

ORIGINAL RESEARCH

Levels of education offered in nursing and midwifery education in the WHO European region: multicountry baseline assessment

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ABSTRACT

Background: Many countries, in Europe and elsewhere, are changing the system and focus of education of their nursing and midwifery professions. The drivers for these changes are manifold and include increasing demands on the competency levels required to provide safe, equitable, high-quality and patient-centred care. The aim of this study was to describe the current levels of education offered for nurses and midwives within the WHO European Region. The purpose of this paper is to report the current status of nursing and midwifery education to provide a baseline for comparison in the Region and for future progress monitoring.

Methods: Two semi-structured questionnaires on nursing and midwifery education were sent to 189 country informants from 52 Member States in the WHO European Region.¹ Data collection took place between July 2016 and March 2017. A total of 40 countries responded the questionnaire on nursing and 41 to the questionnaire on midwifery education, which constitutes a response rate of 77% and 79% respectively. Analysis was based on descriptive statistics.

Results: The levels of education offered for nurses and midwives vary considerably across the Region.

In 32.5% of the countries included in this study, entry-level education to qualify as a professional nurse is exclusively available at bachelor's degree level, while it is available at both bachelor's degree and diploma levels in 50%. In 77.5% of the countries nurses are able to participate in postgraduate master's degree-level programmes.

In 57.5% of the countries included in this study, midwifery education is exclusively available at bachelor's degree level, while it is available at both diploma and bachelor's degree levels in 19.5%. In 50% of the countries midwives are able to participate in postgraduate master's degree-level programmes.

Conclusion: The variation in the levels of education in nursing and midwifery within the WHO European Region highlights the need to monitor progress; to share policy lessons on how to implement educational reforms effectively; and to evaluate the effects of education on the development of the nursing and midwifery professions and on outcomes of care. However, data were not received from 23% of the countries in the Region; this may cause bias in the interpretation of the results.

Keywords: EDUCATION, NURSE, MIDWIFERY, HEALTH PERSONNEL, EUROPE

¹ San Marino was the only country in the Region that was not contacted due to the absence of a focal point.

INTRODUCTION

Many countries in the WHO European Region are facing higher demands on health care and a pressing need to step up health promotion and disease prevention to affect the determinants of health, as chronic conditions and multimorbidities are on the rise (1). Increasingly complex treatment options combined with reduced hospital stays increase the emphasis on the coordination of care, patient empowerment and intersectoral collaboration. Health services are largely reliant on the availability, distribution and performance of a country's health workforce, including physicians, nurses, midwives and allied health professionals.

Education plays a key role in shaping the skills, knowledge and competencies of health professionals, and there is need to ensure that it aligns with changing population health needs (2). The standardization of nursing and midwifery education, with an emphasis on moving education to the bachelor's degree level, is a topic of much discussion. Nurses who have received a higher level of education – such as through a bachelor's degree-level nursing programme – have been found to provide better patient outcomes due to lower patient mortality (3), decreased length of stay in hospitals with fewer complications such as hospital-acquired pressure ulcers (4) and cost savings (5); however, more research is needed to identify factors and prove causal effects.

Less research is available on the association between the level of education of midwives and patient outcomes. Evidence does suggest, however, that well-educated, licensed and supported midwives trained to meet international standards in midwifery can positively contribute to the continuum of care for both women and infants (6). The International Confederation of Midwives established Global Standards for Midwifery Education to focus on competency-based education rather than on academic degrees (7).

It is imperative that the education provided for health care professionals sufficiently prepares the future workforce to work in increasingly complex practice environments and to deliver care that is safe, equitable, of high quality and people-centred (8). Although there have been considerable changes in educational structures and programmes for nurses and midwives, there has been limited cross-country research across the WHO European Region to enable analysis and comparison of the education levels and systems. In the European context, policies from the past decade have triggered the harmonization of minimum training requirements for nurses and midwives. The implementation of the Bologna Process to create a European Higher Education Area (EHEA) has instigated reforms in many western European countries to ensure comparable, compatible and coherent systems of higher education (9). In addition, the European Union (EU) Professional Qualifications Directive 2005/36/EC, amended by Directive 2013/55/EU, has led to changes in the education and training curricula for nurses, midwives and other health professionals. Implementation of the directives was a mandatory requirement for EU Member States in order to benefit from the automatic recognition of qualifications on the basis of harmonized minimum training requirements (10, 11, 12).

