European Journal of General Practice, 2010; 16: 100–105

informa
healthcare

ORIGINAL ARTICLE

Are presentations of abstracts at EGPRN meetings followed by publication?

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Abstract

Background: Research presented at scientific meetings is inaccessible to clinicians, unless the findings are subsequently published in a journal. *Aims:* To assess the publication rate of studies presented at 10 European General Practice Research Network (EGPRN) meetings between 1999 and 2006. *Methods*: Survey by e-mail or postal questionnaire among all presenters. *Results:* Information was obtained on 251 presentations (response rate 60%). In total, 113 out of these 251 (45%) presentations had been published. However, only 60% of the research findings were published in English Medline-listed journals, whereas 20% were not Medline-listed. The most frequently cited reason for non-publication was that the paper had not been submitted yet at time of follow up (103 responses). The main reason for non-submission was that the research presented had not been completed yet.

Conclusion: Presentations at EGPRN meetings commonly concern research ideas or ongoing research. In this light, the ratio of published work to presented work compares well with the corresponding ratios found for international meetings in other specialist fields. This survey was also meant as an audit of the EGPRN meetings and gives better insight in needs for future strategy.

Key words: *Publication rate, research capacity, survey, general practice*

Introduction

The European General Practice Research Network (EGPRN) is a network organization that aims to promote and enhance research capacity in Europe (1,2). Twice a year, it holds meetings in varying locations across the continent at which research ideas, research methods, results of pilot studies and completed research can be presented. Unlike at many other conferences, an extra 15 min time-slot is reserved after each presentation, to discuss about the presented research methodology and results, and for this also novice researchers are encouraged to attend (2). The main aim is to promote collaborative research and to improve research outputs through feedback to the presenters (3). This is especially true for researchers living and working in countries where multiple barriers exist to general practice research. These barriers include linguistic obstacles, low levels of professional development, restriction of research resources and lack of specific General Practice/Primary Care journals. However, little is known with respect to the outcome of the presentations at EGPRN meetings. Therefore, it was worthwhile exploring the potential benefits and impact of EGPRN meetings on the

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(Received 30 October 2009; accepted 30 March 2010)

ISSN 1381-4788 print/ISSN 1751-1402 online
DOI: 10.3109/13814788.2010.482582

publication rate of the research presented. The results would also benefit the European research agenda for general practice/family medicine in Europe, assisting both EGPRN and the World Organization of Family Doctors (WONCA) to refine future research strategies and policy (4,5). This study focuses on the research papers presented in the EGPRN meetings with the aim to explore their effectiveness in assisting researchers to report their findings in biomedical journals. More specifically the objectives of this study are (1) to determine the rate at which results presented in abstracts are subsequently published in full; (2) to describe where EGPRN presenters succeeded in publishing their papers; (3) to establish why presentations were not published as papers; and (4) to assess the extent to which the discussions and the contacts at EGPRN meetings were ultimately helpful in preparing research findings for publication.

Methods

Study design—setting

We included all findings that were initially presented as abstracts at six EGPRN meetings between October 1999 and May 2002 and four further meetings in 2005 and 2006, with follow-up extending to at least one year after the final meeting. Presenters who failed to respond were sent a reminder.

Questionnaire

A questionnaire with open and closed sections was designed by one member of the research committee (FG). It was tested in a pilot survey and checked for validity by comparing the results with a Pubmed search. All EGPRN presenters, corresponding to 416 presentations, were asked to answer the following questions and to include copies of subsequent publications if applicable.

Questions:

1. Have you published a paper related to your presentation at the EGPRN?
2. Where did you publish the paper (journal, peer-reviewed or not, type of publication)?
3. If you have not published a paper, why not?
4. How did EGPRN help in the preparation of the paper for publication?

All presenters were contacted by email or postal questionnaire. Questionnaires for the first six meetings (1999–2002) were sent in May 2003, while these for the four meetings (2005–2006) were sent in October 2008. Presentations were rated as published if a copy of the publication, a prepublication copy or a letter confirming acceptance by the journal was included with the returned questionnaire, or if the publication was found in a Pubmed search.

