A review of teen-tot programs: comprehensive clinical care for young parents and their children

Akinbami L J, Cheng T L, Kornfeld D

Authors' objectives
To review the experience of teen-tot programmes in meeting the goals of improving outcomes and preventing repeat pregnancies.

Searching
MEDLINE, POPLINE and HealthSTAR were searched from January 1980 to August 2000 using the terms 'pregnancy in adolescence', 'parents' and 'program evaluation'. PsycINFO was searched using the terms 'adolescent mothers', adolescent pregnancy' and 'program evaluation'. Bibliographies of articles identified through the search were examined for additional eligible articles.

Study selection
Study designs of evaluations included in the review
There were no pre-specified inclusion or exclusion criteria in relation to the study design. One study was a randomised trial. The remaining three studies were case-control studies, one of which used a control group of mothers who had delivered a year earlier.

Specific interventions included in the review
Studies were eligible for inclusion if they described a programme including clinical health supervision, family planning and support for teenage parents, such as assistance with staying in school or obtaining community services. Each of the included studies had multidimensional interventions. These included well-child health visits; 24-hour on call system to an interdisciplinary team; individual counselling about financial management, school and work; and social worker reviewed family planning methods with referrals to a birth control clinic.

Participants included in the review
Teenage parents were specified for inclusion. It was unclear whether the studies included only mothers or whether fathers were also included; based on the types of outcomes used it might be surmised that it was mothers only. The participants in the included studies were aged from under 17 years to under 20 years, with racial characteristics ranging from 80% white to 100% black. The one study which provided information on the characteristics of the control group matched for maternal and child characteristics. The participants in the intervention group were recruited from different sources in each study: urban hospitals, a clinical adolescent programme, self referral or community referral, and an urban teaching hospital. One of the control groups was recruited from a Woman Infant Children programme, one from an adult obstetric clinic and one from an urban teaching hospital.

Outcomes assessed in the review
There were no pre-specified inclusion or exclusion criteria in relation to the outcomes. The authors examined the efficacy of the programmes in meeting the three goals that all the studies had in common, namely preventing repeat pregnancies and school drop-outs, improving infant and teenage health outcomes, and improving the adequacy of teenagers in the parental or caretaking role.

How were decisions on the relevance of primary studies made?
Two investigators independently reviewed the results of each of the searches to identify articles potentially eligible for inclusion. The authors do not specify how any disagreements were dealt with.

Assessment of study quality
Each article was rated in four areas:
the statement of goals used to develop the programme;

the statement of the intervention content, i.e. the parameters, intensity and target of the intervention, and the staff involved in conducting the intervention;

description of the study design, i.e. the size and characteristics of the target and comparison groups, programme duration and data collection procedures and intervals; and

programme impact evaluation, i.e. the use of reliable outcome measures and appropriate impact analysis, including statistical significance.

The authors did not specify the form of rating used nor systematically report on each of these areas. Three investigators assessed each paper for quality. The authors do not explicitly state whether this was carried out independently or how any disagreements were dealt with.

Data extraction
The authors do not state how the data were extracted for the review, or how many of the reviewers performed the data extraction. The abstracted data included the following: the duration of the intervention; the number, age, race and source of referral of the participants; description of the intervention components and comparison; and outcomes such as child immunisation, contraceptive use, repeat pregnancy, school enrolment, maternal and infant morbidity, employment and emergency room visits.

Methods of synthesis
How were the studies combined?
A narrative synthesis was carried out.

How were differences between studies investigated?
The differences between the studies were described in the narrative. The table provided allows the programme characteristics, interventions, outcomes, and strengths and weaknesses to be compared between studies.

Results of the review
Four studies (n=1,197), including 1 randomised controlled trial (n=243), were included.

Repeat pregnancy rates.

Four studies reported a decreased pregnancy rate (12 to 26 weeks postpartum), which was statistically significant for 3 of the studies. Repeat pregnancy (intervention versus control) in these 3 studies was 16 versus 38%, 9 versus 70%, and 12 versus 28%. In the fourth study, the data were not reported separately for each of the outcomes; instead a composite score was calculated for the 10 outcomes.

