



# **Prenatal/Postnatal Home Visiting Programs and Their Impact on the Social and Emotional Development of Young Children (0-5)**

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## **Topic**

*Home visiting programs (prenatal and postnatal)*

## **Introduction**

Social and emotional problems in young children can be traced to mothers' prenatal health,<sup>1,2</sup> parents' caregiving<sup>3,4</sup> and their life-course (such as the timing of subsequent pregnancies, employment, welfare dependence).<sup>5,6</sup> Home visiting programs that address these antecedent risks and protective factors may reduce social and emotional problems in children.

## **Subject**

Home visiting has a long history in Western societies of being used to deliver services to vulnerable populations. In many European countries, home visiting is a routine part of maternal and child health care, although the practice is less established in Canada and the United States.<sup>7</sup>

Home visiting programs vary in their targeted populations, program models and those who deliver the services. Most operate on the assumption, however, that parents' prenatal health behaviours, care of their children and life-course affect their children's social, emotional and cognitive development.<sup>8</sup>

## **Problems**

Prenatal tobacco exposure and obstetrical complications have both been implicated in the development of externalizing behaviour problems in children;<sup>1,2</sup> there is now evidence that the impact of prenatal tobacco exposure is greatest in the presence of a specific genetic vulnerability.<sup>9</sup>

Child abuse, neglect and excessively harsh treatment of children are associated with both internalizing and externalizing behaviour problems and later violent behaviour,<sup>3,4,10</sup> but again, the impact of child maltreatment on severe antisocial behaviour appears to be greatest in the presence of genetic vulnerability.<sup>11</sup>

Family dependence on welfare, large families with closely spaced births, and single parenthood are all associated with compromised social and emotional development in children.<sup>5,6</sup>

### **Research Context**

While some meta-analyses of home visiting programs suggest that many types of home visiting programs can make a difference in reducing adverse outcomes such as child maltreatment and childhood injuries,<sup>12,13</sup> meta-analyses can produce misleading results if there are insufficient numbers of trials of programs represented in the cross-classification of home visiting target populations, program models and visitors' backgrounds.

In making policy decisions about what types of home visiting programs show greatest promise, it makes sense to focus on programs that have produced replicated effects on socially and clinically significant outcomes in at least two separate randomized trials with different populations,<sup>14,15</sup> as this provides the strongest evidentiary foundation upon which to base social policy and practice.

### **Key Research Questions**

Since few trials of home visiting programs have examined children's social and emotional development with any consistent set of outcomes,<sup>16</sup> it makes sense to ask whether programs have affected antecedent risk and protective factors in addition to social and emotional outcomes per se. Specifically, what home visiting program models show the greatest promise for improving pregnancy outcomes, reducing child abuse and neglect, improving parents' life-course and children's social and emotional development?

### **Recent Research Results**

**Improvement of Pregnancy Outcomes.** Most trials of prenatal home visiting have produced disappointing effects on pregnancy outcomes,<sup>16,17</sup> although one program of prenatal and infancy home visiting by nurses has reduced prenatal tobacco use in two trials<sup>18,19</sup> and has reduced pregnancy-induced hypertension in a large sample of African-Americans,<sup>20</sup> an effect that was loosely corroborated by a non-significant reduction in hypertensive disorders of pregnancy in the first trial of the program with European-Americans.<sup>19</sup>

**Reducing Child Abuse and Neglect and Injuries to Children.** The program of prenatal and infancy home visiting by nurses, tested with a primarily white sample, produced a 46% treatment-control difference in the overall rates of substantiated rates of child abuse and neglect (irrespective of risk) and an 80% difference for families in which the mothers were low-income and unmarried at registration.<sup>21</sup> Corresponding rates of child maltreatment were too low to serve as a viable outcome in a subsequent trial of the program in a large sample of urban blacks,<sup>20</sup> but program effects on children's health-care encounters for serious injuries and ingestions were consistent with the prevention of abuse and neglect.<sup>20</sup>

**Maternal Life-Course.** The effect of home visiting programs on mothers' life-course (subsequent pregnancies, education, employment and use of welfare) is disappointing overall.<sup>8</sup>

In the trial of the nurse home visitor program described above, there were enduring effects of the program 15 years after birth of the first child on maternal life-course outcomes (e.g. inter-pregnancy intervals, use of welfare, behavioural problems due to women's use of drugs and alcohol, and arrests among women who were low-income and unmarried at registration).<sup>21</sup> The effects of this program on maternal life-course have been replicated in separate trials with urban blacks<sup>20,22</sup> and with Hispanics.<sup>18</sup>

### **Children's Social and Emotional Problems**

An increasing number of home visiting programs have found beneficial program effects on infants' attachment behaviours and classifications of attachment security.<sup>23-28</sup> Attachment security is considered a reflection of the quality of parental caregiving and is associated with subsequent behavioural adaptation with peers.<sup>29</sup>

The program of prenatal and infancy home visiting by nurses described above produced treatment-control differences in 15-year-olds' arrests, convictions/probation violations, emergent use of alcohol and tobacco and promiscuous sexual activity among youth whose mothers were at greater risk by virtue of their being low-income and unmarried at registration.<sup>30</sup> These findings have not been replicated in subsequent trials because children in later trials of this program have not yet reached the ages where such problems emerge. There are some indications, however, that the program affects early social and emotional development.

In the third trial of the nurse home visitor program, nurse-visited six-month-old infants born to mothers with low psychological resources displayed fewer aberrant emotional expressions (e.g. low levels of affect and lack of social referencing of mother) associated with child maltreatment.<sup>18</sup>

A Finnish trial of universal home visiting by nurses found significant effects on a number of important child behavioural problems.<sup>31</sup>

### **Conclusions**

Few home visiting programs have improved pregnancy outcomes or parental life-course or reduced child abuse and neglect, compromised caregiving and children's social and emotional problems. The programs with the greatest promise in affecting these outcomes have employed professional home visitors, with the strongest evidence coming from trials of programs using nurses. In a trial that included separate treatment groups of nurse and paraprofessional home visitors, the nurses produced effects that were twice as large as the paraprofessionals.<sup>18</sup>

The program of prenatal and infancy home visiting by nurses has produced consistent effects on clinically significant outcomes in three separate trials with different populations living in different contexts, and at different points in U.S. social and economic history. This increases the likelihood that these findings will have applicability to a wide range of different populations within the U.S. today. A significant challenge for evidence-based programs is to find ways of effectively transporting such programs from research settings into community practice.

### **Implications**

If policy-makers and practitioners decide to invest in home visiting services during pregnancy and the early years of the child's life, they should examine carefully the evidentiary foundations of the program in which they invest. Programs vary considerably in their underlying theoretical and empirical foundations, the quality of the program guidelines and their likelihood of success. Before investments are made outside the United States in the program of prenatal and infancy home visiting by nurses, the program should be tested in separate trials in those contexts to determine whether it produces corresponding effects when health and social systems, cultures and populations differ from those examined in the U.S. Investments in trials of the program are likely to represent modest costs compared to investing public resources in relatively expensive programs that may have limited impact beyond the contexts in which they were originally tested.

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