

Health Development Agency

Teenage pregnancy and parenthood: a review of reviews

Introduction

It is widely understood that teenage pregnancy and early motherhood can be associated with poor educational achievement, poor physical and mental health, social isolation, poverty and

related factors. There is also a growing recognition that socio-economic disadvantage can be both a cause and a consequence of teenage parenthood.

Teenage pregnancy and parenthood in the UK

The UK has the highest rate of teenage pregnancies in western Europe (UNICEF, 2001). Throughout most of the region, birth rates to teenage mothers fell during the 1970s, but UK rates have been fairly consistent, staying relatively stable since 1969 (Botting et al., 1998). Between 1998 and 2000, the under 18 and under 16 conception rates have fallen by over 6%, and:

- In 2000, 38,690 under 18 year olds in England became pregnant
- 44.8% of these ended in legal abortion
- 7,617 of these conceptions were to under 16s
- 54.5% of conceptions to under 16s ended in legal abortion. (Office for National Statistics, 2000)

In 1998, the Social Exclusion Unit (SEU) was asked by the Prime Minister to study the causes of teenage pregnancy and to develop a strategy to reduce the high rates of teenage pregnancy and parenthood in England. The SEU published its report, *Teenage Pregnancy* (SEU, 1999), and this provides a comprehensive review of the area and identifies the most effective approaches to tackle teenage pregnancy.

The main aims of the national strategy are to:

- Reduce the rate of teenage conceptions, with the specific aim of halving the rate of conceptions among under 18 year olds by 2010. *The NHS Plan* provides a target for an interim reduction of 15% by 2004
- Set a firmly established downward trend in the under 16 conception rates by 2010
- Reduce inequality in rates between the 20% of wards with the highest rate of teenage conception and the average wards by at least 25%
- Increase to 60% the participation of teenage parents in education, training and employment to reduce their risk of long-term social exclusion by 2010.

That report sets out a ten-year national strategy for meeting these aims, and a concerted programme of national and regional work, coordinated by the cross-government Teenage Pregnancy Unit (TPU), is underway.

This briefing presents the current evidence from selected systematic and other reviews and meta-analyses published since 1996. The full review – Swann, C., Bowe, K., McCormick, G., Kosmin, M. (2003) *Teenage pregnancy and parenthood: a review of reviews*. London: HDA – will be updated regularly as new evidence becomes available. It can be accessed via: www.hda-online.org.uk/evidence It seeks to pull together learning from review-level data about effective interventions to reduce the rates of teenage pregnancy and improve the outcomes for teenage parents.

Who becomes a teenage parent?

Girls and young women from social class V are at approximately ten times the risk of becoming teenage mothers as girls and young women from social class I. Young people with below average achievement levels at ages 7 and 16 have also been found to be at significantly higher risk of becoming teenage parents (Kiernan, 1995).

We know less about who becomes a young father (but the above refers to young parents). Evidence suggests (Kiernan, 1995) that young fathers (defined as those who became fathers before the age of 22), like young mothers, are more likely to come from

lower socio-economic groups, from families that have experienced financial difficulties, and are more likely than average to have left school at the minimum age.

There is some evidence that certain groups of young people seem to be particularly vulnerable to becoming teenage parents. They include:

- Young people in or leaving care (Biehal, 1995)
- Homeless young people (JRF, 1995)
- School excludees, truants and young people under-performing at school (Kiernan, 1995)

- Children of teenage mothers (Botting et al., 1998)
- Members of some ethnic minority groups (Botting et al., 1998; Berthoud, 2001) – for example, Caribbean, Pakistani and Bangladeshi women are more likely than white women to have been teenage mothers
- Young people involved in crime (Botting et al., 1998)
- Conception rates are slightly higher in the north of England than the south, although there is a lot of regional variation (Botting et al., 1998).

What happens to teenage parents and their children?

Although parenthood can be a positive and life-enhancing experience for some young people, it may also bring a number of negative consequences for young parents and their children.

These factors include:

- Negative short, medium and long-term health and mental health outcomes for young mothers (Botting et al., 1998)
- Education and employment – as well as being more likely to have problems at school before they become pregnant, young mothers are less likely to complete their education, have no qualifications by age 33, be in receipt of benefits and if employed be on lower incomes than their peers (SEU, 1999)
- Housing – 80% of under 18 mothers live in someone else's household (eg parents) (Botting et al., 1998), and teenagers are more likely to have to move house during pregnancy
- Family – teenage mothers are more likely to be lone parents (Kiernan, 1995), and more likely to find themselves in the middle of family conflict (SEU, 1999)

- Young fathers – although there is little data on this group, health, economic and employment outcomes for young fathers post-parenthood seem to be similar to those of young mothers (Kiernan, 1995).

