

Knowledge of students of Warsaw Medical University about expanding professional competence of nurses and midwives with reference to prescribing medicines, writing out prescriptions, and referring for diagnostic tests

Wiedza studentów Warszawskiego Uniwersytetu Medycznego na temat rozszerzenia kompetencji zawodowych pielęgniarek i położnych w zakresie ordynowania leków, wystawiania recept i kierowania na badania diagnostyczne

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Conflict of interests

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Abstract

Background. Starting on January 1, 2016, specific groups of nurses and midwives have gained rights with respect to writing out prescriptions on medical orders and prescribing certain drugs, including writing out prescriptions for these medicines, as well as referring patients for diagnostic tests independently.

Objectives. The aim of this study was to assess the knowledge of MUW students about the expanding professional competence of nurses and midwives.

Material and methods. Four hundred seventeen students, 83% women; mean age: 23 years (min. 18, max. 58, median: 23) took part in this study. Among them were students of: Medicine 35%, Nursing 25%, Public Health 20%, Midwifery 19%. First-year students comprised 30% of the participants, third-year – 28%, fourth-year – 14%, second-year – 12%, fifth-year – 10%, and sixth-year – 5%. Forty-three per cent of the study participants had already taken part in a medical law course. A voluntary and anonymous questionnaire study, a questionnaire developed by the authors, consisted of 3 parts: 13 close-ended questions on knowledge, 26 statements concerning attitudes assessed using the Likert scale, 8 demographic questions. The approval of the Ethical Review Board of Warsaw Medical University was not necessary.

Results. Forty-two per cent of the students knew which legal act had been amended and 31% of the total knew the date of its entry into force. Fifty-three per cent knew that the new regulations were their rights. Twenty-five per cent of the study participants knew that their new powers concerned prescribing medicines, foodstuffs intended for particular nutritional uses and medical devices.

Conclusions. The level of knowledge of students about the expanding professional competence of nurses and midwives with reference to prescribing medicines, writing out prescriptions, and referring for diagnostic tests is insufficient and needs to be improved. The study of students' knowledge of and attitudes towards the new professional competence of nurses and midwives should be continued not only among Nursing and Midwifery students, but also among students of Medicine, Pharmacy, and Public Health.

Key words: prescriptions, nursing, legislation, midwifery, drugs

Streszczenie

Wprowadzenie. Zgodnie z nowelizacją ustawy o zawodach pielęgniarki i położnej od 1 stycznia 2016 r. określone grupy pielęgniarek i położnych uzyskują uprawnienia w zakresie wystawiania recept w ramach zlecenia lekarskiego, ordynowania określonych leków, w tym wystawiania na nie recept, a także samodzielnego kierowania pacjentów na badania diagnostyczne.

Cel pracy. Ocena wiedzy studentów Warszawskiego Uniwersytetu Medycznego na temat rozszerzenia kompetencji zawodowych pielęgniarek i położnych.

Materiał i metody. Badaną grupę stanowiło 417 studentów (83% kobiet i 17% mężczyzn). Średnia wieku respondentów to 23 lata (min. 18, maks. 58, mediana: 23). Największą grupę stanowili studenci kierunku lekarskiego – 35%, następnie pielęgniarstwa – 25%, zdrowia publicznego – 20% i położnictwa – 19%. Narzędziem badawczym był autorski kwestionariusz ankiety składający się z 3 części: 13 pytań zamkniętych dotyczących wiedzy, 26 stwierdzeń dotyczących postaw ocenianych w skali Likerta, 8 pytań metryczkowych. Badania nie wymagały zgody Komisji Bioetycznej WUM. Udział w badaniach był dobrowolny i anonimowy. Najwięcej ankiet wypełnili studenci I roku – 30%, następnie III roku – 28%, IV roku – 14%, II roku – 12%, V roku – 10% oraz VI roku – 5%. Wcześniej z edukacji z zakresu prawa medycznego korzystało 43% osób.

