Interventions to improve interactions between drug abusing mothers and their drug-exposed infants: a review of the research literature

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CRD summary
This poorly conducted review evaluated interventions to improve interactions between drug-abusing mothers and their infants. The author concluded that abstinence and programmes to enhance self-esteem or self-efficacy are potentially important success factors. Given the substantial methodological flaws in this review, the conclusions and recommendations are likely to be unreliable.

Authors' objectives
To evaluate interventions designed to improve interactions between drug-abusing mothers and their infants.

Searching
MEDLINE, CINAHL and PsycINFO were searched for relevant English language papers appearing between 1980 and June 2003; the search terms were reported. The reference lists of published papers were also checked for further relevant articles.

Study selection
Study designs of evaluations included in the review
There were no explicit inclusion criteria for the study designs. The included studies comprised randomised controlled trials (RCTs), a quasi-experimental study, a survey and qualitative studies.

Specific interventions included in the review
Studies of any intervention comprising a treatment, therapy, procedure, or action implemented by a health professional were eligible for inclusion. The included studies were of home visit-based interventions (with various combinations of education and developmental support delivered by public health nurses, paraprofessional advocates and trained lay visitors) and institution-based interventions (consisting of parenting and vocational classes, drug and social rehabilitation, relaxation therapy, and educational materials). The duration and timing of the interventions varied across the studies.

Participants included in the review
Studies of families with pre-school or older children, and those viewed only as part of personal observations, were excluded from the review. The participants included in the review were substance-abusing mothers of all ages and parity. Some were studied at both prenatal and postpartum stages.

Outcomes assessed in the review
There were no explicit inclusion criteria for the outcomes. A range of outcomes was assessed in the review. These included parental indicators of stress, ongoing substance abuse, life-skills development, depression and self-esteem; and others such as child health and development, feeding status, home environment status, parent-child interaction and child abuse. A variety of measurement scales and methods (including self-report) were described in the paper.

How were decisions on the relevance of primary studies made?
The author did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
The author did not state that they assessed validity.
Data extraction
The author did not state how the data were extracted for the review, or how many reviewers performed the data extraction.

Methods of synthesis
How were the studies combined?
The studies were combined in narrative.

How were differences between studies investigated?
Differences between the studies were investigated in the text according to whether the intervention was home visitation or institution-based.

Results of the review
Ten studies (n=961) were included in the review: 5 RCTs (n=596), a 3-group randomised pre-test post-test design (n=60), a quasi-experimental study (n=170), a non-randomised controlled study (n=61), a prospective survey (n=32) and a qualitative study (n=42).

Home visitation interventions.
A positive effect on maternal emotional responsiveness was noted in one RCT (n=60) from bi-weekly home visits made from the prenatal stage to 18 months postpartum (p=0.033). Other positive effects were noted for reductions in continued drug abuse (p=0.059) and improved compliance with primary care (p=0.069). The content of the intervention and control groups was not specified. Three other studies (n=410) based on a longitudinal RCT focused on weekly and bi-weekly lay visitor educational support over an 18-month period. Significantly higher mental and psychomotor development scores were noted in the intervention group compared with controls who did not receive the education component. Associations between negative findings and socioeconomic conditions were speculated. In other studies, positive results for health and well-being were linked to the presence of an advocate; feeding status appeared to improve where mothers were older, had higher parity, and were actively involved in the programme. A qualitative study reported a positive link between empowerment and the mother's ability to take responsibility.

Institution-based interventions.
One RCT (n=126) based in a high school found that those receiving drug and social rehabilitation, parenting, vocational, and relaxation classes showed improvements in behavioural, mother-infant interactions (Early Social Communication Scale p=0.05; Bayley Mental Development scale p=0.05), child health measurements, and depression over a 3-month period. One hospital-based intervention and one residential intervention were the focus of two other controlled studies (n=230). Both interventions involved an educational component and reported improvements in the Nursing Child Assessment Feeding Scale (p=0.085) and positive mother-child interactions (p<0.01) over a 12-month period. The residential programme also reported significant improvements in measurements of self-esteem.

Authors’ conclusions
Abstinence, along with programmes to enhance self-esteem or self-efficacy, were potentially important success factors in improving mother-infant interactions in this high-risk population.

CRD commentary
A broad review question was followed by sparse inclusion criteria for this review. An appropriate search was conducted, but the restriction to papers published in English meant that language and publication bias could not be ruled out. There was no apparent attempt to minimise biases or errors in the review process and a validity assessment was not carried out. Details of the primary studies were supplied, but their substantial heterogeneity meant that the ability to synthesise the findings was very limited. This was a poorly conducted review, hence the conclusions and recommendations are likely to be unreliable.
Implications of the review for practice and research
Practice: The author did not state any implications for practice.

Research: The author stated that further research (with larger sample sizes) should be carried out to test a model incorporating abstinence and self-esteem enhancement as mediators of improved mother-infant interactions.

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Bibliographic details

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Subject indexing assigned by CRD

MeSH
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Record Status
This is a critical abstract of a systematic review that meets the criteria for inclusion on DARE. Each critical abstract contains a brief summary of the review methods, results and conclusions followed by a detailed critical assessment on the reliability of the review and the conclusions drawn.