Home Visiting Programs and Their Impact on Young Children

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Topic
Home visiting programs (prenatal and postnatal)

Introduction
Family and home life constitutes the primary context for the development of infants and young children. Within the setting of family and home, caregivers provide the nurturance, supervision and interactions with the social and physical world that infants and young children require to grow and thrive. Many factors can influence the ability of caregivers to meet these basic needs. The age and maturity of the caregivers, their mental and physical health, level of educational attainment and economic status will shape the environment that children experience. Sometimes, the health or development of the child poses caregiving challenges – for instance, when the child has significant health problems or a compromised birth history (e.g. born at low birth weight) or has a developmental delay or disability. Home visiting programs are designed and implemented to support families in providing an environment that promotes the healthy growth and development of their children. Programs may target their services to families and caregivers who are at a particular disadvantage when it comes to establishing and maintaining such an environment. They may also focus on families in which the child is more vulnerable than the typical child because of health or developmental concerns.

Subject
Home visitation is a type of service-delivery model that can be used to provide many different kinds of interventions to target participants.[1] Home visiting programs can vary widely in their goals, clients, providers, activities, schedules and administrative structure. They share some common elements, however. Home visiting programs provide structured services: 1) in a home setting; 2) from a trained service provider; 3) in order to alter the knowledge, beliefs and/or behaviour of children, caregivers or others in the caregiving environment and to provide parenting support.[2]

Home visits are structured in some way to provide consistency across participants, providers and visits and to link program practices with intended outcomes. A visit protocol, a formal curriculum, an individualized service plan and/or a specific theoretical framework can be the basis for activities that take place during home visits. Services are delivered in the living space of the participating family and within their ongoing daily routines and activities. The providers may be credentialed or certified professionals,

paraprofessionals or volunteers, but typically they have received some form of training in the methods and topical content of the program so that they are able to act as a source of expertise for caregivers.[3] Finally, home visiting programs are attempting to achieve some change on the part of participating families – in their understanding (beliefs about child-rearing, knowledge of child development) and/or actions (their manner of interacting with their child or structuring the environment) – or on the part of the child (change in rate of development, health status, etc.). Home visiting also may be used as a way to provide case management, make referrals to existing community services or bring information to parents or caregivers to support their ability to provide a positive home environment for their children.[4]

Problems

Data regarding the efficacy of home visiting programs have been accumulating over the past two decades. Several large-scale home visiting projects have used randomized designs, with multiple data sources and outcome measures, and longitudinal follow-up. These studies have generally found that home visiting programs produce a limited range of significant effects and that the effects produced are often small.[5,6] Detailed analyses, however, sometimes reveal important program effects.[7] For example, certain subsets of participants may experience long-term positive outcomes on specific variables.[8,9] These results and others suggest that in assessing the efficacy of home visiting programs, it is important to include measures of multiple child and family outcomes at various points in time and to collect enough information about participants to allow for an analysis of the program effects on various types of subgroups.

Other difficulties that must be considered when conducting or evaluating research in this area include ensuring the equivalency of the control and experimental groups in randomized trials,[10] controlling for participant attrition (which may affect the validity of findings by reducing group equivalence) and missed visits (which may affect validity by reducing program intensity),[11] documenting that the program was fully and accurately implemented and determining whether the program's theory of change logically connects program activities with intended outcomes.

Research Context

Because home visiting programs differ in their goals and content, research into their efficacy must be tailored to program-specific goals, practices and participants. In general, home visiting programs can be grouped into those seeking medical/physical health outcomes and those seeking parent-child interaction outcomes. The target population may be identified at the level of the caregiver (e.g. teen mothers, low-income families) or the child (e.g. children with disabilities). Some programs may have broad and varied goals, such as improving prenatal and perinatal health, nutrition, safety and parenting. Other programs may have narrower goals, such as reducing the incidence of child abuse and neglect. Program outcomes may focus on adults or on children; providers frequently cite multiple goals (e.g. improved child development, parent social-emotional support, parent education).[12] Researchers need to be certain to identify the intended program outcomes being sought, as well as potential unintended outcomes. The program model needs to be understood as well so that its implementation can be measured accurately.[13] Trying to

uncover the "active ingredient" in successful home visits through analysis of parental engagement is a recent trend in home visiting research.[14,15]

Key Research Questions

Key research questions for home visiting programs include: 1) To what degree does the program achieve its stated goals and objectives for participating families and children? 2) Does the program alter the incidence or prevalence of the target condition in the community? 3) Can the effective program elements be identified and replicated? 4) What factors influence participation and non-participation in the program? 5) What factors influence full and proper implementation of the program? 6) What are the short-term and long-term benefits experienced by participating families relative to non-participating families? 7) What is the cost of the program relative to the benefits it provides to families, to communities and to society?