The 65th session of the WHO Regional Committee for Europe marked a major milestone in the area of nursing and midwifery in the Region. During this meeting, the European strategic directions for strengthening nursing and midwifery towards Health 2020 goals (ESDNM) were launched (13). The ESDNM is a technical guide for Member States, supported by the WHO Regional Office for Europe, to enable and enhance the contribution of nurses and midwives to achieve the goals of Health 2020 (14). The document is a result of much debate, consultation and discussion with senior nursing and midwifery leaders in the Region. It identifies four priority action areas that align policy and practice with the Health 2020 vision and helps Member States strengthen nursing and midwifery within the context of their own country plans.

This study was developed in close collaboration with the European Forum of National Nursing and Midwifery Associations (EFNMA) and with WHO collaborating centres for nursing and midwifery to establish baseline information related to the first priority action area of the ESDNM, “scaling up and transforming education”. Objective 1 of the ESDNM emphasizes that the education of nurses and midwives should ensure that qualified

and competent nurses and midwives are available to meet changing population needs and changing health care delivery models in order to achieve the best health outcomes for patients and populations. The study describes the current levels of education offered for nurses and midwives within the WHO European Region and is critical for three reasons:

- it expands on previous knowledge and includes countries that have not previously been studied;
- it allows for cross-country, regional and nursing and midwifery comparisons; and
- it sets a baseline upon which future progress and educational reforms can be monitored and measured within the ESDNM and beyond.

THE STUDY

AIM

The aim of this study was to describe the current levels of education offered for nurses and midwives within the WHO European Region. The purpose of this paper is to report the current level of nursing and midwifery education to provide a baseline for comparison in the Region.

DESIGN

A cross-sectional, descriptive study design was used, using two semi-structured questionnaires (one for nursing education and one for midwifery education) containing predominantly yes/no closed questions with an opportunity to expand.

STUDY RESPONDENTS

The study population consisted of national country informants ($N = 189$) from 52 Member States in the WHO European Region² selected with purposive sampling techniques whereby respondents are deliberately or purposefully selected on the basis of their ability to provide the required data (15).

Country informants who were deemed to have the best knowledge concerning the research topic of nursing or midwifery education in each country were contacted via email and asked to participate in the study. At least one informant from each country was chosen to fill in the questionnaire on nursing education and another was chosen to fill in the questionnaire on midwifery. In a total of eight countries, more than one country informant provided information on the nursing and midwifery questionnaires. The inclusion criteria set for participation in the study were that the informants had to:

- be employed in an expert position at a national nursing or midwifery association or a nursing or midwifery educational institute;
- have experience and/or knowledge of nursing or midwifery education in the country;
- have the skills to read and understand the English or Russian language.

National country informants consisted of representatives from national professional associations and unions, educational or research institutions and ministries of health.

² San Marino was the only country in the Region that was not contacted as no suitable country informant could be identified.

DATA COLLECTION

Data were collected from July 2016 until March 2017 through a semi-structured questionnaire accompanied by a covering letter. The country informants were asked to complete the questionnaires in Word-document format and to send them to the researchers by email. Study participants received two reminder emails during the data collection time period. The study achieved a total of 93 respondents ($n = 44$ for nursing education; $n = 49$ for midwifery education) to the questionnaires from 41 countries within the WHO European Region, covering 79% of the 52 countries in the Region that were contacted. During the data validation phase, respondents were contacted via email with follow-up questions to clarify missing, conflicting or unclear information. In addition, data were validated through searches of available peer-reviewed literature, along with information from websites of national professional associations, governmental agencies and educational institutions.

The two semi-structured questionnaires developed for this study consisted of closed questions regarding nursing and midwifery education. Respondents were given an opportunity to expand on each of the questions. The nursing education questionnaire consisted of four sections:

1. basic structure of nursing education in the WHO European Region (nine questions);
2. curriculum content and focus in line with Health 2020 (one question);
3. extent and nature of continuing professional development in the Region (three questions); and
4. oversight on licensing and registration (two questions).

The midwifery education questionnaire contained the same four sections; however, section 1 contained an additional question regarding the possibility of qualifying as a midwife in the country without undertaking nursing training. In addition, section 1 was divided into two subsections:

- a. basic structure of midwifery education in the WHO European Region; and
- b. basic structure of post-nursing midwifery education in the Region.

