Drinking patterns in general practice patients

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SUMMARY. Patients from 47 group practices recruited from the Medical Research Council's general practice research framework participated in a study involving the collection of information about smoking, drinking, exercise and dieting and weight. This paper is concerned with the data on alcohol consumption obtained in the first stage of the study in which a self-administered questionnaire, the health survey questionnaire, was distributed by hand or by post to patients registered with the participating practices.

Of the 25 496 men who completed the questionnaire, 83.6% stated that they had been drinking in the previous three months compared with 69.2% of the 36 657 women. For both sexes, abstinence rates were significantly lower in the younger age groups (P<0.001). Of the men, 7.6% admitted to a weekly alcohol consumption of 35 units or more and 2.7% women were drinking 21 units per week or more.

Of the 1948 male excessive drinkers 45.9% expressed concern about their drinking through a positive CAGE response and/or self assessment of a drinking problem, while for the 989 female excessive drinkers the figure was 44.1%. A positive response to these questions was strongly related to alcohol consumption and was more frequent among women than men at most levels of consumption.

Introduction

EXCESSIVE alcohol consumption is a major cause of morbidity and mortality. In the United Kingdom per capita alcohol consumption rose steadily from the second world war until the end of the last decade, and has recently started to rise again.[1] Although there is considerable debate about which measures should be adopted to reverse this trend, there is much support for a policy of early detection of excessive drinkers followed by some form of brief intervention.[2,3]

General practitioners, who collectively see some 67% of the population each year, are ideally placed for this kind of work, but they frequently fail to detect patients with a high alcohol intake.[4,5] The use of a questionnaire has been shown to lead to a substantial increase in the recognition of excessive drinkers and to be widely acceptable to patients.[6,7] Although there is now strong evidence for the effectiveness of counselling about smoking in a general practice setting,[8,9] the impact of general practitioners' advice to excessive drinkers to reduce their alcohol consumption has not yet been adequately evaluated. A large randomized controlled trial designed to evaluate the impact of general practitioner intervention on the alcohol consumption of excessive drinkers is currently in progress. The study involves 47 group practices around the UK. Although it is primarily concerned with alcohol consumption, data about other aspects of lifestyle have also been collected.

This paper describes the data on alcohol consumption obtained in the first stage of the study using the health survey questionnaire[7] as a screening instrument.

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Methods

Forty seven group practices were recruited from the Medical Research Council's general practice research framework, which includes in excess of 250 group practices in England, Scotland and Wales and was originally set up in order to carry out the MRC trial on the treatment of mild hypertension.[10] It was necessary to involve 47 practices in the study in order to recruit sufficient numbers of excessive drinkers to the randomized controlled trial of general practitioner intervention, and to determine the feasibility of carrying out the intervention in practices in a variety of settings. Although a number of the group practices are situated in cities including London, Birmingham and Newcastle upon Tyne, the majority are in rural areas or small urban centres distributed between Bideford in south west England and St Andrews in eastern Scotland. Their average list size is approximately 10 000 patients.

The health survey questionnaire, which has been evaluated against other measures of alcohol consumption,[7] was used as the screening instrument. This self-administered questionnaire also includes questions relating to smoking, exercise and dieting and weight. Alcohol consumption was assessed using a quantity/frequency scale. The original questionnaire was modified slightly for the purposes of the multi-centre study to include separate quantity/frequency scales for beer/cider, wines and spirits. For the purpose of the study, excessive consumption was defined as 35 units or more per week for men and 21 units or more per week for women, where 1 unit is approximately 8 g ethanol which is equivalent to a half pint of beer, one glass of wine or one single measure of spirits.[11,12]

The questionnaire also includes the four questions of the 'CAGE' interview.[13] The questions were modified slightly and four graded options provided. Patients responding 'very often', 'often', or 'sometimes' to two or more of the questions were classified as positive CAGE responders. The CAGE questions were chosen because an earlier study had indicated that they were reasonably sensitive markers of excessive consumption, particularly when combined with alcohol consumption as estimated by a quantity/frequency scale.[7]

The final section of the questionnaire asks whether the patients think they have a 'problem' relating to any of the four areas of lifestyle. Again, four graded response options were provided; patients responding 'definitely' or 'probably' to the question relating to drinking were classified as self-assessed problem drinkers.

The practices were offered the option of mailing or handing out the questionaire — 23 of the practices mailed the questionnaire while in the remaining 24 it was handed out to patients attending surgery.

Mailing practices

In each of the 23 practices approximately 2000 patients aged 17–69 years inclusive on 31 December 1985 were randomly selected from the age–sex register, using a system of proportional sampling from each year of birth. Each patient was mailed a copy of the health survey questionnaire accompanied by a covering letter signed by their general practitioner. A 'freepost'

Table 1. Weekly alcohol consumption by age and sex.

