

# Teenagers and risk-taking: pregnancy and smoking

CLARE J SEAMARK

DENIS J PEREIRA GRAY

## SUMMARY

*Teenage pregnancy and teenage smoking are both areas of concern in the United Kingdom. This study found that girls who had had a teenage pregnancy were more likely to smoke than those who had not conceived as teenagers.*

*Keywords: teenagers; pregnancy; smoking; risk factors.*

## Introduction

The *Health of the Nation* targets require both a reduction in the rate of pregnancy in the under-16s and a decrease in the number of teenagers smoking.<sup>1</sup> Smoking and early sexual intercourse can be seen as 'risk-taking behaviours' and teenagers are often seen as life's 'risk-takers'.<sup>2</sup> Despite knowing the health risks associated with these activities they still partake, possibly because the consequences seem distant. Smoking was chosen as a potential risk-taking activity, as any smoking can be seen as potentially dangerous.

The aim of this study was to compare recorded smoking habits of girls who had had a teenage pregnancy with those of girls who had not become pregnant as teenagers. This was part of a larger study looking at teenage pregnancy in a general practice setting (Seamark C, MPhil thesis, University of Exeter, 1996).

## Method

The setting for the study was a group practice serving a population of over 14 000 in the east Devon market town of Honiton and surrounding rural area. The study group comprised all girls under the age of 20 years on 31 December 1995 who had had a teenage pregnancy. This was compared with an age/sex/general practitioner matched control group of girls who had not experienced a teenage pregnancy. There was no more than five months' difference in age between a girl and her control. All patient records are computerized and a patient profile screen, used to record lifestyle factors such as smoking, was searched for each girl.

At present, the practice does not routinely collect information on social class from patients. Particularly in the case of teenage girls, it is hard to know how best to apply the traditional model of using the occupation of the head of the household, who is usually male: should this be the girl's father or her partner? For the purposes of this study, whether or not the girl came from a rented or owner-occupied home was used as a proxy for socio-economic status.

## Results

Smoking history could be found for 36 of the 37 girls (97%) in

the teenage pregnancy group and for 33 of the girls (89%) in the control group. The results are shown in Table 1. In the teenage pregnancy group, 22 of the 36 (61%) were recorded as having smoked compared with only seven out of 33 (21%) in the control group. This showed a statistical significance of  $P < 0.01$  using the chi-square test with Yates' correction for small numbers.

There were more girls in the study group who came from rented homes, but this was not statistically significant. Within the control group, more of the smokers came from rented homes but there were very few smokers; in the study group there was no difference.

## Discussion

This study indicates that teenagers who become pregnant are more likely to have smoked at some stage than those who do not conceive as teenagers. There is no particular reason why there should be a difference in the reporting of smoking habits between the two groups. An earlier study of 456 teenage mothers in England and Wales found that only 29% had never smoked.<sup>3</sup> A more recent study from the United States found smoking levels in teenagers actually increased during pregnancy from 59% at conception to 62% at the end.<sup>4</sup>

Teenage pregnancy and smoking are not new problems. The rate of teenage pregnancy in England and Wales is lower now than it was 25 years ago. Many of the smokers who are dying of smoking-related diseases today started smoking as teenagers. What is of concern is that, despite knowing the dangers, many still start to smoke. A study of teenagers in general practice found that 28% of 17-year-olds were regular smokers and self-reported smoking was confirmed by saliva cotinine concentrations.<sup>5</sup> A recent questionnaire study of 7722 pupils born in 1979 found that 67% had smoked at some time and 36% had smoked in the past 30 days, and that this level was higher for girls than for boys.<sup>6</sup> A study of 14- to 16-year-olds in Oxfordshire found that, although 98% thought that smoking harmed health, 21% admitted to smoking.<sup>7</sup> In Sweden, the most important cause of social smoking among teenage girls was a dismissive attitude to the dangers of smoking.<sup>8</sup>

A link between smoking and early sexual intercourse has also been suggested. A questionnaire study of French secondary school pupils found that smoking was the best predictor of teenage sexual activity.<sup>9</sup> A related study has already shown that teenagers who become pregnant in the 1990s are more likely to have a mother who also had a teenage pregnancy than girls who do not become pregnant.<sup>10</sup> There did not appear to be any association in the study or control group between smoking and having a mother who had a teenage pregnancy.

## Conclusion

Although the numbers in this study were not large and it was only carried out in one practice, the differences between the levels of smoking in the two groups are striking. It would appear from this and other studies that 'risk-taking behaviours' such as smoking, early sexual intercourse, and teenage pregnancy may have links, and this may be helpful for those seeking to achieve the *Health of the Nation* targets.