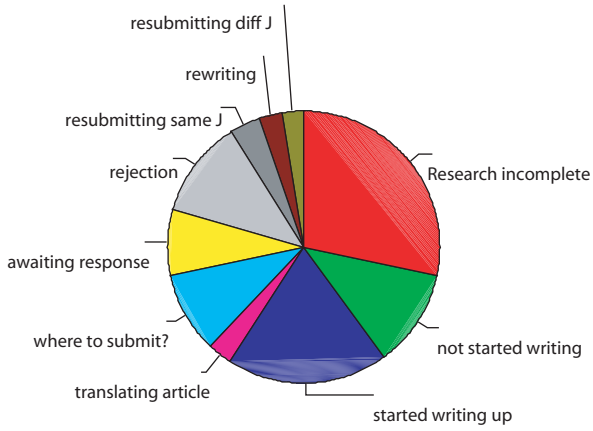

Figure 1. Distribution of reasons for unpublished presentations.

Data analysis

Data were entered into an SPSS file, checked for completeness and validity, and subsequently analysed using frequencies and multiple-response analysis in SPSS10. The topics of the original presentations, as well as the responses to the open questions, were entered verbatim and classified.

Results

Published presentations

We received 127 and 124 completed questionnaires, relating to six (1999–2002) and four (2005–2006) meetings respectively, and encompassing a total of 416 presentations, for an overall response rate of 60%. In total, 113/251 (45%) of the presentations were found to have subsequently been published (Table I). The publication rate of abstracts presented in 2005–2006 was slightly higher than that for abstracts presented at the 1999–2002 meetings. Table II gives the distribution of publications. Publications are classified by accessibility to and readability for the European research community. The first category includes English journals that are Medline-listed and therefore most easily accessible via a Pubmed search and readily available in European libraries. 27/113 (24%) of the publications appeared in Family Practice, the British Journal of General Practice, the Scandinavian Journal of Primary Health Care and the European Journal of General Practice. The preferred journal among EGPRN presenters was Family Practice. Of all presentations published in English, 32/72 (44%) appeared in GP-specific journals.

Table I. Response of the presenters of the EGPRN meetings to the survey.

	Meeting Place, month/year	Presenters responding *n*	Total presentations *n*	Response %	Publication %
1	Göttingen, October 1999	27	35	77	41
2	Maastricht, May 2000	19	34	56	47
3	Zagreb, October 2000	16	38	42	50
4	Tampere, June 2001	17	27	63	35
5	Gdansk, October 2001	19	30	63	47
6	Avignon, May 2002	29	40	73	41
	Total 1999–2002	127	204	62	43
7	Göttingen, May 2005	33	60	55	58
8	Tartu, October 2005	26	48	54	50
9	Copenhagen, May 2006	38	52	73	42
10	Kavala, October 2006	27	52	52	37
	Total 2005–2006	124	212	59	47

Forty (35%) publications were published in various English-language journals, not aimed at primary care, including three high-impact titles (Lancet, JAMA and Br Med J), specific journals in diabetes, medical education and public health, most of which are included in Medline. The remaining articles appeared in national journals, including French, German, Spanish and other-language journals (e.g. Turkish, Croatian, Bulgarian, Italian, Polish). These articles are usually not included in systematic literature reviews, as they are not readable to the foreign-speaking research community. Just 9/113 (8 %) presentations were published in books or other types of non-peer reviewed publications. Comparing the two periods (1999–2002 versus 2005–2006), the number of publications in more specialized international journals, likewise in diabetes, medical education and public health, increases over time, while the number of publications in English general practice journals appears to be declining (tested for trend $P < 0.01$).

Thirty-three out of 55 (60%) respondents from the first group (meetings 1999–2002) who subsequently published, were appreciative of the discussion following their presentation at the EGPRN

Table II. Published presentations at EGPRN, classified by language and type of publication.