Age (years)	Men						Women					
	Total number	No drink (%)	<21 units (%)	21–34 units (%)	35–48 units (%)	49+ units (%)	Total number	No drink (%)	<21 units (%)	21–34 units (%)	35–48 units (%)	49+ units (%)
17–19	1014	15.6	66.5	11.1	3.8	3.0	1319	18.2	77.2	3.1	1.0	0.5
20–29	4611	9.3	63.8	13.7	7.4	5.7	7735	23.2	73.4	2.4	0.6	0.4
30–39	5451	10.6	70.6	10.6	4.4	3.8	9140	22.9	75.0	1.7	0.3	0.2
40–49	4993	14.4	68.4	9.7	3.8	3.7	7108	28.2	69.3	1.8	0.4	0.3
50–59	4371	20.4	65.3	9.0	3.0	2.4	5425	38.5	59.1	1.8	0.4	0.3
60–69	5056	27.9	59.7	8.0	2.1	2.3	5930	51.6	45.6	2.1	0.3	0.3
All	25 496	16.4	65.7	10.2	4.1	3.5	36 657	30.8	66.5	2.0	0.4	0.3

envelope addressed to the practice was enclosed. When returned envelopes indicated that the patient was no longer resident at that address, an attempt was made to identify the correct address and letters were re-directed where possible. If no reply was received within 4–6 weeks of the original mailing, a reminder letter was sent with a fresh copy of the questionnaire and a further freepost envelope. In three of the practices, a second reminder letter containing a further copy of the questionnaire was sent to those patients who had still not replied within 4–6 weeks of the first reminder mailing.

Handout practices

Each of the 24 practices was supplied with 2000 serially numbered questionnaires. These were distributed to patients aged 17–69 years inclusive attending the surgery for any reason. In the majority of cases, distribution was carried out by the practice receptionists but in some cases nurses and general practitioners were involved. The completed questionnaires were either returned to the receptionists or deposited in a collection box in the surgery. Each practice was given up to seven months to distribute as many questionnaires as possible.

Analysis

The questionnaire responses were coded and double checked before computer analysis. As this part of the study was intended to provide data on drinking patterns rather than to test specific hypotheses, formal statistical testing was not generally carried out. However, for those variables where the results indicated a linear trend, chi-square linear trend analysis was performed.

Results

Response rate

A total of 23 413 women and 22 116 men were selected by the 23 practices mailing out the questionnaire. Envelopes were returned undelivered for 7.1% women and 7.5% men. Of the remaining 21 761 women and 20 463 men 82.7% of women and 78.1% of men eventually returned a questionnaire. The overall response rate ranged from 65% to 83%. There was a significant trend towards a higher response rate with increasing age for both sexes (χ^2 = 440, df = 5, $P<0.001$ for men; χ^2 = 484, df = 5, $P<0.001$ for women).

In the 24 practices where questionnaires were handed out, distribution was carried out over a period of seven months until 30 April 1986. The practice receptionists' estimates of the numbers distributed suggested that there was considerable variation between the practices (range 610–2000). Distribution rates were related not only to the size of the practice, but also to the amount of time which the receptionists were able to devote to the study. There was also considerable variation in the proportions of questionnaires completed and returned by the patients following distribution (range 45–99%). In all, 9512 men and 18 658 women completed and returned a copy of the health survey questionnaire.

The total number of questionnaires returned by patients in the 47 practices was thus 62 153 (25 496 men and 36 657 women).

Alcohol consumption

There were no systematic differences between the responses of patients receiving the questionnaire by post and by hand and so the results have been combined.

Of the respondents 83.6% of men and 69.2% of women said they had been drinking alcohol in the three months prior to com-

Table 2. Percentage of patients with positive CAGE response and self-assessed drinking problem by weekly alcohol consumption.

Weekly consumption (units)	Men				Women			
	Total number	Positive CAGE response (%)	Definite problem (%)	Probable problem (%)	Total number	Positive CAGE response (%)	Definite problem (%)	Probable problem (%)
0–6	14 357	2.1	0.1	0.3	30 726	1.9	0.1	0.2
7–13	4818	8.6	0.2	1.3	4125	15.2	0.2	1.8
14–20	1765	19.0	0.8	3.2	817	29.4	0.6	6.1
21–27	2136	25.0	0.7	5.7	581	37.0	2.6	9.1
28–34	472	33.5	0.8	11.9	153	35.9	5.2	11.8
35–41	481	41.8	2.1	14.1	91	62.6	11.0	26.4
42–48	565	35.6	2.3	11.9	62	43.5	4.8	9.7
49+	902	46.3	7.5	21.5	102	61.8	18.6	29.4
All	25 496	10.0	0.6	2.6	36 657	5.1	0.2	0.9