School attendance.

The outcomes for maternal school attendance varied. Two of the studies reported that participants in the intervention group were significantly more likely to be attending school: one of these studies measured school enrolment at 6 months (86 versus 66%) and the other measured school attendance (77 versus 38%). The latter also measured school completion, but data were only provided for the intervention group. The third study used a composite score. The authors reported that the fourth study found no significant difference (more than 50% of both groups returned to school).

Health outcomes.

In general, infant health outcomes were favourable. Two studies reported higher rates of clinic attendance in the intervention group than in the control group: 75 versus 18%, and 40 versus 22%. Three studies reported higher
immunisation completion for the intervention group versus the control group: 91 versus 46% fully immunised at 6 months, and 33 versus 18% immunised at 18 months; no data were provided for the remaining study. One study reported more adequate weight and height for age (97 versus 83% between 5th and 95th percentiles at 6 months), while another study reported lower rates of injury and illness (data not reported). Only one study reported maternal health outcomes; maternal morbidity was significantly lower among the intervention group participants (data not reported).

Caretaking skills.

Only one study reported outcomes for interventions designed to improve caretaking skills. The study measured the use of preventive health behaviours such as using car seats. There were no significant differences between the intervention and control groups (data not reported).

Authors’ conclusions
The teen-tot programmes had moderate success in preventing repeat pregnancies, helping teenage mothers continue their education, and improving parent and infant health over 6 to 18 months. However, study weaknesses may have had an impact on the observed effectiveness.

CRD commentary
This review set out a fairly well-defined research question in terms of the intervention. Possibly as a reflection of the variety of programmes used, the inclusion criteria for the type of programme was fairly broad and no further inclusion or exclusion criteria were applied in terms of the types of outcomes, participants, control groups or study design. The literature search was reasonably extensive in terms of the number of databases searched, although the search terms used were fairly limited; this could possibly have resulted in studies not being identified. Bibliographic searches of the identified studies were also carried out. Other retrieval methods such as locating unpublished literature, handsearching, speaking to experts in the field and citation searching, were not used. Therefore, it is possible that studies were missed. The titles and abstracts, and then full articles, were reviewed by more than one investigator. However, although one of the studies did not meet the pre-specified inclusion criteria, it was included because it was a randomised study.

The validity assessment was weak in a number of aspects. The four areas the studies were reported to have been rated on provided only a limited quality assessment of the included studies. Methodological weaknesses, such as the possibility of bias due to the limitations in study design, the consequences of attrition and limited information about the care received by the control groups, were discussed in a general sense in the discussion, but the studies were not systematically rated on these criteria. Study heterogeneity was not taken into consideration in the narrative synthesis. Detailed information was provided on some aspects of the studies such as the type of intervention; more detail on other areas would have been useful.

The authors note, justifiably, in the discussion that there was limited evidence upon which to judge the evidence of teen-tot programmes. However, they concluded that they had moderate success in preventing repeat pregnancies, helping teen mothers continue their education and improving teenage and infant health. The conclusions are perhaps overly positive given the limitations of the studies that were highlighted. However, the authors acknowledged that study limitations might have reduced or accentuated observed effectiveness. They also drew attention to unanswered questions, such as the efficacy of separate programme components and the long-term sustainability of benefits. However, while teen tos programmes may be very worthwhile, it seems unwarranted on the basis of the evidence presented in the review to say that there should be increased support and funding.

Implications of the review for practice and research
Practice: The authors state that there should be increased support and funding for teen-tot programmes.

Research: The authors call attention to the need for more and better quality evaluations of programmes for pregnant and parenting teenagers. The authors identify areas for improvement in evaluations of such programmes.
Bibliographic details

PubMedID
11572313

Indexing Status
Subject indexing assigned by NLM

MeSH
Adolescent; Comprehensive Health Care; Female; Health Services Research; Humans; Infant; Infant, Newborn; Maternal-Child Health Centers; Patient Dropouts; Pregnancy; Pregnancy in Adolescence; Treatment Outcome

AccessionNumber
12001006166

Date bibliographic record published
31/05/2003

Date abstract record published
31/05/2003

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.