Research Results

A recent review of large-scale home visiting programs that included rigorous evaluation components concluded:

> These findings are sobering. In most of the studies described, programs struggled to enroll, engage, and retain families. When program benefits are demonstrated, they usually accrued only to a subset of families originally enrolled in the programs, they rarely occurred for all of a program's goals, and the benefits were often quite modest in magnitude.[16]

Research into the implementation of home visiting programs has documented a common set of difficulties across programs in delivering services as intended. First, target families may not accept initial enrolment into the program. Two studies that collected data on this aspect of implementation found that one-tenth to one-quarter of families declined invitations to participate in the home visiting program.[17,18] In another study, 20% of families that agreed to participate did not begin the program by receiving an initial visit.[19] Second, families may not receive the full number of planned visits. Evaluation of the Nurse Home Visitation Project found that families received only half of the scheduled number of visits.[20] Evaluations of the Hawaii Healthy Start and the Parents as Teachers programs found that 42% and 38% to 56% of scheduled visits were actually conducted.[21,22] Even when visits are conducted, the planned curriculum and visit activities may not be presented according to the program model, and families may not follow through with the activities outside of the home visit.[23,24] Finally, in a review of major home visitation research, Gomby, Culross and Berman (1999) found that between 20% and 67% of enrolled families left home visitation programs before the scheduled termination date.

Most notable, perhaps, is that the assumed link between parent behaviour change and improved outcomes for children has not received general support in research conducted to date. In other words, even when home visitation programs succeed in their goal of changing parent behaviour, these changes do not appear to produce significantly better child outcomes.

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A number of model programs were unable to document program impacts through control group designs. An evaluation of Hawaii's Healthy Start program found no differences between experimental and control groups in maternal life course (attainment of educational and life goals), substance abuse, partner violence, depressive symptoms, the home as a learning environment, parent-child interaction, parental stress and child developmental and health measures.[25] However, program participation was associated with a reduction in the number of child abuse cases.

An evaluation of the Parents as Teachers program also failed to find differences between groups on measures of parenting knowledge and behaviour or child health and development.[26] Small positive differences were found for teen mothers and Latina mothers on some of these measures.

Evaluation of the Home Instruction Program for Preschool Youngsters found mixed results regarding program effectiveness. In some cohorts, program participants outperformed non-participants on measures of school adaptation and achievement through second grade, but these results were not replicated with other cohorts at other sites.

Available research indicates that home visiting programs produce better outcomes when they employ more highly trained visitors (such as nurses), are based on theories of development and behaviour change, target empirically derived risk factors and follow a well-constructed curriculum across the series of visits.[27] When these conditions are met, home visiting programs have been shown to lead to positive outcomes. The Nurse Home Visitation Program produced gains in the following areas for the experimental group in a randomized trial.[28] In terms of child safety, homes of home visitation families presented fewer hazards and children had fewer visits to emergency rooms, injuries and ingestions. Parental life course was also affected by participation in the program. Visited families had fewer subsequent pregnancies, a greater time span between pregnancies, greater participation in the workforce and reduced time on government aid programs. The program reduced child abuse and neglect – evaluation found reduced rates of child abuse and neglect at program exit and at 15-year follow up. Last, in terms of parental behaviour, visited families demonstrated reduced cigarette consumption, improved diet and greater use of formal and informal social supports.

Randomized clinical trials have also shown that programs are more likely to have positive effects when targeted to the neediest subgroups in a population. For example, in addition to the whole-sample effects noted above, smokers in the Nurse Home Visitation Program had fewer preterm deliveries, and low-income single teen mothers used less punishment with their children and provided more appropriate play materials. At a 15-year follow-up, children of the last group of mothers had fewer arrests, convictions and behaviour problems. A cost-benefit analysis of the program found no net savings resulting from the program. However, the program produced net savings exceeding costs by a factor of four when only low-income unmarried mothers were considered.[29]

The largest randomized trial of a comprehensive early intervention program for low-birth-weight, premature infants (birth to age three), the Infant Health and Development Program, included a home visiting component along with an educational centre-based program.[30] At age three, intervention group children had significantly better cognitive and behavioural outcomes and improved parent-child interactions. The positive outcomes were most pronounced in the poorest socio-economic group of children and families and in those who participated in the intervention most fully. The Chicago Parent-Child Center Program also combined a structured preschool program with a home visitation component. This program found long-term differences between program participants and matched controls. Participating children had higher rates of high-school completion, lower rates of grade retention and special education placement and a lower rate of juvenile arrests.[31] These studies suggest that a more intensive intervention involving the child directly may be required for larger effects to be seen.

Conclusions

Research on home visitation programs has not been able to show that these programs have a strong and consistent effect on participating children and families, but modest effects have been repeatedly reported. Programs that are designed and implemented with greater rigour seem to provide better results. These results may include changes in parental health and safety behaviour, parenting and discipline and parental life course. Home visitation programs also appear to offer greater benefits to certain subgroups of families, such as low-income single teen mothers. On the whole, home visitation programs have not been shown to result in large changes in important child outcomes, such as birth weight, cognitive development or behaviour problems.

Implications

"One of the clearest messages that has emerged from this program of research is that the functional and economic benefits of the nurse home visitation program are greatest for families at greater risk."[32] This finding implies that universal home visitation programs may be inefficient, unnecessarily using resources that could be better spent on families that are more likely to experience benefits. Programs that are successful with families at increased risk for poor child development outcomes tend to be programs that offer a comprehensive focus – targeting families' multiple needs – and therefore may be more expensive to develop, implement and maintain. In their current state of development, home visitation programs do not appear to represent the low-cost solution to child health and developmental problems that policy-makers and the public have hoped for.[33] However, information that is accumulating about long-term outcomes and effective practices may lead to the development of replicable programs that are capable of producing modest but consistent and positive results for participating target families.

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