Both questionnaires were developed by an expert group comprised of 11 experts from WHO collaborating centres and WHO Regional Office for Europe. Representatives from EFNNMA provided joint efforts on questionnaire development, along with contact information on potential national informants.

The questionnaires were first developed in English and then translated into Russian to facilitate the participation of experts in countries of the Commonwealth of Independent States (CIS) and in south-east European (SEE) countries. The nursing and midwifery questionnaires in both languages were pilot tested by two experts from two WHO collaborating centres who were not involved in the development process of the original questionnaires. The questions were clarified and modified following pilot testing, but no questions were added or deleted. This paper solely presents the preliminary findings from the first section regarding the levels of education offered for nurses and midwives, since analysis of all the results had not been finalized at the time of writing. Further results of the survey will be published in the course of 2017–2018.

ETHICAL CONSIDERATIONS

Formal approval from an ethics committee and written consent from all participants were not seen as necessary for this study. Contacts were informed of the study's aim prior to participation. In addition, participation was voluntary, and completing the questionnaire was taken as consent. Participant confidentiality has been protected: the study findings are reported in such a way to prevent the possibility of participants identification. Data were kept in a safe place only accessible to the researchers and will be destroyed after there is no further use for the data.

DATA ANALYSIS

Data analysis included descriptive statistics. Frequencies and percentages were used to summarize the responses to the closed questions. The open-ended responses were categorized and presented in relation to the frequency of occurrence. The main categories constructed in the study consisted of three levels of education provided for nurses and midwives: diploma, bachelor's degree and master's degree levels.

RESULTS

For the purpose of this analysis, Member States in the WHO European Region were grouped into EU or European Free Trade Agreement (EFTA) countries, CIS, SEE and other countries (Table 1).

TABLE 1. GROUPS USED BY THE STUDY FOR MEMBER STATES IN THE WHO EUROPEAN REGION

EU/EFTA countries	SEE countries	CIS countries	Other countries
Austria	Albania ^a	Armenia	Andorra ^a
Belgium	Bosnia and Herzegovina ^a	Azerbaijan	Georgia ^a
Bulgaria	Montenegro	Belarus	Israel
Croatia	Republic of Moldova	Kazakhstan ^a	Turkey ^b
Cyprus	Serbia	Kyrgyzstan	
Czechia	The former Yugoslav Republic of Macedonia ^a	Russian Federation	
Denmark		Turkmenistan	
Estonia		Tajikistan	
Finland		Ukraine	
France ^b		Uzbekistan	
Germany			
Greece			
Hungary ^a			
Iceland ^b			
Ireland			
Italy			
Latvia			
Lithuania			
Luxembourg			
Malta			
Monaco ^a			
Netherlands			
Norway			
Poland			
Portugal			
Romania			
San Marino ^c			
Slovakia			
Slovenia ^a			
Spain			
Sweden			
Switzerland			
United Kingdom			

Notes: ^a did not respond to nursing or midwifery questionnaires; ^b only responded to midwifery questionnaire; ^c was not contacted due to the lack of a focal point.

Within the WHO European Region, initial nursing and midwifery education is offered through diploma-level and/or bachelor's degree-level programmes (Tables 2 and 3). Nurses and midwives in the Region are also able to participate in postgraduate master's degree-level programmes.

LEVELS OF EDUCATION OFFERED FOR NURSES

A total of 13 countries (32.5%) in the WHO European Region only offer initial nursing education as bachelor's degree-level programmes; half of the countries ($n = 20$, 50%) offer it as both diploma-level and bachelor's degree-level programmes; and it is offered exclusively at the diploma level in seven (17.5%) of the total of 40 countries included in the study on nursing education. In 31 (77.5%) countries, nurses can participate in master's degree-level postgraduate education (Table 2).

Subregional analysis of this variation across the Region was undertaken. Almost half ($n = 13$, 48.1%) of the 27 countries included in this study in the EU/EFTA subregion offer initial nursing education exclusively at the bachelor's degree level and the same number ($n = 13$, 48.1%) offer both diploma- and bachelor's degree-level programmes. Luxembourg ($n = 1$, 0.04%) is an exception: it provides initial nursing education exclusively at the diploma level. In terms of postgraduate education, a total of 25 countries (92.6%) offer further education for nurses at the master's degree level or equivalent.

