Demographic characteristics of general practitioners attending educational meetings

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SUMMARY. There are many factors which influence general practitioners' behaviour with regard to attendance at education meetings. The demographic characteristics of general practitioners in the west of Scotland attending educational meetings were studied over a two year period. A total of 1672 doctors had attended sufficient sessions to claim their postgraduate education allowance and of these 1551 (93%) responded to the questionnaire. Overall attendance at meetings did not vary between age groups, but older doctors (those born before 1935) attended the highest mean number of education sessions on disease management and the lowest mean number on service management and health promotion. Doctors in rural areas attended fewer meetings than those in urban areas with the largest difference in the disease management category. Doctors from smaller practices attended significantly fewer sessions on service management than those from larger practices. There was no difference between sexes regarding the mean total number of education sessions attended but men attended significantly more sessions on service management and women attended more on health promotion. Full-time doctors attended more service management sessions than part-time doctors. Those who were widowed or divorced attended fewer sessions in total, the differences being greatest in service management and health promotion. Multiple regression analysis showed that location of practice, whether working full time or part time and marital status had a small but statistically significant bearing on overall attendance at meetings.

Although the differences are small, these factors should be noted by education providers, negotiators and government.

Keywords: course attendance; demographic factors; GP statistics.

Introduction

PREVIOUS work has shown that doctors who attend more educational sessions than their colleagues tend to have been qualified for between 10 and 20 years, to be working in practices with five or more principals and are also more likely to hold additional appointments or be trainers.[1-3] Further work has shown that high attenders are more likely to be women.[4]

The new contract for general practitioners includes the postgraduate education allowance which is paid as part of the statement of fees and allowances.[5] To qualify for this a general practitioner has to attain on average five days of accredited education each year, and during a five year period two days of accredited courses must be attended in each of the three subject areas of health promotion, disease management and service management.

The West of Scotland Committee for Postgraduate Medical Education has set up a computerized database which keeps a record of all course attendances at accredited meetings both within and outwith the region.[6]

The aim of this study was to examine demographic characteristics of general practitioners attending educational meetings to aid understanding of general practitioners' behaviour with regard to education.

Method

As part of another study, a questionnaire was sent to all doctors in the region to determine their educational preferences. This questionnaire asked for demographic data related to age, location of practice, size of practice, sex, practice commitment and marital status. The non-respondents, after two mailings, received a further questionnaire which only requested demographic data.

A printout was obtained from the database of all doctors attending half-day sessions accredited for the postgraduate education allowance between 1 April 1990 and 31 March 1992, divided into the categories of disease management, service management and health promotion. Only those doctors who were principals before 1 April 1990 and had two years of data sufficient to claim the postgraduate education allowance were included in the study.

Comparison of the mean number of sessions attended in different sub-groups was made by a two-sample t test or one-way analysis of variance, as appropriate. In addition, since the distribution of the number of sessions attended was positively skewed for all three categories of meeting, these comparisons were repeated after logarithmic transformation. The results obtained by the two methods were similar, so that only results using the untransformed data are reported. In addition, stepwise multiple regression was used to enter all explanatory variables into a linear model to assess the effect of each on the number of sessions, after adjusting for all others.[7]

Results

There are 1830 general practitioners in the region and data were available from a total of 1672 of whom 121 (7.2%) were non-respondents to the questionnaire.

There was a highly significant difference between the mean number of total sessions attended by the 1551 respondents and the 121 non-respondents (24.6 versus 16.8, $P<0.001$) and this was seen in all three categories. The respondents attended a mean of 9.7 sessions in disease management compared with a mean of 6.9 sessions attended by the non-respondents ($P<0.001$). Respondents attended a mean of 8.7 sessions in service management compared with 5.6 sessions attended by non-respondents

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($P<0.001$) and respondents attended a mean of 6.2 sessions in health promotion compared with 4.2 sessions by non-respondents ($P<0.001$). All further analysis of data is based on respondents only. The number of people answering each question varied.

Breakdown of attendance at educational sessions, by various demographic factors is shown in Table 1. Older doctors (those born before 1935) attended fewer educational sessions in total (23.2) compared with any of the other groups of doctors but this was not statistically significant. The older doctors attended the lowest number of service management and health promotion sessions and the highest number of disease management sessions. Breakdown by location of practice showed that those in rural areas attended fewer meetings (22.1 versus 24.8 in urban areas and 25.1 in mixed areas, $P<0.001$), the main difference being in attendance at sessions in disease management. Attendance by doctors from urban and mixed practices was similar. Breakdown by practice size shows that doctors in larger practices went to significantly more meetings on service management compared with doctors working in smaller practices. While similar total mean numbers of sessions were attended by men and women doctors (24.6 versus 24.5), men attended significantly more sessions on service management, and women attended more on health promotion.