Wyniki. Czterdzieści dwa procent studentów wskazało akt prawny, do którego wprowadzone zostaną zmiany, 31% znało datę wejścia zmian w życie. Pięćdziesiąt trzy procent wiedziało, że nowe przepisy to uprawnienia. Dwadzieścia pięć procent wiedziało, że uprawnienia będą dotyczyć ordynacji leków, środków spożywczych specjalnego przeznaczenia żywieniowego oraz wyrobów medycznych.

Wnioski. Poziom wiedzy studentów na temat rozszerzenia uprawnień zawodowych pielęgniarek i położnych w zakresie ordynowania leków, wystawiania recept i kierowania na badania diagnostyczne jest niewystarczający i wymaga pilnego uzupełnienia. Badania dotyczące wiedzy i postaw studentów wobec nowych uprawnień zawodowych pielęgniarek i położnych powinny być kontynuowane, nie tylko w grupie studentów pielęgniarstwa i położnictwa, lecz również w grupie studentów kierunku lekarskiego, farmacji i zdrowia publicznego.

Słowa kluczowe: recepty, pielęgniarstwo, przepisy o lekach, pielęgniarki, prawo, położne

Introduction

In accordance with amendments to the Nurses and Midwives Act, beginning on January 1, 2016, specific groups of nurses and midwives have gained rights with respect to writing out prescriptions on medical orders and prescribing certain drugs, including writing out prescriptions for these medicines, as well as referring patients for diagnostic tests independently (not including high risk procedures).¹⁻⁶ The legal changes are a part of the process of introducing the model of *Advanced Nurse Practitioner* in Poland.¹⁻⁶ The implementation of these provisions depends on the attitudes of nurses and midwives themselves, particularly due to the fact that these are their rights, not duties.¹⁻⁶

Students of Nursing and Midwifery beginning their education in the academic year 2015–2016 should be particularly interested in the changes mentioned above since, after graduation with a Bachelor's degree and obtaining the right to practice as a nurse or midwife, they gain the aforementioned rights without the necessity to complete their education in postgraduate courses. Study

programs in the aforementioned majors were modified beginning in the academic year 2015–2016, so that the content concerning the aforementioned professional qualifications has already been included in the study programs.

However, due to the fact that the expanding professional competence of nurses and midwives with reference to prescribing medicines, writing out prescriptions and referring for diagnostic tests concerns not only nurses and midwives but also, indirectly, doctors and public health professionals in a broader sense, students of Medicine and Public Health should also have knowledge of the expanding of these powers. Only a satisfactory level of knowledge of nurses' and midwives' rights to prescribe medicines, write out prescriptions and refer for diagnostic tests will ensure effective and efficient cooperation in an interdisciplinary team.

The study aimed to assess the knowledge of students of Warsaw Medical University about the expanding professional competence of nurses and midwives with reference to prescribing medicines, writing out prescriptions and referring for diagnostic tests.

Material and methods

The study enrolled a total of 417 students of Warsaw Medical University. The study group consisted of 348 women (83%) and 67 men (16%). Two persons (1%) did not respond to the question about gender. Mean age of the respondents amounted to 23 years (min. 18, max. 58, median: 23).

The students of Medicine comprised the largest subgroup of all the study participants (144 persons; 35% of all), followed by students of Nursing (107 persons, 25% of all) and students of Public Health (82 persons, 20% of all). Midwifery students returned the smallest number of questionnaires (80 persons, 19% of all questionnaires returned) and 4 students (1%) did not provide their major.

The study group consisted of 185 (44%) Bachelors-degree-seeking students (majors: Nursing, Midwifery and Public Health), 144 (35%) students of Medicine (combined, long-cycle program), and 80 (19%) Master's-degree students (majors: Nursing, Midwifery, and Public Health). Eight persons (2%) did not provide their mode of study.

The largest number of questionnaires were filled in by first-year students (125 persons, 30% of all), followed by second-year students (117 persons, 28% of all), fourth-year students (57 persons, 14% of all), third-year students (48 persons, 12% of all), and fifth-year students (44 persons, 10% of all). Sixth-year students constituted the smallest subgroup of the study participants (20 persons, 5% of all). Six persons (1%) did not respond to the question about the year of studies.

One hundred seventy-nine persons (43%) had already taken part in a medical law course but most study participants (236 persons, 56%) had not had such an experience. