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# Academic careers in general practice: scientific requirements in Europe

Michael M Kochen, Wolfgang Himmel

This paper, based on a survey of all 25 council members of the European Academy of Teachers in General Practice (EURACT), describes requirements for scientific qualification in general practice. The career tracks for becoming a professor are different throughout Europe and the criteria to enter a research programme or to start a doctorate are diverse. Three models of academic careers have emerged: (1) career development following no formalised path (e.g. in Israel); (2) a 'liberal' model requiring a thesis (e.g. in Denmark, the Netherlands and the UK); (3) a formal procedure (habilitation) which requires completed vocational training, a number of high-quality research publications, some years of teaching experience, and a successful thesis (e.g. in Croatia, Germany, Hungary). In most European countries, research doctorates with an MD or PhD degree usually precede an appointment as professor of general practice. Although strengthening the scientific base of general practice is necessary to improve the reputation of the discipline, a liberal model for entry into an academic career may offer the best opportunities to combine academic work with primary care for general practitioners (GPs) in European countries.

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**Keywords:** family practice, medical schools, staff development, graduate education, Europe

## Introduction

General practice throughout Europe is diverse in its organisation of care, education and funding<sup>1</sup> as well as in academic institutionalisation and personnel recruitment at

universities.<sup>2,3</sup> Two crucial aspects for the future of general practice (called family practice in some European countries<sup>4</sup>) are the imminent leadership transition in academic institutions and the conferment of academic titles.<sup>5-8</sup> This paper is based on a survey of all 25 council members of the European Academy of Teachers in General Practice (EURACT)<sup>9</sup> to describe requirements for scientific qualification in and for becoming a professor of general practice.

## The situation in Europe

In nearly all countries (20/25), a research doctorate is a condition for an academic career leading to a professorship of general practice. However, three countries have no regulations at all (table 1). In some countries, a thesis may also be written in a different field of medicine, not necessarily in general practice. Table 1 also gives an impression of how many theses have been written in each country (based on personal knowledge of the interviewee). Countries with high numbers of theses, e.g. the Netherlands, the UK, Sweden or Finland, do not necessarily have strongly formalised regulations for an academic career, but in general a long tradition of primary health care.

Table 2 summarises requirements for a thesis in general practice in different European countries. Experience in research – shown by publication – and publishing in peer-reviewed journals are necessary for a thesis in more than half of the countries. Vocational training is required in ten countries, whereas experience in undergraduate education is deemed necessary in only six countries. The PhD degree is often considered to have higher academic status than the MD degree, although the standard of scholarship involved should be the same.<sup>10-12</sup> In the UK, for example, the PhD student usually works full-time for two or three years supervised by an experienced academic. An MD candidate is usually older, experienced in clinical medicine and not supervised.<sup>12</sup> (Note: the MD degree referred to in this paper should not be confused with the identically named degree awarded to all graduates of medical schools in some countries, e.g. the US.<sup>13</sup>)

Applicants for a thesis in general practice are usually employed by a university, often in a part-time job, with some countries offering mixed forms of appointments.

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Table 1. Theses and academic career.

Countries	Thesis required for professorship	Doctorate in other fields permitted	Number of theses written by GPs (estimated)
Austria	Yes	No	0
Belgium	Yes	Yes	10
Croatia	Yes	No	4
Czech Republic	*	Yes	1
Denmark	Yes	Yes	11
Estonia	Yes	Yes	2
Finland	Yes	Yes	27
Germany	Yes	No	13
Greece	Yes	Yes	0
Hungary	Yes	Yes	3
Iceland	Yes	Yes	1
Ireland	No	Yes	2
Israel	No	No	0
Italy	*		
The Netherlands	Yes	No	>80
Norway	Yes	No	21
Poland	Yes	Yes	?
Portugal	Yes		4
Slovakia	Yes	No	1
Slovenia	Yes	No	2
Spain	*		
Sweden	Yes	Yes	30
Switzerland	Yes	No	0
Turkey	Yes	No	
United Kingdom	Yes	Occasionally	*
All (% agreeing)	80	40	-

\* Respondents did not feel capable to give an adequate answer

Table 2. Requirements for an MD or PhD thesis.

