A Medline search for publications generated by Dutch family medicine

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Abstract Dutch medical research findings are well represented in the Index Medicus. The situation for Dutch family medicine, however, is unknown. A Medline search on CD-ROM was performed over a period of ten years: 1983 through 1992 (Nov). A total number of 42 publications were found in the first and of 174 in the second period of five years. In the first period of five years 66 per cent of the total production was published in Dutch medical journals. In the next 5 years this decreased to 28 per cent. Publications in international family medicine journals increased from 12 to 33 per cent and in international medical journals from 21 to 39 per cent. In addition there is an increase, from 19 per cent to 50 per cent, in the number of publications in journals with an impact factor.

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Introduction

Family medicine is a relatively young discipline in medicine. In the Netherlands, the first professor of family medicine was appointed in 1967. This appointment can be considered the official recognition of the discipline and a starting point for its academic development. This development can be followed in dissertations or publications in scientific journals.[1] The number of dissertations in family medicine has remained stable throughout the years, but the subjects have changed: from historical studies of family medicine to clinical studies in family practice.[2,3]

Publications in medical journals are another source of scientific knowledge with a special advantage. They are more accessible than dissertations, especially when they have been indexed in one of the major literature databases, like the Index Medicus. A reference in Index Medicus makes research findings more accessible for a broad international audience, especially now that there is a CD-ROM version for personal computer use (Medline).[4]

Dutch medical research findings are well represented in the Index Medicus.[5] The situation for Dutch family medicine, however, is unknown. Therefore this article will focus on the following questions:

- Is there an increase in the number of publications from Dutch departments of family medicine and/or Dutch general practitioners, that can be traced via Medline?
- In which journals are these articles published?

Methods

A Medline search on CD-ROM was performed over the section 1983 t/m 1992 (November). The search consisted of two parts: in the first part the search focused on 'family practi*' (in title, MESH headings, author's affiliation), 'family medicine' (in title, author's affiliation), 'general practi*' (in title, author's affiliation) or 'primary health care' (author's affiliation); in the second part the focus was on 'Netherlands' (MESH headings, author's affiliation) or 'Dutch' (language). By using a 'wild card' (*) the search identified articles containing 'practice' as well as 'practitioners' in the fields searched. Part 1 of the search identified publications from 'family medicine', part 2 identified publications 'from the Netherlands'. The numbers from each part of the search were used as a baseline estimate of the general increase in Medline citations. The combination of these two parts resulted in a rough list of citations, which was then edited as follows:

- letters, comments and editorials were excluded from the list;
- when a family medicine institute had come up in the field 'author's affiliation', the citation was included in the final list;
- from citations without a family medicine affiliation, the original article was screened for the assessment of the author's profession.

When inconclusive, the ultimate assessment was made using the appendix of the 'medical adressbook', in which the medical profession of every doctor living in the Netherlands is registered.[6] One general practitioner as (co-)author of the article was sufficient for inclusion in the final list.

In order to evaluate the kind of journal in which the articles were published, it was first established whether it was a Dutch medical journal, an international family medicine journal or an international medical journal.[7] Secondly, the impact factor of each journal was determined.[8]

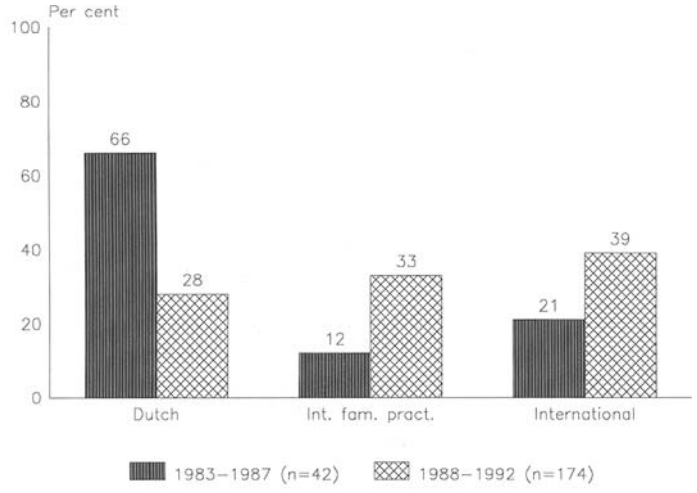
The results are presented in two succeeding periods of five years: from 1983-1987 and from 1988-1992 (November).

Results

Number of publications

The search yielded a rough list of 315 citations, 90 in the first and 225 in the second five-year period. After checking for author's affiliation and author's profession, a total of 216 publications (68 per cent) remained in the final list, 42 from the first five-year period and 174 from the second. This is a fourfold increase.

Figure *Percentage of publications in the different kinds of medical journals. Comparison between 1983-1987 and 1988-1992 (Nov).*



Chi-square test $p<0.05$.

Table *List of journals with and without impact factor (IF) where family medicine publications were found from the Netherlands in Medline 1983 to 1992 (Nov).*

Journals	Impact Fact.	1983-1987	1988-1992
With impactfactor			
Br Med J	3.7	1	7
Br J Gen Pract*	0.8		13
Eur Respir J	1.1		3
Fam Pract	0.2	3	27
J Hum Hypertens	0.6		3
Med Care	1.2		4
Med Educ	0.6	2	5
Remainder (English)	2†	2	26
Subtotal		8	88
Without impactfactor			
Fam Med			2
J Cancer Educ			4
Scan J Prim Health Care		2	15
Soc Sci Med		1	10
Remainder (2x German)		3	7
Dutch		28	48
Subtotal		34	86
Total		42	174

* Formerly J R Coll Gen Pract. † Average

This increase can be compared with the increase of citations from 'family medicine' (part 1 of the search) and citations 'from the Netherlands' (part 2 of the search). In the two five-year periods, respectively 4125 and 6561 citations from 'family medicine' were found; this is 8615 and 30,226 for citations from 'the Netherlands'. Because of this large amount of articles, no further attempt for confirmation was undertaken. These numbers serve merely as a rough estimate of the rise in publications from 'family medicine' (1.5) and from 'the Netherlands' (3.5).