In the SEE subregion, two (Montenegro, Serbia) out of three countries studied offer initial nursing education at the diploma and bachelor's degree levels, while the Republic of Moldova only offers the diploma level. Two countries provide further education for nurses at the master's degree level or equivalent.

In the subregion of CIS countries, all nine countries for which data were available offer diploma-level initial nursing education. Four of these (44.4%) offer both diploma and bachelor's degree-level programmes, whereas five countries (55.5%) offer solely the diploma level. Of the CIS countries included in the study, three offer a master's degree-level postgraduate programme for nurses.

Israel was not included in the above subregions but offers initial nursing education at the diploma and bachelor's degree levels. In addition, master's degree-level programmes in nursing are provided.

TABLE 2. LEVELS OF NURSING EDUCATION AVAILABLE

Levels of nursing education available in EU/EFTA countries			
Country	Diploma	Bachelor's degree	Master's degree
Austria	✓	✓	✓
Belgium	✓	✓	✓
Bulgaria	–	✓	–
Croatia	✓	✓	✓
Cyprus	–	✓	✓
Czechia	✓	✓	✓
Denmark	–	✓	✓
Estonia	–	✓	✓
Finland	–	✓	✓
Germany	✓	✓	✓
Greece	✓	✓	✓
Ireland	–	✓	✓
Italy	–	✓	✓
Latvia	✓	✓	✓
Lithuania	✓	✓	✓
Luxembourg	✓	–	–
Malta	✓	✓	✓
Netherlands	–	✓	✓
Norway	–	✓	✓
Poland	✓	✓	✓
Portugal	–	✓	✓

TABLE 2. LEVELS OF NURSING EDUCATION AVAILABLE

Levels of nursing education available in EU/EFTA countries			
Country	Diploma	Bachelor's degree	Master's degree
Romania	✓	✓	✓
Slovakia	✓	✓	✓
Spain	–	✓	✓
Sweden	–	✓	✓
Switzerland	✓	✓	✓
United Kingdom	–	✓	✓
Levels of nursing education available in SEE countries			
Country	Diploma	Bachelor's degree	Master's degree
Montenegro	✓	✓	✓
Republic of Moldova	✓	–	–
Serbia	✓	✓	✓
Levels of nursing education available in CIS countries			
Country	Diploma	Bachelor's degree	Master's degree
Armenia	✓	✓	–
Azerbaijan	✓	–	–
Belarus	✓	–	–
Kyrgyzstan	✓	–	–
Russian Federation	✓	✓	✓
Tajikistan	✓	–	–
Turkmenistan	✓	–	–
Ukraine	✓	✓	✓
Uzbekistan	✓	✓	✓
Levels of nursing education available in other countries in the WHO European Region			
Country	Diploma	Bachelor's degree	Master's degree
Israel	✓	✓	✓

Notes: ✓ = yes; – = no

LEVELS OF EDUCATION OFFERED FOR MIDWIVES

Country informants were asked if initial midwifery education is dependent on nursing education. Prior completion of nursing education is a requirement for entry to midwifery programmes in 10 (25%) countries (Cyprus, Finland, Iceland, Israel, Norway, Portugal, Serbia, Spain, Sweden, Uzbekistan).

Of the 41 countries in the WHO European Region included in this study, 23 (56.1%) offer initial midwifery education exclusively at the bachelor's degree level, eight (19.5%) offer both diploma- and bachelor's degree-level programmes and nine (22%) provide solely a diploma-level initial midwifery programme. In Spain, midwives are trained in post-nursing programmes offered through accredited hospitals. In 48.8% of the studied countries, midwives can participate in master's degree-level postgraduate education (Table 3).

Subregional analysis displayed wide variation in the level of education provided for midwives as apparent in Table 3. In the EU/EFTA subregion, 22 (78.6%) of the 28 countries included in this study offer midwifery education exclusively at the bachelor's degree level and four (14.3%) offer it at both diploma- and bachelor's degree-level. Luxembourg is the only country in this subregion that trains midwives exclusively at the diploma level. More than half the countries ($n = 18$, 64.3%) provide further master's degree-level education for midwives.

In the SEE subregion, none of the three countries studied offer midwifery education at the bachelor's or master's degree levels. All countries ($n = 3$, 100%) offer initial midwifery education at the diploma level.

Half (n = 4, 50%) of the eight countries included in this study from the CIS subregion offer both diploma- and bachelor's degree-level education for midwives while the other half of the studied CIS countries (n=4, 50%) offer only the diploma level. Uzbekistan was the only country within the subregion to report that postgraduate midwifery education in the form of a master's degree-level programme is offered.

