Chapter 1
General introduction

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Over the last years, more and more European medical doctors work in a different country than in which they were trained. Within Europe, the increase of mobility of medical doctors between different countries is partially caused by uneven distribution of workforces of medical doctors between urban and rural areas, as well as between different European countries. Despite the fact that mobility of medical doctors throughout Europe is stimulated, the reality of daily work of medical doctors working in a different European country than where they were trained, can be challenging. For instance, these medical doctors encounter different health care systems, differences in health care delivery and differences in their legally permitted level of independence during training and/or practice. Experiences of mobile medical doctors and trainees suggest that their performance during examinations and clinical work declines and they require more attention for acclimatisation to their new clinical settings. This may affect the quality of care that is delivered.

An approach to reduce challenges of medical doctors to work in a different European country and thus to enhance mobility of medical doctors, is to align training of medical doctors between European countries. A better alignment of training across Europe could facilitate medical doctors to practice in different countries, which can eventually lead to better quality of care.

One approach to align training is standardisation of training, which refers to the development and the use of uniform learning outcomes, uniform strategies of training, and uniform systems of assessment of training. These elements of training are collectively described as the standards of training and can be integrated into a curriculum. Standardisation thus implies that it is desired to create uniformity. To aim for uniformity in training of medical doctors in Europe may be a bridge too far, since the diversity of training contexts is too great. A somewhat different approach to align training of medical doctors is referred to as harmonisation. Harmonisation can be defined as the establishment of common standards in training, while maintaining institutional autonomy rather than creating uniformity in training practices. This approach can be considered more applicable for alignment of training in Europe, considering the diversity of training contexts.

Although we interpret the concepts ‘standardisation’ and ‘harmonisation’ differently in this thesis, in the medical education literature they are used interchangeably, which causes confusion with regard to the reasons for which these processes are initiated, and with regard to their perceived end goals. Throughout this thesis, we hold on to the interpretations provided here, and we aim to specify both concepts more.

Harmonisation processes can be challenging and complex. For instance, questions can be raised such as ‘How can different countries agree on common standards?’, or ‘To what extent is uniformity desired?’ or ‘How can institutional autonomy be ensured?’, or ‘Under which conditions will different contexts adhere to the common standards?’. 
In this thesis, we aim to explore challenges that can be encountered in a process of European harmonisation of postgraduate medical education (PGME), specifically. We have taken the opportunity to address potential challenges in harmonisation during the development of a harmonised European curriculum in PGME. A harmonised curriculum describes what should be trained as well as how this should be trained, while taking into account the contexts of training. A harmonised curriculum can thus be regarded as the instrument through which harmonisation is to be achieved. By researching different elements of the development of a harmonised curriculum, we aim to gain knowledge about European harmonisation of PGME and how it may be achieved. We will look at the development of the harmonised curriculum as a learning process and we describe our questions and our findings scientifically, so that others can learn from our experiences as well. This is an important and contemporary subject to explore, because several medical specialties have expressed the need for harmonisation of PGME in their specialty across Europe. However, only few projects and best practices of harmonisation of PGME in Europe have been initiated.

The current chapter further describes the setting of our research by providing background information on PGME in general, on differences in PGME in Europe, and on the need for harmonisation of PGME in Europe. This is all important knowledge to consider in the exploration of European harmonisation of PGME. Subsequently we explain the aims of this thesis in more depth and provide an overview of the research by outlining the different chapters of this thesis.

**Postgraduate medical education in general**

PGME is the phase of education that medical doctors enter after finishing academic undergraduate medical education. It prepares them to work as a medical specialist, or as a general practitioner. The medical doctors who undergo PGME are called trainees. Day-to-day education of trainees takes place mainly in clinical settings, i.e. the workplace, as trainees practice medicine under the supervision of medical specialists within a specific medical specialty. Trainees’ workplaces are shaped by the patient care that is being delivered, but also by social relations, organisation of healthcare, medical specialty and education in clinical practices. Their workplaces offer continuous variation in learning opportunities and thereby enable development of the required competencies for trainees. These workplaces may thus vary greatly throughout Europe.