C J Seamark, MPhil, MRCP, MFFP, research fellow; and D J Pereira Gray, MA, FRCP, professor, Institute of General Practice, University of Exeter. Submitted: 24 January 1997; accepted: 11 September 1997.

© *British Journal of General Practice*, 1998, 48, 985-986.

**Table 1.** Numbers and percentages of smokers in the study and control group.

	Smoker	Non-smoker	Total	% smokers
Study Group	22	14	36	61
Control Group	7	26	33	21
Total	29	40	69	42

Chi-square test with Yates' correction and 1 df:  $\chi^2 = 9.67$ ;  $P < 0.01$ .

### References

- Secretary of State for Health. *The Health of the Nation. A strategy for Health in England*. London: HMSO, 1992.
- Tonkin RS. Adolescent risk-taking behaviour. *J Adolesc Health Care* 1987; **8**: 213-220.
- Simms M. Teenage mothers and smoking. *Health Education Journal* 1983; **42**: 87-89.
- Cornelius MD, Geva D, Day NL, et al. Patterns and covariates of tobacco use in a recent sample of pregnant teenagers. *J Adolesc Health* 1994; **15**: 528-535.
- Townsend J, Wilkes H, Haines A, Jarvis M. Adolescent smokers seen in general practice: health, lifestyle, physical measurements, and response to anti-smoking advice. *BMJ* 1991; **303**: 947-950.
- Miller PMcC, Plant M. Drinking, smoking and illicit drug use among 15 and 16 year olds in the United Kingdom. *BMJ* 1996; **313**: 394-397.
- Macfarlane A, McPherson A, McPherson K, Ahmed L. Teenagers and their health. *Arch Dis Child* 1987; **62**: 1125-1129.
- Herlitz C, Westholm B-M. Smoking and associated factors among young Swedish females. *Scand J Prim Health Care* 1996; **14**: 209-215.
- Choquet M, Manfredi R. Sexual intercourse, contraception and risk-taking behaviour among unselected French adolescents. *J Adolesc Health* 1992; **13**: 623-630.
- Seamark CJ, Gray DJ Pereira. Like mother, like daughter: a general practice study of maternal influences on teenage pregnancy. *Br J Gen Pract* 1997; **47**: 175-176.

### Acknowledgements

Clare Seamark had a Research Fellowship from the Devon FHSA. Thanks are due to the partners and staff of the Honiton Group Practice, especially Dr David Seamark. The Honiton Practice is an RCGP research practice.

### Address for correspondence

Dr C Seamark, University of Exeter, Institute of General Practice, Barrack Road, Exeter EX2 5DW.

### ROYAL MEDICAL BENEVOLENT FUND

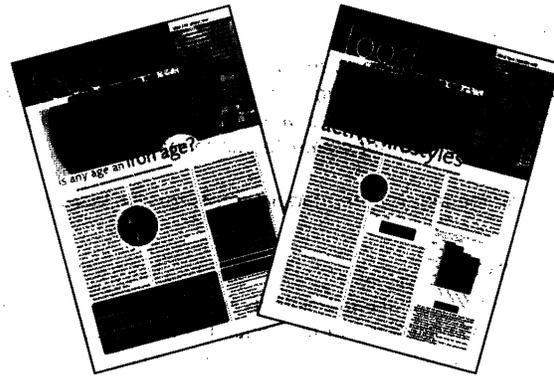
**One day you  
may need our help**



**A nationwide support service for doctors in need,  
their wives, husbands and children  
Help the medical profession help themselves**

Donations and enquiries to:

The Secretary, Royal Medical Benevolent Fund  
24 King's Fund, Wimbledon, London SW19 8QN  
Tel: (0181) 540 9194 Fax: (0191) 542 0494



The second issue of 'Food Track', the British Meat Nutrition Education Service's quarterly newsletter is now available for all Healthcare Professionals.

Focusing on Diet and Physical Activity, the newsletter includes features from a number of experts in the field of diet, obesity and exercise. As well as addressing current issues such as E.coli and food hygiene, Food Track also includes delicious, healthy recipes and shopping tips.

If you would like to receive a free copy of 'Food Track' and/or a reprinted copy of the first issue, which focused on iron, then please send your name, title, address and issue(s) required to:

Food Track, British Meat Nutrition Education Service, PO Box 44, Winterhill House, Snowdon Drive, Milton Keynes MK6 1AX or telephone 01908 234423.

'Food Track' brings you topical nutrition information, research findings and practical advice.