Those working full time attended significantly more sessions on service management than those working part time. Doctors who were widowed or divorced attended a mean of 20.7 sessions in total in comparison with 24.9 sessions for those doctors who were single and 24.7 for the doctors who were married ($P<0.05$). Those who were widowed or divorced attended significantly fewer education sessions on health promotion. The mean number of health promotion sessions attended by married or single women was 6.8 (men 6.0) and the mean number of sessions attended by widowed/divorced women was 4.9 (men 3.7).

Multiple regression was used to assess the effect of each of these factors after adjusting for all others. After adjustment, the only factors related to total number of sessions were the location of practice, working full time or part time and marital status (Table 2). However, these factors together accounted for only 2% of the variability in total sessions attended.

For sessions on disease management, location was the only significant factor affecting the mean number of sessions attended while for health promotion sessions, only sex and marital status remained significant (Table 2). For service management, four factors were significant: marital status, sex, number of doctors in the practice and date of birth. However, this only explained 3.4% of the variability in service management sessions attended.

Table 1. Educational sessions completed by respondents in the three categories, by year of birth, location of practice, practice size, sex, work commitment and marital status.

	Mean no. (SD) of sessions completed by doctors in:		
	Disease management	Service management	Health promotion
Year of birth			
Before 1935 (n = 173)	10.1 (5.1)	7.4 (3.9)	5.7 (4.1)
1935–44 (n = 306)	10.0 (5.0)	8.8 (5.3)	6.3 (3.9)
1945–54 (n = 536)	9.6 (4.9)	9.1 (5.6)	6.2 (4.0)
1955 onwards (n = 420)	9.6 (5.5)	8.6 (5.6)**	6.2 (4.2)
Location of practice			
Urban (n = 832)	9.8 (5.0)	8.7 (5.2)	6.3 (4.3)
Rural (n = 191)	8.5 (5.4)	8.0 (5.3)	5.6 (4.0)
Mixed (n = 491)	10.1 (5.2)***	8.9 (5.6)	6.1 (3.9)
Practice size[a]			
1 (n = 150)	10.3 (6.8)	8.4 (5.4)	6.0 (5.0)
2 or 3 (n = 486)	9.6 (4.9)	7.8 (4.9)	6.3 (4.2)
4 or 5 (n = 571)	9.7 (5.1)	9.1 (5.4)	6.0 (3.9)
6+ (n = 318)	9.7 (4.6)	9.3 (5.6)***	6.3 (3.9)
Sex			
Men (n = 1087)	9.6 (5.2)	9.0 (5.6)	6.0 (3.9)
Women (n = 457)	10.0 (5.1)	7.8 (4.7)***	6.7 (4.5)**
Work commitment			
Full time (n = 1407)	9.7 (5.2)	8.8 (5.4)	6.2 (4.1)
Part time (n = 121)	9.8 (4.9)	7.3 (5.0)**	5.9 (3.7)
Marital status			
Widowed/divorced (n = 42)	9.7 (5.4)	6.8 (5.4)	4.3 (3.6)
Single (n = 108)	9.8 (5.4)	8.6 (5.2)	6.5 (4.4)
Married (n = 1362)	9.7 (5.1)	8.8 (5.4)	6.2 (4.1)**

n = number of doctors in group. [a]Number of partners. **$P<0.01$, ***$P<0.001$.

Discussion

Respondents and non-respondents were found to be distinct groups in their attendance at educational meetings and this may be related to their perception and interest in education and the relevance and importance which they place on questionnaires. Differences were found between the two groups for mean total number of sessions attended and for attendance in all three categories of educational meeting, suggesting that the behaviour of the non-respondents was consistent when related to educational matters.

The number of sessions attended was slightly lower for older doctors (those born before 1935) but it is interesting to note that their attendance at disease management sessions was the highest compared with other age groups of doctors. Their training both at undergraduate level and in continuing education meetings over the years probably stressed the importance of disease management. Previous studies have suggested that this is the area of greatest interest among general practitioners.[1,2] The recent

Table 2. Results of multiple regression analysis showing factors significantly associated with total number of sessions attended and in each of the three categories.