	1999–2002	2005–2006	Total	Total %
English journals of general practice	20	12	32	28
Fam Pract.	5	3	8	7
Br J Gen Pract.	5	2	7	6
Scand J Prim Health Care	3	4	7	6
Eur J Gen Pract.	3	2	5	4
Aust Fam Physician	1	0	1	1
BMC Fam Pract.	1	1	2	2
Prim Care Respir J.	1	0	1	1
Practitioner	1	0	1	1
Other journals, (English)	10	30	40	35
Br Med J., Lancet, JAMA	1	3	4	4
Diabetes journals (Diabet Med., Prim Care Diabetes)	0	5	5	4
Medical education journals (Med Teach, Med Educ.)	0	4	4	4
Journals public health (BMC Public Health, Eur J Public Health, Health Policy)	1	3	4	4
Patient Educ Couns.	1	2	3	3
J Eval Clin Pract.	0	2	2	2
Qual Saf Health Care	1	1	2	2
Journals physiotherapy (J Manipulative Physiol Ther., Aust J Physiother.)	2	0	2	2
Other journals	4	10	14	12
French journals	8	4	12	11
German journals	5	0	5	4
Spanish	2	0	2	2
Other journals various languages (not Medline-listed)	5	8	13	12
Other publications (books, research reports, book chapters) not peer-reviewed	5	4	9	8
All publications (total)	55	58	113	100

meeting, but just 22/55 (40%) reported either having established contacts that were helpful in preparing their paper for publication or receiving advice on where to submit their paper.

Unpublished presentations

Figure 1 and table III gives the results of a multiple-response analysis of presenters who did not publish a paper. The most commonly cited reason was that the research was incomplete (37/138 respondents, 27%), which reflects the fact that EGPRN meetings were originally designed as a research workshop where scholars could seek advice in the early stages of the research process. Seventeen respondents (12%) had completed their study, but had not started writing up their findings. The second most commonly cited reason was that, although the research had been completed, the writing process was still under way (31/138 respondents, 22%). Sixteen respondents (12%) without publication reported that they had submitted an article to a journal but that it had been rejected. Most rejected papers had been sent in to the following journals: the British Medical Journal, Family Practice, the European Journal of General Practice, and the Scandinavian Journal of Primary Health Care. Some researchers resubmitted their paper to a different journal or to the same journal after revision, but got no final answer yet.

Discussion

As in many international meetings, all abstracts of presentations at EGPRN meetings are included in electronic proceedings and published as such in cited journals, formerly in Family Practice and since 2000 in the European Journal of General Practice. However, abstracts published in the EGPRN conference proceedings or in the European Journal of General Practice are not generally accessible via search engines, unless they have been published as full articles. Several previous studies have relied on Pubmed searches to verify subsequent publication. By contrast, we proceed on the basis of a pre-tested questionnaire survey, a method whereby we were able to trace many publications, which we would otherwise have missed. In fact, of all retrieved publications of EGPRN presentations (regardless of type), 20% were not Medline-listed. On this strength, we conclude that sending out a questionnaire and asking respondents to include a copy of their published paper was an appropriate method.

Our descriptive survey found a publication rate of 45%, though it should be pointed out that the non-response rate was high. We used Pubmed to search for published articles from non-responding authors. For 88 non–responders of the last four meetings, we found nine articles, six in an international journal and three in a local Medline-listed journal, giving a publication rate of 32% (67 out of 212). We may have found additional articles through using other search engines. People, who attended only one meeting and/or were no EGPRN member, were more frequently not responding the survey.

By way of comparison, we considered twenty studies in other medical fields relating to the publication behaviour after conference presentations over the past 10 years (6–25). The reported publication rates show that our findings are not discouraging at all. However, we have no way of telling

Table III. Reason for non-publication ($n=138$).

