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16–19 year olds get 'smokerlysed'

As part of a health fair held at Exeter College's conference centre on 24 October 1990, a display on 'Smoking and Health' was staffed by the Health Promotion Department of Exeter Health Authority.

Leaflets, booklets, fact sheets and guides to giving up smoking (including the HEA's *Quit and Win* booklet), were available to all visitors at the stand.

The measurement of carbon monoxide concentrations (parts per million, or ppm) in end-expired breath, using a 'mini smokerlyser' manufactured by Bedfont Technical Instruments Ltd, was also offered to all volunteers. A user-friendly computer program for the BBC microcomputer, entitled *Horrorsmokes* (by Bedfont Ltd), which assesses expenditure on cigarettes over various time periods, was available and proved exceedingly popular.

High interest

The sampling method used was as per the procedures stated in the instruction manual for the EC50 mini smokerlyser published by Bedfont Technical Instruments Ltd, pp. 8–10.

During the course of the day over 250 students aged between 16 and 18+ (plus a small number of teaching staff) visited the stand. A high proportion from both groups offered to be 'smokerlysed' — individual measurements and the sex of each subject were recorded. A total of 125 individual measurements were noted, and these are analysed in the tables below.

	Males	*Females*
1–8ppm	33%	37%
9–20ppm	30%	34%
21–40ppm	32%	15%
>40ppm	5%	15%
Total	63	62

	Males	*Females*
1–5ppm	21%	24%
≥6ppm	79%	76%
Total	63	62

The upper table groups non-smokers in the 1-8 category, the lower table groups them in the 1-5 category .(See text.)

Due to the high interest and the intensity of the visits to the stand, this total figure may be an underestimate. It was not possible manually to record all measurements. Indeed, a very small proportion of volunteers sought to be 're-smokerlysed' after an intended time interval. This would account for no more than 2% of the total number of individual readings. Results were analysed graphically and reproduced as a series of pie charts and bar graphs.

Who are the smokers?

Among children of school age, girls are more likely than boys to take up smoking nowadays. Statistics from 1988 show that 9% of schoolgirls aged between 11 and 15 smoke regularly, compared with 7% of boys in the same age group. The most significant recent trend appears to have been a slight decrease in regular smoking among year 11 (15–16 year old) girls. Among schoolchildren, the largest proportion are 'recruited' to the habit between the ages of 14 and 15!

However, the results and observations, albeit based on a small sample size from the Exeter College Health Fair, suggest that smoking is highly prevalent amongst students there: approximately 76% of females gave readings of 6 parts per million (ppm) or greater and 79% of males have this reading or above. These percentages will represent smokers of all descriptions, i.e. occasional, light, or heavy. Indeed, some smokers had CO levels in excess of 50ppm!

Hungry for knowledge

Whilst the 'research design' may be seen by some to be relatively unsophisticated and unable to distinguish between types of smoker (i.e. whether occasional, light, or heavy), the method and equipment used are valid, sensitive, and accurate enough to distinguish clearly between non-smokers and smokers.

Bedfont Technical Instruments Ltd. suggest that the 'best cut-off point for dividing smokers and non-smokers is around 1.6% carboxy-haemoglobin (COHb) or 8ppm CO in end expired breath. Levels above this would normally indicate an unusual level or source of pollution, or smoking.'

At Exeter College Health Fair it was decided to use 6ppm as a cut-off point, i.e. those registering 6ppm or greater of CO were self-reported smokers. This seems reasonable, as all those who were monitored and gave levels between 1–5ppm CO stated clearly that they were non-smokers.

The observation that so many smoking students voluntarily and enthusiastically sought to be monitored despite the presence of peers is encouraging. Certainly the desire for increased knowledge about smoking and health was present in all those who participated. The next stage would be to encourage smokers who wish to stop to do so in a group setting.

The use of simple equipment for example, a carbon monoxide monitor and a computer program, together with the delivery of high-quality advice and education about smoking, seems to engage this kind of audience. Numerous teaching points arise through the process of monitoring and equipment usage, allowing greater rapport and receptivity to be established between client and professional health educator or promoter.

Group work

'Smoking and health' as a topic is generally seen by smokers to be boring. The 'facts alone' approach to drug education including smoking education has been described to be largely ineffective. Interestingly, the observed positive approach to monitoring shown by this particular age group in the presence of peers together with the ensuing active discussion, certainly points to the potential success of group-work smoking cessation methods.

Smoking cessation groups are set up and run according to a number of different formats and protocols. The *Smoke Stop* method devised by Liz Batten and others (Department of Psychology, University of Southampton), and the methods devised by Dr Anne Charlton, seem appropriate for this particular target group. Dr Charlton's model for smoking cessation in the FE college setting has been devised as a stop-smoking course for the 16–19 age group. The course *Packing it in?* is aimed specifically at FE colleges and has recently been evaluated.

Whatever models or methods are used, there seems to be good evidence for the successful promotion of the group-work approach for this particular target population.

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