There may also be negative outcomes for the babies and children of teenage mothers:

- Babies tend to have a lower than average birth weight (Botting et al., 1998)
- Infant mortality in this group is 60% higher than for babies of older women (Berthoud, 2001)
- Some 44% of mothers under 20 breastfeed, compared to 64% of 20–24 year olds and up to 80% of older mothers (Botting et al., 1998)
- Children of teenage mothers are more likely to have the experience of being a lone parent family, and are generally at increased risk of poverty, poor housing and having bad nutrition (Botting et al., 1998)
- Daughters of teenage mothers may be more likely to become teenage parents themselves (Botting et al., 1998; Kiernan, 1995).

Methodology

The Evidence Briefing series from the HDA presents the findings of reviews of reviews on the current evidence for the effectiveness of interventions to improve health and reduce health inequalities. The following procedure was used to identify reviews to be included in the briefing:

- Systematic searches of the literature for published reviews
- Selection of relevant systematic and other reviews and meta-analyses
- Critical appraisal of the selected reviews
- Synthesis of the findings into an evidence briefing.

The Evidence Briefing series is intended to inform policy and decision-makers, NHS providers, public health physicians and other public health practitioners in the widest sense. Further work will be done to turn the summary of evidence presented here into advice for practice.

The evidence in this briefing on the prevention of teenage pregnancy and improving outcomes for teenage parents is derived primarily from systematic reviews, meta-analyses and literature (also known as narrative) reviews, reporting generally on intervention evaluation studies, and published since 1996. The evidence briefing benefited from discussion and guidance from an expert reference group, and was subject to ongoing internal and external appraisal and peer review.

The reviews included in the briefing for consideration were undertaken primarily in the US and UK. Reviews were classified by the authors into categories 1, 2 or 3, depending on their methodology. The categories were defined as follows:

- 1 Typically a systematic review or meta-analysis where research questions, methods and analysis are completely

transparent and replicable

- 2 A review in which there is some clear methodological and analytical data, although not sufficient information for the searches, selections and analysis to be replicated
- 3 Typically a literature review or synthesis where the research questions are highly relevant to the area, but little or no methodological or analytical information is presented.

In all, 21 reviews were included and their findings synthesised. These findings are presented with reference to the categories described above.

A full description of the procedures and quality standards for the Evidence Briefing series may be found at www.hda-online.org.uk/evidence

Findings

Reducing the rate of teenage pregnancies

What we know

The findings presented here summarise those presented in the full report. The full report should be referred to for a detailed discussion of the evidence.

There is some consensus about what works to reduce teenage pregnancy rates. Good (strong evidence contained in category 1 or 2 reviews) evidence was found for the effectiveness of the following interventions aimed at preventing unintended teenage pregnancies:

- School-based sex education, particularly linked to contraceptive services (measured against knowledge, attitudes, delaying sexual activity and/or reducing pregnancy rates)

- Community based (eg family or youth centres) education, development and contraceptive services
- Youth development programmes: although the evidence base for this was small, reviews indicate that programmes focusing on personal development (programmes that support and teach confidence, self-esteem, negotiation skills), education and vocational development may increase contraceptive use and reduce pregnancy rates
- Family outreach: some good evidence was found for the effectiveness of including teenagers' parents in information and prevention programmes.

Some good (category 1 or 2) review-level evidence was also found for the following characteristics of effective services and interventions:

- Focusing on improving contraceptive use and at least one other behaviour likely to prevent pregnancy and/or STI transmission
- Long-term services and interventions, tailored to meet local needs of young women and young men, with clear and unambiguous information and messages
- Focusing on local high risk groups
- Including interpersonal skills development – such as negotiating and refusal skills – in programmes, and allowing young people to practise these skills
- Taking key opportunities – eg if an adolescent uses a clinic service and receives a negative pregnancy test – for education and information
- Basing interventions and programmes on theory-driven approaches, with clear behavioural goals and outcomes, and using participatory, inclusive teaching methods

- Checking that interventions and services are accessible to young people – in terms of location, opening hours and so on
- Selecting and training staff who are committed to programme and service goals and to the needs of young people, who will respect the confidentiality of young people where possible
- Making sure that information and education is in place before young people become sexually active
- Working with teenage 'opinion leaders' and peer group influences
- Making sure that interventions are age appropriate
- Encouraging a local culture in which discussion of sex, sexuality and contraception is permitted
- Joining up services and interventions aimed at preventing pregnancy with other services for young people, and working in partnership with local communities.

