Short reports

Lifestyle and occupation

Alison Donnan, Lesley Rushton

Department of Public Health Medicine and Epidemiology, University of Nottingham, Queen's Medical Centre, Nottingham NG7 2UH

Correspondence to: Dr Rushton.

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Most studies of occupational cohorts do not collect detailed data on lifestyle habits, thus limiting the interpretation of the results as to potential causation. An example is a historical cohort study of UK oil distribution workers.¹ All cause mortality was lower than that of the general population of England and Wales, as was mortality from many of the major non-malignant diseases such as stroke, hypertensive disease, bronchitis, and pneumonia. However, this reduction, a "healthy worker effect", was not apparent in ischaemic heart disease, and deaths from aortic aneurysms were also particularly high. Lifestyle factors may clearly be relevant but such studies of oil industry workers are scarce. Thus a cross sectional lifestyle survey was carried out.

Method and Results

All 397 distribution workers employed in one UK oil company in October 1992 were given a self completion questionnaire during regular work meetings. Verbal reminders were given at future meetings. The questionnaire was based mainly on that used in the Trent Health Lifestyle Survey (THLS)² and investigated aspects of diet, smoking habits, alcohol intake, exercise, and stress. Directly comparable groups, for example, by social mix and age,

were not readily available, but some broad differences between the study group and the general population were ascertained by comparison with the results for the THLS.

The overall response rate (voluntary, with personal reminders impossible) was 45% with over half of the largest occupational group, tanker drivers, responding. Compared with the THLS, diet in the study population was reportedly healthy, with low consumption of sugar, butter, and red meat and high consumption of fruit, white meat, and low fat spreads. However, anecdotal evidence suggests that in the past the diet was considerably worse, and consisted of canteen and transport cafe food. Significantly more distribution workers were overweight (table 1). Most jobs were sedentary, and exercise outside work tended to be in the home and garden rather than participation in sporting activities. Reported total units of alcohol consumed was considerably lower than the THLS. The patterns of drinking, however, showed a tendency towards binge rather than regular drinking, with significantly more reporting one to five alcoholic binges per month (defined as consuming more than six units of alcohol at one time). Significantly more oil workers, particularly drivers, reported having given up smoking. Shift work and fear of unemployment were reported as sources of stress.

Comment

Although the response rate was low this small study has provided useful information on the lifestyle habits of oil workers. If the prevalence of heart disease risk factors, such as being overweight, lack of exercise, stress, and the large number of ex smokers in the current workforce is a continuation of the same patterns in past workers this may go some way to explaining the lack of a healthy worker effect in heart disease mortality in the past cohort study. A number of studies^{3 4} have shown that non-responders tend to be different from responders, and may be less healthy. We accept, however, that this survey collected data on the current workforce and we must be cautious in extrapolating to the past cohort.

This study has highlighted the importance of exploring potential lifestyle as well as occupational exposures. A more holistic approach to research is required in the future so that the influences and interaction of the many factors

Table 1 Comparison of oil distribution workers with the Trent Health Lifestyle Study for body mass index, alcohol consumption, and smoking status

Variable	Distribution sample		Trent Health Lifestyle sample	
	Number	%	Number	%
Body mass index				
Underweight	1	1	257	5
Normal	75	44	2440	50
Overweight	84	49	1826	37
Obese	11	6	389	8
Total	171	100	4912	100
Alcohol consumption (units)				
None	27	16	572	13
Less than recommended (1-20)	123	74	2649	60
More than recommended (> 21)	16	10	1197	27
Total	166	100	4418	100
Binge drinking* (per month)				
None	39	27	1688	43
1-5	73	50	1279	32
6+	34	23	966	25
Total	146	100	3933	100
Smoking status				
Never smoked	50	31	2001	44
Ceased smoking	65	41	1078	23
Smokes daily	45	28	1511	33
Total	160	100	4590	100

* 6 or more units of alcohol consumed at one time.

that affect health outcomes can be more rigorously examined.

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- 1 Rushton L. Further follow-up of mortality in a UK oil distribution centre cohort. *Br J Ind Med* 1993;**50**:561–9.

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- 3 Cartwright A. Who responds to postal questionnaires? *J Epidemiol Community Health* 1986;**40**:267–73.
- 4 Smith C, Nutbeam D. Assessing non-response bias: a case study from the 1985 Welsh Heart Survey. *Health Education Research: Theory and Practice* 1990;**5**:381–6.

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