population and curriculum. This local variability is both a strength of the model, in that specific aspects of the program can be tailored to best meet individual community needs, as well as a challenge — in particular, that this local variability makes the synthesis and generalizability of outcomes from studies of tHFA more difficult, and that outcome studies have had more inconsistent outcomes than those of more prescriptive models (Azzi-Lessing, 2011; LeCroy & Krysik, 2011). More research on this widely disseminated and popular model that can better identify and specify how model variations may influence outcomes is needed.

More generally, several recent articles have identified the need for more research that can identify program and family characteristics that may contribute to the variability in program outcomes in the home visiting literature (Azzi-Lessing, 2011; Howard & Brooks-Gunn, 2009; Kahn & Moore, 2010; Peacock et al., 2013). Characteristics that have been highlighted as particularly important in this regard include the quality of service delivery (Azzi-Lessing, 2011; Daro, 2006; Howard & Brooks-Gunn, 2009; Kahn & Moore, 2010; Peacock et al., 2013); the timing of initiation of services (specifically, prenatal vs. postnatal enrollment and enrollment of first-time

* Corresponding author at: P.O. Box 751, Portland State University, Portland, OR 97207-0751, United States. Tel.: +1 503 725 9904.
E-mail address: beth.green@pdx.edu (B.L. Green).

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vs. multiparous mothers; Huntington & Galano, 2013; Kahn & Moore, 2010); community and cultural context (Azzi-Lessing, 2011; Del Grosso, Kleinman, Mraz Esposito, Sama-Miller, & Paulsell, 2012); and effectiveness for families with specific risk factors (e.g., teen parents, depressed and/or psychologically vulnerable mothers; Kahn & Moore, 2010; Rodriguez, Dumont, Mitchell-Herzfeld, Walden, & Greene, 2010) or different levels of cumulative risk (Azzi-Lessing, 2013; Peterson et al., 2013). Below we briefly review features of programs and families that may influence outcomes for HFA and other home visiting models, with a particular emphasis on findings related to HFA programs. The current study will add to our understanding of the effectiveness of home visiting programs, and specifically of the Healthy Families America (HFA) model, by rigorously evaluating early program impacts and by systematically assessing outcomes for key subgroups defined by characteristics that have been hypothesized to influence program effectiveness.

1.1. Quality of program implementation

The quality of program implementation, and in particular the dosage, frequency, and content of home visits is a near-universal challenge for home visiting programs and associated research. Two early randomized studies of the HFA model in Alaska (Caldera et al., 2007; Duggan, Caldera, Rodriguez, Burrell, & Crowne, 2007) and Hawaii (Duggan, Fuddy, et al., 2004; Duggan, McFarlane, et al., 2004; Duggan et al., 2000) found few positive impacts for the program, while at the same time describing significant implementation issues in terms of programs' ability to engage and retain families, and to deliver the expected level of home visits. For example, in Healthy Families Alaska, fewer than 4% of families received 75% of expected home visits during the first two years of the program (Caldera et al., 2007). Further, neither of these programs went through the rigorous quality assurance process now available through HFA accreditation (HFA, 2014). Accreditation involves documentation by external reviewers and site visitors of the extent to which programs meet over 100 research-based standards of practice related to training, supervision, staff characteristics, curriculum implementation, service delivery and retention, and ongoing evaluation (HFA, 2014). While accreditation does not guarantee high quality implementation, it provides a clear structure and process for ongoing quality assurance; programs are re-accredited every five years and those which do not meet the standards risk losing their accredited status (HFA, 2014).

Three more recent randomized studies, of Healthy Families programs in New York (DuMont et al., 2008, 2010), Massachusetts (Easterbrooks et al., 2012, 2013), and Arizona (LeCroy & Krysik, 2011) have examined the effectiveness of accredited HFA programs using rigorous randomized designs. Perhaps not surprisingly, the outcomes of these accredited programs have shown more positive results across a number of domains, including the frequency of positive discipline strategies (DuMont et al., 2008); reduction in harsh and severe parenting (DuMont et al., 2008; LeCroy & Krysik, 2011) and maternal parenting stress (Easterbrooks et al., 2012); and lower maternal alcohol use (LeCroy & Krysik, 2011). These studies suggest that evaluations of HFA programs must clearly identify the quality of program implementation, and call into questions results from programs that do not meet HFA accreditation standards. The current study, while it does not directly assess program implementation, involves a long-standing statewide accredited HFA program, Healthy Families Oregon, with a strong history of data-driven quality improvement (e.g., Green, Tarte, Aborn, & Talkington, 2014).