Countries	Vocational training	Teaching publication	Research	Publications in peer-reviewed journals
Austria	Yes	Yes	Yes	+
Belgium	No	No	Yes	+
Croatia	Yes	No	Yes	+
Czech Republic**				
Denmark	No	No	No	-
Estonia	No	No	No	+
Finland	Yes	No	No	+
Germany	Yes	Yes	Yes	+
Greece	Yes	Yes	Yes	+
Hungary	No	No	Yes	+
Iceland	No	No	Yes	+
Ireland	No	No	No	-
Israel*				
Italy**				
The Netherlands	Yes	No	Preferable	Preferable
Norway	No	No	Yes	+
Poland	No	No	Yes	-
Portugal	No	Preferable	Yes	+
Slovakia	Yes	Yes	Yes	+
Slovenia	No	No	No	+
Spain	No	No	No	-
Sweden	No	No	No	-
Switzerland	Yes	Yes	Yes	+
Turkey	Yes	No	No	-
United Kingdom	Yes	No	No	-
All (% agreeing)	40	24	52	60

\* No formal thesis required for academic disciplines  
\*\* No thesis procedure offered to GPs

Three models

With regard to the requirements to begin and successfully finish a doctorate, three idealised models could be extracted from the representatives’ answers as shown in table 3.

In some countries, a formalised career is required to become a professor (a procedure called ‘Habilitation’ in German-speaking countries).<sup>14-16</sup> This procedure is mostly based on a doctoral dissertation, scientific publications, a habilitation thesis (an opus magnum qualifying the doctor to be an expert in the area of his or her thesis), and involvement in basic medical education.<sup>15</sup> General practitioners (GPs) may be especially deterred by the formalised habilitation since they usually have to divide their attention among academic research, teaching and community-based practise.<sup>17,18</sup> Furthermore it involves a high degree of dependence on senior academics.

Some countries favour a less formalised, but no less demanding system of academic advancement for young scientists as well as for scientifically interested GPs. For example, there are doctorates in the Netherlands or the UK

conferring an MD or PhD degree to the successful candidate.<sup>19-21</sup> In the UK, it is not uncommon for GPs to write MD theses from clinical practice (Pereira Gray, personal communication).

The situation in Israel is completely different. We would suppose that the circumstances for interested GPs in this country are similar to those described by Williams et al.<sup>22</sup> and Zyzanski et al.<sup>23</sup> for family practice in the United States: successful candidates for promotion to associate professor and attaining tenure must publish in peer-reviewed journals, succeed in getting research grant support and acquire teaching experience. There is, though, no formalised procedure.

In Italy (and less so in Spain), however, there are no rules but also no academic pathway, no university department of general practice and no professorships offered.

In countries that are grouped in one model (see, for example, Belgium compared to Germany), there is, of course, some variation between scientific requirements. There are even substantial differences within any given

**Table 3. Models of academic career in general practice.**

**Model I – no rules**

Career development in general practice does not follow any formalised tracks. The academic situation in Israel seems best characterised by this ‘model’. Italy and Spain provide no academic pathway whatsoever for general practice.

**Model II – liberal**

A thesis (or an equivalent) is required to qualify for a professorship in general practice. However, candidates may be admitted without any further requirements. In some countries, such as the Netherlands or Norway, experience in research and publishing are recommended or required. Theses are regarded as the first major step for an academic career. Apart from some variation between the different countries, this model is valid for most European countries: Denmark, Estonia, Iceland, Ireland, the Netherlands, Norway, Poland, Portugal, Slovenia, Sweden, Turkey, and the UK.