Factor	Mean difference (95% CI)
Total sessions attended	
Location[a]	2.7 (1.3 to 4.2)***
Work commitment[b]	1.8 (0 to 3.5)*
Marital status[c]	3.9 (0.9 to 6.9)**
Disease management	
Location[a]	1.4 (0.7 to 2.2)***
Health promotion	
Sex[d]	–0.8 (–1.2 to –0.3)***
Marital status[c]	2.1 (0.9 to 3.4)***
Service management	
Marital status[c]	1.7 (0 to 3.4)*
Sex[d]	1.2 (0.6 to 1.8)***
Practice size[e]	1.1 (0.5 to 1.7)***
Year of birth[f]	1.4 (0.6 to 2.3)***

[a]Urban/mixed versus rural. [b]Full time versus part time. [c]Married/single versus widowed/divorced. [d]Men versus women. [e]4+ partners versus ⩽3 partners. [f]Before 1935 versus 1935 onwards. *$P<0.05$, **$P<0.01$, ***$P<0.001$.

changes in general practice have been more related to service management and health promotion than disease management and these challenges would appear to have been taken up more by the younger doctors than the older doctors. Thus, those who are going to be affected by the 1990 contract for general practitioners for the longest time may be those most likely to attend service management and health promotion education sessions.

There has been concern that with the removal of the travel and subsistence budget from the new postgraduate arrangements doctors in rural situations would attend fewer meetings. A previous study suggested that distance from a postgraduate centre was an important factor in attendance.[3] This was also found in the present study despite the considerable effort by the committee in the west of Scotland to arrange meetings throughout the region. The difference in attendance was highly significant regarding sessions in disease management but doctors in rural areas were attending a similar number of service management and health promotion meetings as their colleagues in urban areas; this may also be a response to the 1990 contract for general practitioners. A recent study showed that general practitioners continued to attend educational courses outwith their region despite the removal of the travel and subsistence reimbursement.[8]

Attendance at educational meetings by doctors from different size practices did not vary greatly, although doctors from small practices were attending fewer sessions, differences being significant for service management meetings. Single handed doctors were attending the highest mean number of sessions in disease management. This may be related to the difficulties that these doctors have in sharing medical problems with colleagues, and their motivation for keeping up to date is most important in disease management where advances are rapid. Within larger practices doctors can have specific areas of medical interest but the single-handed doctor has to encompass all disciplines. Service management attendance was highest among doctors in the largest practices; they are most likely to have a practice manager who will be aware of this area and be implementing management principles.

There was no difference in the total mean number of sessions attended by men and women and this differs from a previous study where women were more likely to be high attenders.[4] In the present study men attended significantly more sessions on service management and significantly fewer sessions on health promotion. Service management is related to the business side of general practice which may be seen as a male prerogative whereas health promotion, especially cervical cytology may be more likely to be carried out by the women doctors. Full-time general practitioners attended significantly more meetings on service management than part-time doctors. Full-time doctors are more likely to be involved in the running of the practice and this may explain the higher number of service management sessions attended. The part-time doctor can obtain the full postgraduate education allowance and this could be one factor explaining the small difference found in overall attendance by the two groups.

Although only a small number of the sample were widowed or divorced, they attended significantly fewer sessions in total than those who were single or married. This difference was highly significant for attendance at health promotion meetings. There was no information available on when this group became widowed or divorced so it is difficult to identify reasons for the differences in attendance.

The linear model suggested that location of practice, whether working full time or part time and marital status were the three main factors related to total attendance at educational meetings. For attendance at disease management meetings only the location of the practice was found to be statistically significant. Overall, doctors in rural areas went to fewer sessions at the expense of disease management rather than service management or health promotion. This could be influenced by the interests of the doctors involved or be related to maintenance of income.

Attendance at health promotion meetings was more likely among women doctors than men and among doctors who were married or single, than widowed or divorced. This could have been related to their specific interests. Attendance at service management meetings was significantly related to marital status, sex, number of doctors in the practice and year of birth. The mean number of service management sessions attended by doctors from practices with four or more doctors was greater than the number attended by doctors from practices with two or three doctors. Within a larger group there is more likely to be one doctor who is interested in this area and this knowledge and enthusiasm could be passed to the other doctors. Overall, regarding service management sessions the doctors who were born between 1935 and 1954 completed more than those born before 1935. This category of education includes computers and audit, and also management changes within the practice and those innovations may be more likely to be accepted by younger doctors. However, these factors were responsible for less than 4% of the differences, the vast majority being the result of other factors.

In the west of Scotland an annual subscription scheme is available throughout the region.[4] This offers unlimited courses for a single payment and can influence the mean number of sessions attended.[9] However, the scheme is available to all general practitioners and is unlikely to influence the demographic differences noted. The west of Scotland is, in all other respects, similar to the rest of the United Kingdom.

The significant differences found are mainly a result of the large sample size and only explain a part of general practitioners' behaviour in relation to education. However, the results should be noted by education providers, negotiators and government. With large sums of money being spent on postgraduate education, further work is required looking at doctors' needs and how this relates to day-to-day work in the practice.

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