1.2. Timing of service initiation

Another key program characteristic that has varied across studies of HFA is the point of entry into services, specifically, whether mothers are enrolled prenatally or postnatally, and whether enrollment is restricted to first-time parents. While some have argued that services to first-time mothers may be more effective, and have restricted enrollment to this subgroup (e.g., Olds, 2007) most evaluations of HFA have included both primiparous and multiparous mothers enrolled both prenatally and postnatally (DuMont et al., 2008, 2010; LeCroy & Krysik, 2011) or postnatally only (Duggan, Fuddy, et al., 2004; Duggan, McFarlane, et al., 2004; Duggan et al., 2000). One exception is Healthy Families Massachusetts (HFMA), which enrolls only first-time mothers under age 20; early results for HFMA were promising in terms of reducing parenting stress (Easterbrooks et al., 2012) for this target population. DuMont et al. (2010), in their study of the HFNY program, had sufficient sample size to examine effects specifically for young (<20), first-time, prenatally enrolled mothers, and found some evidence that they may, indeed, show more positive outcomes in terms of reported harsh/severe parenting, compared to similar controls. Rodriguez et al. (2010) similarly found improvements in positive parenting behavior for all mothers who received HFNY services, but found a reduction in negative/harsh parenting only for the young, first-time, prenatally enrolled mothers. Further, comparing prenatally vs. postnatally enrolled mothers, Lee et al. (2009) found a significant effect of HFNY participation on the likelihood of having low birth weight infants (the sample size was not sufficient to also compare first-time vs. subsequent births).

While results of HFA evaluations involving first time mothers have been promising, Huntington and Galano (2013), using a quasi-experimental longitudinal data, directly compared outcomes within the Healthy Families Virginia program for first-time vs. other mothers, and found no evidence of differential program effects. This study did not explore whether there were outcome differences for prenatally vs. postnatally enrolled mothers. Green et al. (2014), compared outcomes within the HFO sample of first-time parents, and found that mothers enrolled prenatally (compared to postnatally) were more likely to report breastfeeding at the child's 6-month birth date and had somewhat lower rates of premature birth, but did not find differences in parenting-related stress. Thus, while there is some evidence that Healthy Families may have particular benefits for young, prenatally enrolled first-time mothers, the findings are mixed at best and lack a clear pattern of either testing for differences within studies or clearly specifying differences in target populations that may help to better synthesize results across studies. The Healthy Families Oregon study will compare outcomes for first-time mothers who are enrolled prenatally vs. postnatally as well as for teenage, prenatally enrolled mothers vs. older, postnatally enrolled mothers (because all mothers are first time, differential effectiveness for primiparous vs. multiparous mothers cannot be assessed).

1.3. Community and cultural context

Azzi-Lessing (2013) notes that the findings of home visiting programs may be substantially impacted by cultural and community norms, citing differences in the racial/ethnic populations served as well as the communities in which studies have been conducted. Several studies of Early Head Start services have compared differences for White, Hispanic, and African American families (Love et al., 2002; Peterson et al., 2013; Raikes, Vogel, & Love, 2013), finding consistent evidence that African American families may benefit most, at least in selected domains. However, few HFA studies have directly examined differential impacts for various racial/ethnic groups; nor have most studies addressed or discussed the substantial culturally differences that may characterize program communities. For example, the Hawaii HFA study involved almost two-thirds Native Hawaiian and Asian/Pacific Islander families (Duggan et al., 2000), while the Alaska study was characterized by a high proportion of Native Alaskan mothers (Duggan et al., 2007). Both HFNY and HFMA enrolled a large proportion of minority participants; however, subgroup effects for race/ethnicity were not reported. Instead, outcome analyses controlled for race, a common statistical approach but one that might serve to mask positive outcomes that occur only within a particular subgroup. The current study will take advantage of the relatively large proportion of Hispanic mothers served by Healthy Families Oregon to systematically compare outcomes for Hispanic vs. White/Caucasian (non-Hispanic) mothers.

1.4. Family and maternal risk factors

While there are numerous family, parental, and social risk factors that may influence the effectiveness of home visiting services, several have received particular attention in the research to date and will be examined in the current research: (1) maternal depression (Ammerman, Putnam, Bosse, Teeters, & Van Ginkel, 2010; Duggan, Berlin, Cassidy, Burrell, & Tandon, 2009; Duggan, Fuddy, et al., 2004; Duggan, McFarlane, et al., 2004; Easterbrooks et al., 2013; Peterson et al., 2013); (2) teen parent status (DuMont et al., 2008; Olds et al., 2002, 2004); and (3) overall level of family