

Review: home visiting programmes that include ≥ 1 postnatal home visit are associated with improved quality of home environment and parenting

Kendrick D, Elkan R, Hewitt M, et al. *Does home visiting improve parenting and the quality of the home environment? A systematic review and meta analysis.* *Arch Dis Child* 2000 Jun;82:443–51.

QUESTION: Do home visiting programmes improve quality of home environment and parenting?

Data sources

Studies were identified by searching Medline (1966 to July 1996), CINAHL (1982 to July 1996), EMBASE/Excerpta Medica (1980 to October 1996), and the *Cochrane Library*. The journal *Health Visitor* was hand-searched (1982–97), bibliographies of relevant reviews were checked, key individuals and organisations were contacted, and advertisements were placed in relevant journals to identify unpublished studies.

Study selection

Randomised controlled trials or quasi-experimental studies that had a control group were included if they evaluated a home visiting programme, the programme included ≥ 1 postnatal home visit, the tasks of the home visit were within the practice of British health visitors (eg, social support and facilitation of mother-child interaction), and outcomes relevant to British home visiting were reported (eg, quality of home environment and parent-child interaction).

Data extraction

Data were extracted on study purpose, design, sample size determination, description of participants, randomisation and stratification, use of a comparison group, management procedures, blinding, loss to follow up, and evaluation. 3 reviewers blinded to study authors, results, and conclusions assessed the quality of individual studies using the Reisch scale (score of 0–1, with higher scores representing higher quality).

Main results

34 studies met the inclusion criteria: 17 reported Home Observation for Measurement of the Environment

(HOME) scores, 27 reported other parenting outcomes, and 10 reported both types of outcomes. 12 of 17 studies reporting HOME scores provided enough data to be included in a meta-analysis, which used Fisher's method based on reported p values. Home visiting was associated with improved HOME scores ($p < 0.001$); results were similar when the analyses were restricted to randomised studies ($p < 0.001$) and higher quality studies (Reisch scores ≥ 0.5) ($p < 0.001$).

21 of the 27 studies that reported other measures of parenting found improvements associated with home visiting. 12 of 17 studies found improved mother-child interactions with home visiting (ie, increased involvement and reciprocal interaction, responsiveness to child's behaviour, quantity and type of interaction, conversation, positive feedback and praise for the child, and a more positive attitude towards the child; and decreased rates of reported difficulties in the relationship and negative interactions). 5 studies found no group differences for mother-child attachment, maternal interaction, parental warmth, verbal praise, and shared activities.

Home visiting was associated with more positive or realistic developmental expectations of the child (4 of 5 studies); more maternal involvement in schooling and more stimulation to promote future success (2 of 2 studies); and parental stimulation of the child using books, games, or toys (3 of 5 studies).

Conclusion

Home visiting programmes that include ≥ 1 postnatal visit are associated with improved quality of the home environment and improved parenting.

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COMMENTARY

Although home visiting programmes for children have various goals, content, and methods, most promote parental caregiving and improving home environments as means of improving children's lives. The findings of this review by Kendrick *et al* are therefore encouraging.

It would be a mistake, however, to conclude that programmes with few visits could produce beneficial effects on important aspects of parenting. Although 2 of the programmes with only 1 visit produced improvements on certain measures of parenting, the clinical significance of those measures must be questioned.

Moreover, the HOME inventory used in the meta-analysis allows parent report to be used for some items, and one of its subscales counts the number of toys in the home. Given that many home visiting programmes provide infants with toys as part of the intervention, one must question the clinical significance of programme effects on this measure alone.

Although the authors of this report have not yet reported whether home visiting programmes improve the health and development of children, earlier reviews suggest that it is in this realm, where the clinical importance of effects is clearer and opportunities for measurement bias reduced, that programme models diverge in their effectiveness.^{1,2} Some have argued that programmes conducted during pregnancy and infancy are more likely to produce clinically important effects when they serve families at greater social risk and when they are delivered by nurses who have frequent contact with families and who follow programme guidelines grounded in research on risk and protective factors and in theories of behavioural change.¹ Although there are too few studies with sufficiently varied sample and programme characteristics to permit statistically stable estimates of how these factors affect programme effectiveness using meta-analysis, it would be a mistake to conclude, on the basis of this review, that all home visiting programmes are equally effective.

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1 Olds D, Hill P, Robinson J, et al. Update on home visiting for pregnant women and parents of young children. *Curr Probl Pediatr* 2000;30:107–41.

2 Gomby DS, Culross PL, Behrman RE. Home visiting: recent program evaluations—analysis and recommendations. *Future Child* 1999;9:4–26,195–223.