Israel and Turkey were not included in the above subregions. Initial midwifery education is provided in Israel at the diploma level and in Turkey at the bachelor's degree level. Master's degree-level programmes in midwifery are offered in Turkey.

TABLE 3. LEVELS OF MIDWIFERY EDUCATION AVAILABLE

Level of midwifery education in EU/EFTA countries			
Country	Diploma level	Bachelor degree level	Master degree level
Austria	-	✓	✓
Belgium	-	✓	-
Bulgaria	-	✓	-
Croatia	✓	✓	-
Cyprus	-	✓	✓
Czech Republic	-	✓	✓
Denmark	-	✓	✓
Estonia	-	✓	-
Finland	-	✓	-
France	-	✓	✓
Germany	✓	✓	✓
Greece	✓	✓	-
Iceland	-	✓	✓
Ireland	-	✓	✓
Italy	-	✓	✓
Lithuania	✓	✓	-
Luxembourg	✓	-	-
Malta	✓	✓	✓
Netherlands	-	✓	-
Norway	-	✓	✓
Poland	-	✓	✓
Portugal	-	✓	✓
Romania	-	✓	✓
Slovakia	-	✓	✓
Spain ^a	-	-	-
Sweden	-	✓	✓
Switzerland	-	✓	✓
United Kingdom	-	✓	✓
Levels of midwifery education in SEE countries			
Country	Diploma level	Bachelor degree level	Master degree level
Montenegro	✓	-	-
Republic of Moldova	✓	-	-
Serbia	✓	-	-

TABLE 3. LEVELS OF MIDWIFERY EDUCATION AVAILABLE

Level of midwifery education in EU/EFTA countries			
Country	Diploma level	Bachelor degree level	Master degree level
Armenia	✓	✓	-
Azerbaijan	✓	-	-
Belarus	✓	✓	-
Kyrgyzstan	✓	-	-
Russia	✓	-	-
Turkmenistan	✓	-	-
Ukraine	✓	✓	-
Uzbekistan	✓	✓	✓
Levels of midwifery education in other countries of the WHO European Region			
Country	Diploma level	Bachelor degree level	Master degree level
Israel	✓	-	-
Turkey	-	✓	✓

Notes: ✓ = yes; - = no; ^a midwifery training is provided at accredited hospitals.

DISCUSSION

Education of nurses and midwives is strongly linked to professional values and the perceived role of the health professional, their knowledge, skills and leadership, management and team abilities, among others (16). Across the WHO European Region, wide variations exist in the levels of education offered for nurses and midwives. It is relevant to acknowledge these as they show that countries still need continuous support in aligning their national practices, in particular considering the level of health professional mobility across the Region (16). Bachelor's degree-level education is linked to lower rates of patient mortality and quality of care (17), and despite the variations across the Region, it is normally regarded as the professional benchmark (13). This is especially the case within the EU/EFTA subregion, where nursing education in 96.3% of the countries and midwifery education in 78% of the countries is offered either only at the bachelor's degree level or at both diploma and bachelor's degree levels. Bachelor's degree-level initial nursing and midwifery education is less common in countries in the SEE and CIS subregions: when these two are combined, initial nursing education is offered at the bachelor's degree level in half the countries ($n = 6$, 50%) and initial midwifery education in about a third of countries ($n = 4$, 36.4%).

The wide variations in the levels of education offered for nurses and midwives across the Region can be attributed to three political processes, in addition to other country-specific developments. First is the establishment of the EHEA, which aims to reform nursing and midwifery education by moving education partly or fully to the bachelor's degree level taught in higher education institutions (18, 19). This applies to 45 countries in the WHO European Region, including countries from the EU/EFTA, CIS and SEE subregions (20). Second is the establishment of the EU Professional Qualifications Directive 2005/36/EC, amended by Directive 2013/55/EU, which allows free movement of people on the recognition of diplomas for nurses and midwives in EU/EFTA countries; this may provide further impetus for countries to reform their nursing and midwifery educational systems and curricula, in particular scaling up the level of initial nursing and midwifery education to bachelor's degree level in CIS and SEE countries (10, 12). Third, as part of the preparations for accession to the EU, a review of nursing and midwifery education is undertaken and often leads to an upgrade to bachelor's degree-level education (21).