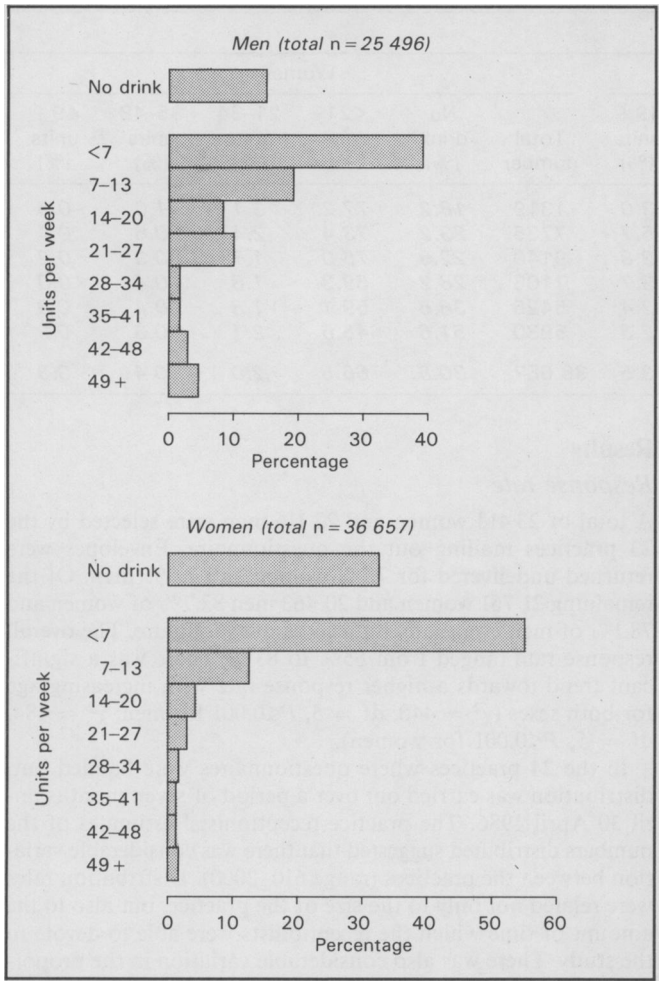

Figure 1. *Weekly alcohol consumption in last three months.*

pleting the questionnaire. For both sexes, the proportion of non-drinkers increased significantly with age (χ^2 = 756, df = 5, $P<0.001$ for men; χ^2 = 1758, df = 5, $P<0.001$ for women) (Table 1).

Weekly alcohol consumption was considerably lower among women than men (Figure 1). Of the men 75.9% were moderate drinkers (up to 35 units per week) while 7.6% were classified as excessive drinkers (drinking at least 35 units per week). Of the women, 66.5% were moderate drinkers (up to 21 units per week), while 2.7% were classified as excessive drinkers (drinking at least 21 units per week).

Among the men, the proportion of excessive drinkers was highest (13.1%) in the 20–29 years age group (Table 1). In the case of the women, the youngest age group (17–20 years) contained the greatest proportion of excessive drinkers (4.6%). There was a strong relation between stated weekly consumption and both positive CAGE responses (χ^2 = 4256, df = 7, $P<0.001$ for men; χ^2 = 5539, df = 7, $P<0.001$ for women) and self assessment of a drinking problem (χ^2 = 3040, df = 7, $P<0.001$ for men; χ^2 = 4658, df = 7, $P<0.001$ for women) (Table 2). For both questions, the proportions of women indicating concern at most levels of weekly alcohol consumption were higher than those of the men at the same level (Table 2).

The relationship between excessive consumption, a positive CAGE response and a self-assessed drinking problem is shown in Figure 2. Positive responses to the CAGE and/or self-assessment sections of the health survey questionnaire were obtained for 10.8% of men and 5.3% of women. Of the 1948 male excessive drinkers, 45.9% expressed concern about their drinking as evidenced by a positive CAGE response and/or self assessment of a drinking problem, while in the case of the 989 female excessive drinkers the figure was 44.1%. A total of 7.3% of all men and 4.1% of all women expressed concern about their drinking although their weekly consumption was below the limits set for excessive drinking in the study.