However, one recent systematic review of randomised controlled trials of interventions to reduce unintended teenage pregnancies (DiCenso et al., 2002) found little, if any, evidence for the efficacy of interventions, with the exception of a multi-factor approach to life skills and pregnancy prevention. This review included only interventions which had been evaluated with randomised controlled trials, a very small and narrowly defined proportion of the available evidence, which may bias its overall results. Further research is needed to look in more detail at the types of studies reviewed by this paper, and a discussion of this review may be found in the full version of this briefing.

There was no strong (1 or 2 rated) evidence for the effectiveness of abstinence-based interventions (those that focus only on promoting sexual abstinence), and in fact DiCenso et al. (2002) found evidence that abstinence-only approaches had the opposite effect, actually increasing

pregnancy rates in the partners of male participants. On the whole, our findings indicate that abstinence approaches (despite heavy funding provision in the US) do not work, and programmes including abstinence messages only seem to be effective if messages about contraceptive services and other practical issues are included.

Cost effectiveness

Good evidence (category 1) was found to indicate that effective contraceptive services are highly cost effective in preventing teenage pregnancy. However, information on the cost effectiveness of other types of interventions was not identified.

Improving outcomes for teenage parents

What we know

Only three reviews dealt explicitly with improving outcomes for teenage parents – one category 1 review and two category 3 – so there is very little evidence to draw on here. From the three (NHS CRD, 1997; Nitz, 1999; Card et al., 1999) we found evidence to support the following:

- Good antenatal care can improve health outcomes for mother and child, and are cost effective (category 1 evidence)
- Home visiting, parental and psychological support can improve health and welfare outcomes for mother and child (category 1), and may prevent or delay repeat pregnancies (category 3 evidence). However, home visiting is not a single or uniform intervention, it is a mechanism for the delivery of a variety of interventions directed at different outcomes. Further work will need to be undertaken about what is meant by home visiting in a UK context
- Improving housing for young parents and their children will increase health outcomes (category 3 evidence)

- Support for young parents to continue education will improve educational and employment outcomes for parents, mother/child interaction, and social outcomes for children. Early educational interventions for disadvantaged children can improve long-term outcomes (category 3 evidence)
- Clinic-based healthcare programmes for teenage mothers and their children can improve their health outcomes (category 3 evidence).

What we don't know

Methodological issues

There are a number of methodological problems with the review-level evidence base on preventing teenage pregnancy and improving outcomes for teenage parents that need to be kept in mind. These are:

- Most of the reviews we considered commented on the poor methodological quality of the studies they reviewed
- Many evaluation studies considered by reviews are actually measuring different things, making a synthesis of their findings very difficult to achieve
- There is a notable difference in findings between reviews that looked at all kinds of evaluation studies, and those that looked only at randomised controlled trials
- Reviews tend to rely on traditional evaluation studies, and often do not consider other types of study that might be relevant or useful, eg action research, qualitative research and expert opinion
- It is difficult to determine 'what works' to prevent teenage pregnancy, when some teenage pregnancies may be wanted and planned, others may be unplanned but wanted, and yet others may be unwanted and unplanned – there are many different pathways to parenthood for young people, and more research is needed to understand them better.

Findings (continued)

Gaps in the evidence base

We identified a number of areas in which little or no evidence was found, where research is needed:

- Intervention and evaluation of interventions to prevent pregnancy aimed at specific vulnerable groups, eg young people in/leaving care, school excludees/persistent truants, children of teenage parents, young people from some black and minority ethnic groups (primarily Caribbean, Pakistani and Bangladeshi)
- Intervention and evaluation of interventions aimed at improving outcomes for all teenage parents – we found very little review-level evidence on this
- Interventions and evaluations of interventions that are based in the UK – the majority of studies considered

by the reviews we identified were US-based

- Young men are often completely absent in the literature – there is an urgent need to find out more about the paths to early fatherhood, what works to prevent young fatherhood, and how best to support young fathers to improve their health, social, educational and employment outcomes
- The nature of the relationship between poverty, deprivation and teenage parenthood – it is not clear to what extent the effects of teenage pregnancy are determined or mediated by poverty.

In addition to these gaps, there are a number of areas that would merit further development and research:

- Youth development projects (Kirby, 1999) appear to have some promise for preventing pregnancy and improving contraceptive use; however, virtually all of the research considered by reviews here was based and carried out in the US
- The effectiveness of Internet-based interventions, because this medium may be particularly suited to working with young people
- Given the long-term costs that teenage parents incur in welfare and health, further work on the cost effectiveness of interventions might help to promote more government investment.