What kind of journal?

In the first period of five years, 66 per cent of the total production that could be found in journals indexed in Medline was published in Dutch medical journals. In the next 5 years this decreased to 28 per cent. Publications in international family medicine journals increased from 12 to 33 percent, and in international medical journals from 21 to 39 per cent (*figure*).

The number of publications in journals with an impact factor has also increased: from 19 percent of the total production in the first five-year period to 50 per cent in the second five-year period. Most of the publications were written in English or Dutch. There were only two publications in a German journal (*table*).

Discussion

The aim of this study was to find all Dutch family medicine publications in journals indexed in Medline for the last 10 years. The search produced a total of 315 citations, of which 68 per cent were eligible. The absolute number of publications has become four times as large. In addition to this, an increasing percentage of the total production has been published in international medical journals and also in journals with an impact factor.

The results must be interpreted carefully, because not all publications of 1992 have been indexed. The production indexed until November 1992 does not approximate the year production. Medline citations in CD-Rom are approximately 6

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months delayed. This will increase the difference in the two periods of five years. Medline is a dynamic index, which means that the number of journals has grown over the years. Therefore, an increase of the total number of publications by Dutch general practitioners was to be expected. However, Dutch family medicine publications increased by a factor four, compared to the rough estimate of a 1.5 growth in publications from 'family medicine'. This means that there is a substantial rise in Dutch family medicine publications. When the same increase is compared with the rough estimated growth of publications from 'the Netherlands' (3.5), Dutch general practitioners seem to keep good pace with their specialist colleagues.

A few examples of journals relatively new in Medline are *Family Practice* and *Scandinavian Journal of Primary Health Care*, which have been listed since 1986.[9] The *table* shows that in the second five-year period a lot of articles were published in these journals. Together they have contributed 24 per cent to the total production in the last five years. If their contribution is subtracted from the *table*, then the increase is still more than threefold (3.5) and still much more than the growth in the number of publications from 'family medicine'. Thus, the total increase is only partly due to the rise in the number of the family medicine journals indexed in Medline. But publications by general practitioners also appear in other medical specialisms, like pulmonology and internal medicine.

It was not taken into account that some Dutch general practitioners publish in *Huisarts en Wetenschap*, the journal of the Dutch College of General Practitioners. This would surely increase the number of publications from family medicine journals. But since *Huisarts en Wetenschap* is not listed in the Index Medicus, publications from this journal have not been included in the final list.

What does it mean that the amount of publications in journals with an impact factor has grown? The impact factor is a measure for the diffusion of information from a particular journal. So the Dutch

family medicine institutes succeed in reaching a broad audience with their scientific publications. However, this does not indicate scientific quality, although the impact factor is commonly used as a measure for this, for lack of a better standard.

In comparison with publications from US family medicine faculties, the Dutch family medicine institutes seem to perform better. In the US the total number of publications has doubled (from 178 to 328), but the percentage of publications in family medicine journals remained the same: 50 percent of the total number of published articles. It should be considered, though, that the American study was limited to a search only for 'author's affiliation'. So publications in collaboration with other (medical) departments were not listed, while these publications are more likely to be published in other than family medicine journals.

The results of this study show a blooming development in family medicine research in the Netherlands. The 'publish or perish' policy of the medical faculties has had an impact. Also, research programs funded by the goverment, such as NWO (Nederlands Wetenschappelijk Onderzoek) and SGO (Stimulering Gezondheidszorg Onderzoek) seem to bear fruit.

Finally, it would seem recommendable for the family medicine departments from the eight medical faculties in the Netherlands to use the same name as their author's affiliation. Department of general practice, department of family medicine or department of family practice were used side by side; also within one department. In Medline the indexed term is 'family practice', so 'department of family practice' would be an obvious choice.

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Samenvatting

Publikaties in medische tijdschriften vormen een belangrijke bron van wetenschappelijke kennis. Indien ze opgenomen zijn in Index Medicus, worden de onderzoeksresultaten bovendien toegankelijk voor een breed, internationaal publiek, zeker sinds er een CD-ROM-versie beschikbaar is. Nederlandse medische publikaties zijn goed vertegenwoordigd in Index Medicus. Over de aanwezigheid van Nederlandse huisartsgeneeskundige publikaties in dit bestand is echter niets bekend. Een Medline-search op CD-ROM over de jaren 1983 t/m november 1992 leverde 216 huisartsgeneeskundige publikaties op: 42 uit de eerste periode van vijf jaar en 174 uit de tweede. Van de publikaties uit de jaren 1983-1987 was 66 procent in het Nederlands geschreven; in de jaren 1988-1992 was dat nog slechts 28 procent. Het aandeel van de publikaties in internationale tijdschriften steeg van 21 naar 39 procent, het aandeel van de publikaties in internationale huisartsgeneeskundige tijdschriften van 12 naar 33 procent. Het aandeel van de publikaties in tijdschriften met een impactfactor nam toe van 19 naar 50 procent.