Discussion

This study has demonstrated the feasibility of using the health survey questionnaire in general practices in a variety of settings. In the practices where the questionnaire was mailed to patients, the response rates were consistently high. The overall response rate in these practices exceeded that obtained in the pilot study.[7] This finding confirms the general acceptability of the health survey questionnaire to adult patients. Distribution of the questionnaire by hand was considerably less effective than mailing, but more consistent results might have been achieved by using the questionnaire as part of a case finding or screening exercise undertaken by a practice nurse.[14]

The health survey questionnaire was designed principally for recognizing patients with excessive alcohol consumption rather

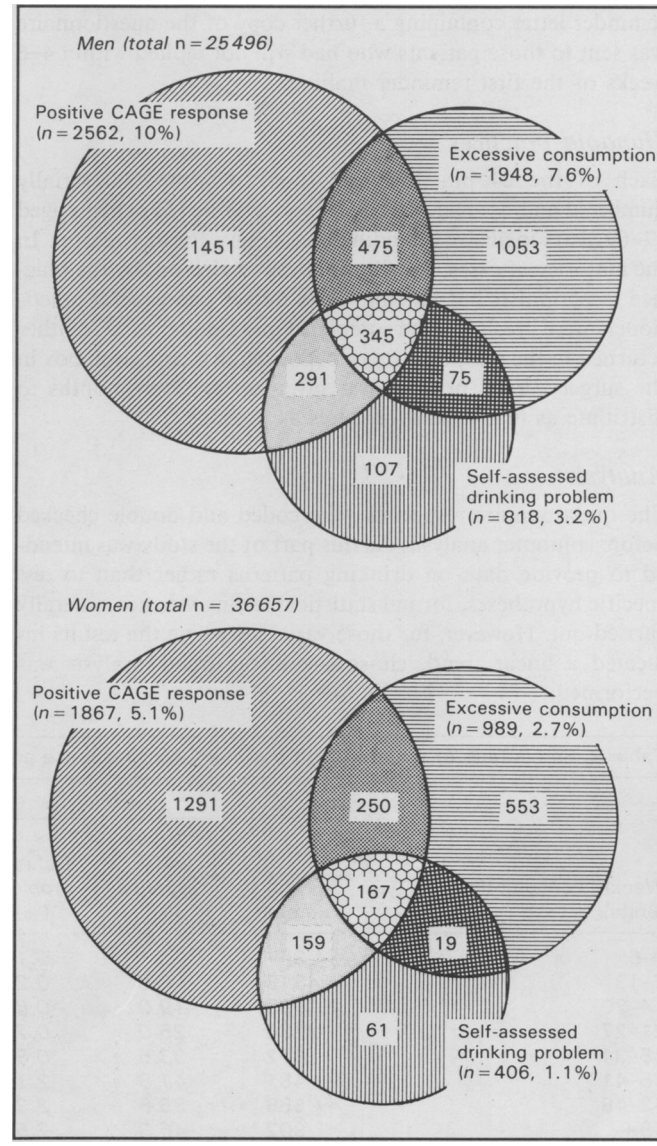

Figure 2. *Relationship between excessive consumption, a positive CAGE response, and a self-assessed drinking problem.*

than as an instrument for obtaining accurate estimates of consumption. Thus a quantity/frequency scale, which can be quickly and easily completed by respondents was chosen rather than a record of the last week's drinking which, although it may be more accurate is more time-consuming to complete.[15] Both the general household survey and the regional heart survey have also collected information about alcohol consumption using a quantity/frequency scale.[16,17] In this study the proportions of men (84%) and women (69%) drinking alcohol were similar to those found in a number of surveys carried out in the UK.[16,18,19] Our results, however, indicate rather lower overall levels of weekly consumption than those obtained in these studies, though they are similar to those of the 1984 general household survey (unpublished data), especially for women.

It is possible that the heavier drinkers were over-represented among the non respondents in this study, particularly since the response rates in practices mailing the questionnaire were lower among the lower age groups which tended to drink more. The lower overall levels of weekly consumption may also be due in part to the fact that the study population, recruited mainly from practices in rural areas and small urban centres, is somewhat unrepresentative of the national population. Evidence for this comes from the proportions of current smokers found in the study population — 29% of men and 28% of women,[20] considerably lower than the 36% and 32%, respectively, found in the 1984 general household survey.[21] However, this difference between the smoking rates may be due to the continued decline in smoking in the UK. Nevertheless, the health survey questionnaire resulted in the detection of a substantial number of heavy drinkers, the great majority of whom do not appear to have had advice about their drinking.[20]

Both the CAGE interview and the Michigan alcoholism screening test have been used in general practice to detect patients with alcohol related problems.[22] The CAGE interview is the shorter of the two and has been found to be generally acceptable to patients and sensitive in detecting heavy drinkers.[7,23] In this study a strong relationship was found between stated alcohol consumption and both self assessment of a drinking problem and a positive CAGE response. It seems likely that a positive response to those sections of the questionnaire indicates concern about drinking and, if this is the case, there is considerable awareness among patients of the harm of excessive consumption. Concern may also be the result of pressure by relatives or friends. The higher levels of concern at a given level of alcohol consumption expressed by women compared with men may reflect the greater stigma attached to women's drinking and also an awareness that women are at increased risk from a given level of alcohol consumption.[24] Just under half of the excessive drinkers expressed concern about their drinking and these patients may be especially responsive to advice to reduce their consumption. This hypothesis is being tested as part of the main study.

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