Although CIS and SEE countries were less likely to offer bachelor's degree-level nursing and midwifery education than countries in the EU/EFTA subregion, there are still several countries – including the Russian Federation, Ukraine and Uzbekistan – that offer it. The questionnaires did not aim to explore the reasons some countries in

the Region have embarked on reforms and others have not. Reasons may include political leadership and will (10, 22), population needs (14, 23) and the perceived need to modernize education (24), among others. Further research is needed to assess country-specific drivers for change and to monitor and evaluate educational reforms, as well as the impacts that these have on the nursing and midwifery professions. Countries should strive to share lessons on reform successes and challenges.

The coexistence of both diploma- and bachelor's degree-level programmes within initial education continues to be more common among the nursing than the midwifery profession and can help in the transition to full bachelor's degree-level education in the future.

This study confirms and extends the findings from previous research (16) that there are large differences across the WHO European Region in the education of nurses. These results suggest even greater differences when including countries from subregions that were not part of previous research. For the midwifery profession, limited research was identified (25) across the WHO European Region, so findings cannot be discussed in light of earlier work. Diploma-level education was found to be less common within midwifery education than bachelor's degree-level education. However, the results show less availability of midwifery master's degree programmes, in particular in SEE and CIS countries. Further research is required to provide an in-depth analysis of educational levels for nurses and midwives in the wider European Region and, in particular, in SEE and CIS countries to understand fully the levels of education, historical contexts and current reform processes and outcomes. The ESDNM emphasizes the importance of scaling up initial nursing and midwifery education. For that purpose, this study gives a baseline assessment for future progress monitoring.

STUDY LIMITATIONS

This study contained several limitations. First, the data were provided by different country informants with different affiliations, yet all with competencies in the field of nursing and midwifery education. In addition, only 1–3 country informants provided information on nursing or midwifery education in each of the participating countries, which reduces the reliability of the responses received. Second, this analysis focused on levels of education available and did not analyse the types and characteristics of educational institutions, length of education, curricula and whether education is competency-based and responds to the health care needs of the respective country. Third, some respondents responded in Russian and nuances in the translation may have been missed, although qualified translators were used. In addition, English was not the native language of several of the respondents who answered the questionnaire in English; therefore, there was a possibility of misunderstanding. Fourth, data were not received from about 23% of the countries in the WHO European Region, which may cause bias in the interpretation of the results. Finally, some countries are undergoing education system reforms; hence, some information collected in 2016 may no longer be up to date and requires further monitoring. This study is intended solely to provide a baseline as of 2016 to measure educational developments and progress in the future, as indicated in ESDNM priority area 1. The study is descriptive in nature and lacked systematic cross-validation (triangulation) of the data; therefore, the results are indicative in nature.

CONCLUSION

Across the WHO European Region, large differences exist in the levels of education offered to nurses and midwives. In almost all EU/EFTA countries, bachelor's degree-level education exists or co-exists with diploma-level education for nurses and midwives. Among CIS and SEE countries, the proportion of countries with bachelor's degree-level education is lower. Monitoring progress; sharing policy lessons on how to implement change effectively; and evaluating effects on the professions, clinical practice and outcomes will become critical in the future as countries continue to implement educational reforms. This study gives a baseline assessment of the levels of education for nurses and midwives in the Region as emphasized in the ESDNM under priority area 1, “scaling up and transforming education”.

BOX 1. DEFINITIONS

Entry-level/initial education: the first level of education available for nursing and midwifery students – for example, diploma-level or bachelor's degree-level education.

Higher education institution: these include traditional universities and profession-oriented institutions, such as universities of applied science or polytechnics.

Diploma level: qualification for nursing or midwifery provided by vocational schools.

Bachelor's degree level: undergraduate academic degree provided at colleges, universities and universities of applied science.

Master's degree level: postgraduate academic degree provided at colleges, universities and universities of applied science.

Acknowledgments: The authors deeply appreciate the contribution of country respondents by taking their time to answer the study questionnaires and for the continuous support throughout the validation process. This study would have not been possible without the close cooperation with The European Forum of National Nursing and Midwifery Association and WHO collaborating centers for nursing and midwifery.

Sources of funding: None declared.

Conflicts of interest: None declared.

Disclaimer: The authors alone are responsible for the views expressed in this publication and they do not necessarily represent the decisions or policies of the World Health Organization.

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