**Differences in postgraduate medical education in Europe**

We regard Europe as the geographical region of thirty-seven countries that are situated on the European continent, being Albania, Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, North Macedonia, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Italy, Kosovo, Latvia, Lithuania, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine and the United Kingdom. Figure 1 shows a map of these countries.
In Europe, PGME varies greatly between different countries, as well as between different medical specialties. There are many factors that play a role in the way that PGME is designed and enacted. These factors are apparent for instance in the workplace (micro level), in the training institution (meso level), or at the national level (macro level) via rules, regulations, habits, practices, norms, and values.

To explain how national regulations may affect PGME, we use an example on how national organisation of healthcare in Germany affects training in Obstetrics and Gynaecology (OBGYN) in comparison to the Dutch training context. In Germany, many medical specialists work in primary care settings, therefore uncomplicated gynaecologic care is mainly delivered by gynaecologists who work in these primary care settings. However, German OBGYN trainees are only trained in hospitals that are official training institutions and they are rarely trained in primary care settings. Thus, these trainees are not exposed to as much uncomplicated gynaecologic care as, for instance, Dutch trainees in OBGYN, because uncomplicated gynaecologic care is delivered in the Netherlands in secondary care settings where trainees are being trained as well.

On a national level, differences exist between countries regarding the duration of training, the number of different trainees per training site, selection criteria for entry to training, required scholarly experience during training and job opportunities after finishing training. All these factors affect how PGME is carried out.\textsuperscript{32-36}
From the harmonisation perspective, it is important to consider existing differences in PGME. Harmonisation aims to maintain institutional autonomy, although there is no common understanding of how to achieve institutional autonomy and for what elements of PGME this is needed. Obviously, existing differences limit standardisation and creation of uniformity. However, understanding of existing differences offers opportunities for harmonisation, to determine the institutional autonomy that is required. Since contextual variation is to be respected to some extent in harmonisation, it is of importance to understand for which elements of training this accounts.

Standardisation and Harmonisation of postgraduate medical education in Europe

Increasing insight in how PGME is carried out across Europe, has stimulated international collaborations regarding PGME. The Union Européenne des Médecins Spécialistes (UEMS) is the representative organisation of the national associations of medical specialties of 40 European countries. Since 1994, UEMS has put standardisation of PGME in Europe on its agenda. UEMS considered that increased uniformity in training would improve quality by establishing standards of training.\(^{13}\)

An important reason for UEMS to stimulate standardisation was the increase in the mobility of medical doctors within Europe over the past decades. There was a need for more clarity regarding recognition of PGME qualifications between European countries to ensure mobility of medical doctors.\(^1, 2, 12, 37-39\) Since 2005, all countries within the European Union therefore have mutually recognised several PGME qualifications for all medical doctors, as well as for medical specialists.\(^{37}\) These qualifications regard minimum requirements for training sites (university or medical teaching hospital) and duration of training.\(^{12}\) Thus, although UEMS aimed for standardisation of PGME, only minimum requirements for training could be mutually recognised. The possibilities for creating uniformity of training seemed limited.\(^{12}\)

Following these developments, instead of standardisation, harmonisation of undergraduate education was initiated through the European-wide ‘Bologna Process’. Through this process a commonly shared system for higher education was developed.\(^{40-42}\) The process aimed to provide quality standards of education to allow comparison and exchange of best practices, as well as to allow mobility of students throughout Europe, while maintaining institutional autonomy.\(^{14}\)

Since then, European collaborations within medical specialties were intensified too. Many medical specialties argued there was a need for harmonisation of training within their medical specialty, to improve training quality throughout the entire Europe.\(^{17, 19-27}\) Some medical specialties have initiated or even completed development of a harmonised European curriculum.\(^{16, 28}\)

Specialists in OBGYN in particular, have been on the forefront of establishing international collaborations and developments in PGME to improve training in their field.\(^{19, 43-46}\) The European Board & College of Obstetrics and Gynaecology (EBCOG) is one of the major international bodies that aims to improve PGME in Europe. After the publication of the UEMS charter\(^{13}\) EBCOG developed a standardised logbook for training. In 2014 they recognised that updating of the logbook was required, as well as further development of standards in content as well as educational strategies for PGME in OBGYN in Europe, to ensure improvement of quality of PGME.\(^{19}\) Therefore, they recently initiated the development of a harmonised European curriculum for the field of OBGYN, through a project called
‘PACT’ (Project for Achieving Consensus in Training). This project offers a valuable case to explore harmonisation of PGME in Europe.