**Model III – habilitation**

Successful theses are tied to a strongly formalised procedure that usually requires completed vocational training, a number of high-quality research publications and some years of teaching experience. The habilitation (or an equivalent) is required in Austria, Belgium, Croatia, the Czech Republic, Finland, Germany, Greece, Hungary, Slovakia, and Switzerland.

country<sup>10,14</sup> (in the Netherlands e.g., a thesis is acceptable in some – but not all – faculties only if the thesis is based on articles in English). It should be also considered that chairpersons usually need higher qualifications than other professors.

**Strengthening the academic base of general practice**

In most European countries, research doctorates with an MD or PhD degree usually precede an appointment as professor of general practice. This can be interpreted as strengthening the academic base of primary health care.<sup>24</sup> It may also help to improve the reputation of general practice.<sup>12</sup> However, the detailed requirements for an academic career, which have not been compared or published so far, are diverse in Europe. This can be demonstrated by the part that teaching, research, publishing and time arrangements do play for successful candidates. Three models for academic careers have emerged from our survey of EURACT council members: a model without any formalised requirements (I), a liberal model (II), and a model requiring habilitation (III).

At present, it is difficult to assess whether model I is a disadvantage for the academic development of general practice. Models II and III are similar in their requirement for a research doctorate and confirm William’s<sup>12</sup> emphatic conclusion that the best way of producing good researchers in general practice is to encourage doctors to accept the challenge of writing an MD or PhD thesis. A higher research degree is increasingly becoming a prerequisite for promotion or employment.<sup>11</sup>

The most important difference between model II and model III seems to be the level of additional criteria to begin and finish a thesis. Model III with its high entry criteria is likely to deter GPs from an academic career.<sup>25</sup> The thesis should be regarded as the first major step into an academic career, but it should not be burdened by strong regulations. The habilitation in the German-speaking countries has been criticised as being anachronistic because it keeps scientists in a long phase of personal dependence on the head of department and prevents young scientists from developing efficient research techniques and modern methods of teamwork rather than stimulating such development.<sup>16</sup> In the case of general practice, one should also consider the fact that not all academic GPs will proceed to become senior lecturers or – ultimately – professors. Therefore, it is important to avoid rigidity in career structures and to offer young scientists opportunities to return to general practice or postgraduate teaching.<sup>24</sup> This is a plea for model II.

Obviously, there is no strong association between the career model in one country and the number of theses written by GPs. Considering the Netherlands and the UK, one may suppose that the liberal model is more appropriate to motivate young applicants to successfully finish a thesis. The number of theses also depends on the tradition of general practice in a country. This is especially true for those countries that have high scores in Starfield’s<sup>26</sup> analysis of primary care in different countries. Although British GPs have written, to date, more than 100 theses, they make up only about 2% of all theses in the UK.<sup>12</sup> This proportion mirrors the academic situation for general practice (not only) in the UK and elsewhere.

Readers should note that our data are based on one informant in each country only and may be perhaps inaccurate in some instances (e.g. – contrary to our initial information – research experience should be shown by publications in the UK; Bradley C, personal communication). Further research should scrutinise the information presented and highlight the future development in this important field.

**Recommendations**

In times where general practice is still struggling for academic recognition in many countries, it may be helpful to harmonise career patterns considering the following principles:

- A research doctorate, finished with a thesis, should be offered to all applicants for an academic career in general practice.
- A thesis in the field of general practice should be a usual requirement for becoming a professor of general practice.
- All applicants should learn and become acquainted with methods of applying for research support, basic medical teaching and publishing; however, this dimension should

not be strongly formalised as a criterion for successfully finishing a thesis.

- To motivate young GPs to enter an academic career, appointments in university departments should meet the needs of the scientist as well as the practising GP. Part-time jobs with protected time for personal development and research permit the physician working in a community practice or as a clinician at the university, and these positions seem best suited for academic recruitment in general practice. To the same extent as in the UK, each department should, in principle, have several part-time positions at its disposal.<sup>18</sup>

These recommendations may help young researchers to structure career patterns and to provide comparability of scientific qualifications in Europe. ■

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