Name	Responses (1999–2002) *n*	Responses (2005–2006) *n*	Total number (% of cases)
The research is incomplete	22	15	37 (27)
I have not started writing up the research yet	9	8	17 (12)
I have started but not yet completed writing up the research	15	16	31 (22)
I have written up the research in my own language but it has yet to be translated into English	2	7	9 (7)
I have an article ready for submission but do not know where to submit it	5	4	9 (7)
Subtotal	53	50	103 (75)
I have submitted my article and I am awaiting a response	6	4	10 (7)
I submitted an article but it was rejected	9	7	16 (12)
I am resubmitting the same article	3	1	4 (3)
I am rewriting the article after it was rejected	2	1	3 (2)
I have resubmitted a revised version of the article to a different journal	2	3	5 (4)
Total	75	66	141[a]

[a]More than 100% since some respondents gave more than one answer.

whether non-respondents published or not. Assuming that all non-respondents failed to publish even at the national level and adding the nine extra found publications in Pubmed, we arrive at an overall publication rate of 29% (122 out of a total 416 presentations). While this is clearly a rather conservative estimate, it is similar to the publication rates found in other medical specialties, for example radiology (29–47%) (6–9), anaesthesiology (38–45%) (10), orthopaedics (33–59%) (11–14), emergency medicine (30–40%) (15,16), urology (22–55%) (17–20), toxicology (24%) (21), cardiology (30%) (22), gastroenterology (31–58%, declining over time) (23), clinical chemistry (14%) (24) and medical decision-making (27%) (25). Scherer et al. (26) found a weighted mean rate of subsequent full publication of 44.5% (95% confidence interval (CI): 43.9–45.1), combining data from 79 reports (29 729 studies reported as abstracts). In the present survey, we also observed that articles on primary-care research presented at EGPRN meetings are increasingly disseminated not only via dedicated general practice journals but also in other specialist publications and in the major medical journals. This finding also chimes with the observed increase in primary-care research publications between 1975 and 2003 (27).

This study was conducted as a first step of an audit of EGPRN meetings. It is a tradition of many years that researchers from across Europe are encouraged to attend these meetings to present and discuss their research ideas. In fact, many of the presentations concern research ideas or pilot studies that are not yet ready to be formulated as a concrete research proposal. Indeed, many researchers use the meetings as a soundboard, presenting their ideas or current research at a very early stage. Furthermore, one has to take into account that the EGPRN reaches researchers from very different European settings in terms of research resources and professional development. Lack of research capacity can represent barriers to research (2,28,29) and to publication in international journals. In a questionnaire survey on publication behaviour of orthopaedic surgeons barriers to publication cited included lack of time to prepare a manuscript for publication (46.5%), the fact that the study was still ongoing (31%), the fact that responsibility for writing the manuscript lay with someone else (19.7%), and uncooperative co-authors (16.9%) (28). Major reasons for non-publication can be insufficient priority or lack of time, funds or other resources-related barriers to General Practice research (30).

Some 60% of those who subsequently published assert that the EGPRN discussions had been helpful in preparing a paper. Most of those who intended to publish (but failed) made similar assertions. However, it seems there is room for improvement, as some respondents pointed out that there is a need for better access to international journals and research findings, especially for non-native English researchers. Retrieval bias creates problems for those completing systematic reviews and those relying on the published English literature for evidence.

Last, the results of this study assisted the developers of the recently published European research agenda for general practice/family medicine and primary care (5) in formulating clear implications for journals and policymakers. There is clear evidence that most researchers intend to publish in a specific family-medicine and Medline-registered journal. National libraries should be encouraged to make such journals available across Europe, as they account for some 30% of the total number of publications. It is also known that editors of medical journals shape medical knowledge in the way they accept publications or interpret or enhance research (31). Also publication bias, where studies with interesting or statistically interesting results are more likely to be published, can play its role (32). Some respondents mentioned a lengthy review process with unclear or non-feasible suggestions as a major obstacle for publication. There is a strong case to be made for publishers and researchers to exchange ideas on how evidence from different primary healthcare systems should be made available to Europe's scientific community. In addition, the new Editorial Board of the European Journal of General Practice could implement the outcome of this discussion in their future publication policy.

Full publication of studies initially appearing as abstracts ought to be enhanced, and specific initiatives to this end should be further organized and planned by the EGPRN, including the provision of basic and advanced research courses (33), and personal mentoring and practical assistance in the writing of articles in English.

Declaration of interest: The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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