Exploring European standardisation and harmonisation of postgraduate medical education

The intentions to harmonise PGME in OBGYN give rise to some questions and uncertainties regarding how to achieve harmonisation of PGME in Europe, and for OBGYN in specific.

To start with, much is still to explore about how common standards in training can be developed by different countries. In the literature the creation of international standards of medical education has been described as a form of globalisation. However, Harden explains that in globalisation of medical education, one of the three dimensions in medical education, i.e. the student, the teacher, or the curriculum, is either international or imported. Harmonisation does not fit these criteria exactly. Nonetheless, there is much to learn from globalisation, for instance with regard to ethical considerations about the relevance and purpose of developing training standards for different countries and cultures.

We aim to explore the purpose of European harmonisation, and study whether this can be achieved in the field of OBGYN in Europe and if harmonisation may have unintended effects.

Secondly, we described in this introduction that harmonisation is not necessarily aimed at creating uniformity in training. However, the increasing focus on standardisation of PGME seems to govern medical specialities in Europe to make PGME as uniform as possible, to ensure quality of training.

The available literature is ambiguous in their use of the terms standardisation and harmonisation in relation to the level of creating standards, uniformity or a harmonised approach. We aim to provide more comprehensive understanding of the two concepts, how they relate to each other and how they are characterised with regard to alignment of training.

Thirdly, a harmonised curriculum is designed for the purpose of being implemented in different training contexts in different countries. Therefore, the harmonised curriculum must be appropriate for all European contexts, even if practices may differ. We aim to explore to what extent contexts can be considered in harmonisation processes, when determining outcomes of training, for medical expertise competencies as well as generic competencies.

Lastly, as the development of a harmonised curriculum is aimed to change and improve PGME throughout Europe, this change process needs strong support. Change processes in PGME have proven to be challenging and offer many barriers for implementation. Therefore, we also consider the importance of change management perspectives in the development of a harmonised European OBGYN curriculum.

Outline of this thesis

In Chapter 2 of this thesis, we argue the need for a harmonised European curriculum in OBGYN in an Expert Opinion study. Also, perspectives are provided on the planned deliverables of a harmonisation project to realise development of a harmonised curriculum.
In Chapter 3, we explore variation of OBGYN training in Europe, to understand to what extent harmonisation can be achieved. By performing semi-structured interviews with OBGYN trainees from different European countries, we aim to gain insight in variation in training of caesarean section. This study will provide insights into potential boundaries of harmonisation.

Subsequently, we aim to determine what medical expertise outcomes should be included in a harmonised curriculum, according to the European OBGYN specialists and trainees. In Chapter 4 we provide an outline of the Delphi procedure that was performed to reach consensus on these medical expertise outcomes. We then present the medical expertise outcomes of the core curriculum of the harmonised European OBGYN curriculum. Also, we further explore what consequences these outcomes may have for OBGYN training in Europe.

In Chapter 5, we explore how the developers of a harmonised curriculum experienced tensions between standardisation and contextualisation of PGME during the phase of development. The insights gained in this chapter provide further knowledge on feasibility of harmonisation and potential unintended effects.

In Chapter 6 we elaborate on the importance of generic competency frameworks in PGME curricula and we report on how the generic competency framework for the harmonised European OBGYN curriculum was developed through action research. We further discuss the value of change management principles in competency framework development, that may enhance implementation of the competency framework across Europe.

In Chapter 7, we summarise the purposes and the achievements of the project. We describe how the harmonised European OBGYN curriculum was developed. We reflect on the process and achievements of the project, and describe further implications for implementation.

Finally, Chapter 8 reflects on the main findings of this thesis, elaborates on what we have learned from our research and offers a novel perspective on harmonisation of PGME that gives rise to implications for practice and future research.

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References