Other evidence briefing summaries

This Evidence Briefing summary is part of a series of publications covering a wide range of public health topic areas to be published by the HDA over the next few years. Subjects will include:

- Alcohol
- Smoking
- HIV
- STIs
- Drugs
- Health impact assessment
- Mental health
- Accidental injury
- Depression in later life
- Low birth weight
- Mobility in later life
- Breastfeeding
- Nutrition in pregnancy.

Evidence Briefings provide detailed expositions of the strengths and weaknesses of the evidence, identify gaps in the evidence, analyse future primary and secondary research needs, and discuss the implications of the

evidence for policy and practice. Each briefing is accompanied by a freestanding summary. The documents are also supported by the HDA website www.hda-online.org.uk/evidence

Electronic copies of the original systematic reviews upon which the Evidence Briefings draw as well as full bibliographical information about the relevant primary sources will also be found on the website.

Evidence Briefings provide a comprehensive, systematic and up to date map of the evidence base for public health and health improvement, with a particular focus on reducing inequalities in health. They are a resource that will be used by a variety of audiences as well as being source documents from which a range of other products may be developed.

*Reviews included in the briefing***Category 1 reviews**

NHS Centre for Reviews and Dissemination, University of York (1997). Preventing and reducing the adverse effects of unintended teenage pregnancies. *Effective Health Care* 3 (1): 1-12.

DiCenso, A., Guyatt, G., Willan, A. and Griffith, L. (2002). Interventions to reduce unintended teenage pregnancies among adolescents: a systematic review of randomised controlled trials. *British Medical Journal* 324 (7531): 1426.

Category 2 reviews

Cheesbrough, S., Ingham, R. and Massey, D. (1999). *Reducing the rate of teenage conceptions. A review of the international evidence: the United States, Canada, Australia and New Zealand*. London: Health Education Authority.

Franklin, C., Grant, D., Corcoran, J., O'Dell M. and Bultman, L. (1997). Effectiveness of prevention programs for adolescent pregnancy: a meta-analysis. *Journal of Marriage and the Family* 59: 551-67.

Grunseit, A. (1997). Sexuality education and young people's sexual behaviour: a review of studies. *Journal of Adolescent Research* 12 (4): 421-53.

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Kirby, D. (2001). *Emerging Answers: Research Findings on Programs to Reduce Unwanted Teenage Pregnancy*. Washington DC: National Campaign to Prevent Teenage Pregnancy.

Peckham, S., Ingham, R. and Diamond, I. (1996). *Teenage Pregnancy: Prevention and Programmes*. Southampton: Institute for Health Policy Studies.

Category 3 reviews

American Academy of Pediatrics (2001). Condom use by adolescents: Committee on Adolescence. *Pediatrics* 107 (6): 1463-9.

Card, J. J. (1999). Teen pregnancy prevention: Do any programs work? *Annual Review of Public Health* 20: 257-85.

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Manlove, J., Terry-Humen, E., Papillo, A. R., Franzetta, K., Williams, S. and Ryan, S. (2002). *Preventing Teenage Pregnancy, Childbearing and Sexually Transmitted Diseases: What the Research Shows*. Child Trends Research Brief. Washington DC: Child Trends.

Nitz, K. (1999). Adolescent pregnancy prevention: a review of interventions and programs. *Clinical Psychology Review* 19 (4): 457-71.

Pierre, N. and Cox, J. (1997). Teenage pregnancy prevention programs. *Current Opinion in Pediatrics* 9 (4): 310-6.

Reif, C. J. and Elster, A. B. (1998). Adolescent preventive services. *Primary Care; Clinics in Office Practice* 25 (1): 1-21.

Roffman, D. M., Shannon, D. and Dwyer, C. (1997). Adolescents, sexual health, and the Internet: possibilities, prospects, and challenges for educators. *Journal of Sex Education and Therapy* 22 (1): 49-55.

Thomas, M. H. (2000). Abstinence-based programs for prevention of adolescent pregnancies: A review. *Journal of Adolescent Health* 26 (1): 5-17.

Other reviews, books and reports

Berthoud, R. (2001). Teenage births to ethnic minority women. *Population Trends* summer 104: 12-7.

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Botting, B., Rosato, M. and Wood, R. (1998). Teenage mothers and the health of their children. *ONS Population Trends* 93: 19-28.

Joseph Rowntree Foundation (1995). *Social Background and Post-birth Experiences of Young Parents*. London: JRF.

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Authors of this review:

C Swann, K Bowe, G McCormick & M Kosmin

Acknowledgements:

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Contact:

website: www.hda-online.org.uk
email: communications@hda-online.org.uk

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