

An evaluation of a training programme in primary care research for general dental practitioners

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Aims To determine whether general dental practitioners would find seminars on research methods in primary care research of interest and whether they would be stimulated to plan their own research.

Method Questionnaire with both open and closed questions distributed to participants at the end of the seminars. 10 seminars in locations throughout the north west of England were planned.

Results 98 dentists attended the seminars of whom 81 returned questionnaires, giving a response rate of 82.6%. More than 60% found the seminars and the specially developed teaching manual very useful. However there was somewhat less enthusiasm for undertaking research projects.

Conclusions The findings suggest that some GDPs are interested in primary care research but are not keen to initiate or plan research themselves.

Research in primary healthcare has been recognised by the National Health Service as an important arena for scientific investigation.^{1,2} Dentistry in particular is a clinical discipline where research at the primary care level is required.^{3,4} At the end of 1998 there were some 29,951 dentists registered with the General Dental Council,⁵ the majority of whom work within the National Health Service to provide clinical care. For example, in 1999 there were 17,500 dentists in England and Wales offering treatment in the General Dental Service.⁶ Therefore the bulk of the expenditure and clinical activity is undertaken by general dental practitioners, who in most instances are independent practitioners

contracted to provide dental care under the auspices of the National Health Service. However it is clear that the majority of research on clinical dentistry is undertaken in dental schools with some work being undertaken in the community dental service. The providers of the clinical service are not participating to any degree in a scientific evaluation of the services offered to patients.^{7,8}

Unlike most other primary care health workers, the dental profession has already developed a list of primary care based research priorities,^{9,10} and forward planning led to research funds being released in

1997 from the National Health Service Research and Development Office. A sum of five million pounds was provided to fund projects in primary dental care. Despite having well developed research priorities it became clear that much of the research agenda and planning was being undertaken by academics. The input from general dental practitioners was quite limited in scope. At various meetings with general practitioners it became clear that many were intimidated by the research process and did not have a sufficient grasp of scientific research methodology to plan projects which would give meaningful results.

On the basis of these problems the University of Manchester approached the NHS Executive in the North West of England to fund a study which would have five aims:

- To develop a practical manual on how to do research in general dental practice.
- To offer region-wide seminars in the North West of England on research methods relevant to primary dental care.
- To offer a list of academics at Manchester University who would advise on planning the protocol and analysing the results for primary care dentists who wanted to undertake a research project.
- To assess whether a seminar format was appropriate.
- To determine whether GDPs felt they were capable of or interested in planning research projects themselves.

The theme of the study was partnership, mobilising the resources of academia and general dental practice for the good of the patients in terms of service delivery and clinical effectiveness.

Methodology

A manual entitled *Doing Research in General Practice*¹¹ was commissioned and published following comments from community dental staff and general dental practitioners.

In brief

- General dental practitioners were interested in improving their understanding of research methods.
- Research support units may not be the way to encourage research in the primary care dental setting.
- GDPs are interested in being involved in practice based research provided there is an academic mentor.

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A 2-hour seminar format was then prepared around the manual and had five themes:

- *Introduction* — value of research in primary care, how to gain advice, writing a protocol, gaining ethical approval and financial backing.
- *Logic of scientific method* — study design, need for randomisation, control groups, making measurements and statistical planning.
- *Group discussions* — ideas for research questions were requested and the group helped develop a protocol for a research project in a general dental practice setting.
- *Case studies* — published articles were reviewed to highlight good and bad scientific methodology.
- *Future plans* — seminar participants were urged to contact the course organisers to develop any outline research ideas.

As this was a regional project it was decided to concentrate on geographical locations which were not close to the University of Manchester. Ten postgraduate centres in Barrow, Bolton, Chester, Oldham, Preston, Rochdale, Stockport, Trafford, Warrington and Wigan were chosen as being suitable venues, as all had a seminar room and good parking facilities.

As the seminars were designed to be interactive a decision was taken to have a maximum of 20 participants per seminar. A

telephone recruitment policy was adopted; practitioners in each area were contacted and invited to attend a seminar. Once 20 positive answers had been received, the telephone recruitment process ceased. Confirmation letters plus the training manual¹¹ were sent to the participants. An evaluation questionnaire was developed and was given to those who attended the seminars. It recorded information on the following topics:

- *Manual*: whether interesting; ease of use
- *Seminar*: whether interesting; able to follow discussions

- *Future interest*: feasible to undertake research; likelihood of developing a project.

In addition general comments were asked for on:

- Good and bad aspects of the manual/seminar.
- Whether there is potential for research in general practice initiated by GDPs.

A 5-point likert scale was used for each topic with a score of 1 being positive and 5 being negative. A postage prepaid envelope was used to collect the completed questionnaires.

Table 1 Number of practitioners contacted about seminars and the number who participated according to geographical location			
Location	Contacted N	Agreed N	Attended N (%)
Barrow	94	20	14 (70.0)
Bolton	87	20	9 (45.0)
Chester	116	20	8 (40.0)
Oldham	110	20	9 (45.0)
Preston	80	20	16 (80.0)
Rochdale	65	20	9 (45.0)
Stockport	127	20	16 (80.0)
Trafford	56	20	9 (45.0)
Warrington	60	2	0
Wigan	77	20	8 (40.0)
Total	872	182	98

Table 2 Responses to likert scales on the value of the manual and seminar					
Topic	1 N (%)	2 N (%)	3 N (%)	4 N (%)	5 N (%)
Manual of interest	25 (30.9)	37 (45.7)	19 (23.4)	0	0
Manual easy to follow	19 (23.4)	41 (50.6)	11 (13.6)	10 (12.4)	0
Overall value of seminar	31 (38.3)	23 (28.4)	19 (23.4)	5 (6.2)	3 (3.7)
Seminar easy to follow	32 (39.5)	37 (45.7)	9 (11.1)	0	3 (3.7)
Scales graded as 1 highly positive to 5 very negative					

Table 3 Responses to lickert scales on the feasibility of undertaking research in practice and likelihood of becoming involved in a funded project					
Topic	N ¹ (%)	N ² (%)	N ³ (%)	N ⁴ (%)	N ⁵ (%)
Research in practice feasible	24 (29.6)	30 (37.1)	19 (23.4)	8 (9.9)	0
Interested in becoming involved	23 (28.4)	28 (34.6)	21 (25.9)	6 (7.4)	3 (3.7)
Scales graded as 1 highly positive to 5 very negative					

Results

A total of 872 dentists were contacted in order to recruit the 200 for the seminars in the ten sites. However in Warrington only two practitioners agreed to attend, so the seminar was cancelled. Therefore the results will be presented for the nine sites where seminars were undertaken. Of the 180 recruited in the nine sites where seminars were held, 98 attended giving an attendance rate of 54.4%. The attendance at the nine sites is detailed in Table 1. The proportional attendance ranged from 80.0% in Stockport and Preston to 40.0% in Chester and Wigan.

The 98 participants were asked to complete questionnaires and 81 were returned giving a response rate of 82.6%. There was no clustering of the non respondents, they were generally distributed around the nine geographical locations.

Table 2 shows that the majority of respondents were favourably disposed to both the manual and the seminars, scores 1 and 2 were returned consistently by more than 60% of the respondents. As to the feasibility of undertaking research in general dental practice (Table 3), the majority of participants again scored 1 and 2 but there was certainly less enthusiasm, as the proportion scoring 3, a neutral score, rose when compared with the answers given in Table 2.

The respondents also completed two free

answer questions. One asked for likes and dislikes related to the manual/seminar and the other one asked for comments on the potential for research to be undertaken by general dental practitioners.

The responses were collated and the recurring themes reproduced in Figures 1 and 2. Overall the seminars and manual were viewed on a positive light (Figure 1)

but the potential for independent research by practitioners themselves was seen as difficult (Figure 2) and most of the free comments were somewhat negative.

Six months after the seminars finished only one request for help with a project had been received by the chair of the organising committee.

Figure 1	Open comments on the manual and seminar
“	Positive Quotes <ul style="list-style-type: none"> • Research no longer just for academics • Presentation and delivery easy to follow • Convenient time and place • Opportunity to discuss research with other GDPs • GDPs and academics could meet informally • Support offered — not just preaching • Stimulated to participate in research
	Negative Quotes <ul style="list-style-type: none"> • Concerned that colleagues had not attended • Seminar too short — need a series • Some of the teaching was patronising • Statistical aspect too complicated • More examples required ”

Figure 2

General comments on the potential for research in dental practice initiated by general practitioners



- Research needs to have a reward — either monetary or further qualification
- GDPs are efficient at providing treatment but lack research skills — cooperative ventures with universities essential
- Audit needs to be given a boost by linking in with universities
- Time is the biggest problem
- A lead from universities with primary care dentists collaborating is the best way forward
- Research might generate too much paperwork
- GDPs are isolated, need a support network



Discussion

Despite the considerable publicity given to the need for and funding of research in primary dental care it proved very difficult to recruit dentists within the north west of England to a seminar on the topic. The organiser of the seminar programmes made 872 telephone calls to recruit the 180 participants and nearly half those who agreed to come did not attend their designated seminar.

Those who attended were clearly a self selected interested group of individuals. The finding that they thought the seminars and booklet of interest and easy to follow is gratifying but would probably be expected given their interest in research. Despite this interest, the general feeling of these motivated practitioners was that research formulated and planned in the primary care setting was neither practical or feasible. They wanted cooperation with universities so that they could participate in projects rather than lead them.

There are, of course, other sources of advice for practitioners interested in research. Regional health authorities have an R&D advisory service and the Faculty of General Dental Practitioners (UK) has designated research advisors distributed

throughout the country as well as producing literature on research methods. Vocational training which includes a research component may also encourage further investigations in primary dental care.

One must also consider that research which is scientific and of practical value is not straight forward to plan and execute. Should academics be surprised that many of the dentists who attended the course were prepared to cooperate but not lead? The answer must be no, given the lack of training and the time constraints of working in a busy general practice. Indeed it is becoming generally difficult to recruit young academic staff to dental schools because research time is being squeezed by the demands associated with teaching and clinical training.

These findings have important funding implications as there is a move within the National Health Service to establish research support units to help primary care workers undertake research. This would clearly be of little value to dental practitioners who do not want to undertake independent research. A more useful way of generating primary care research would be to fund academics in dental schools with a proven track record in pri-

mary care or health service related research. These individuals could liaise with their practitioner colleagues to determine a research agenda and write relevant protocols. The projects could then be undertaken by groups of interested practitioners, but the organisational work, data analysis and research publications should be the academic 'coordinators' role. This would have the advantage of placing primary care research firmly on the academic agenda of university dental schools while promoting research in general practice. In time enthusiastic practitioners might feel motivated to take a more proactive research role. Such a directed approach to research would appear to be a more sensible use of resources than funding a somewhat more passive support unit.

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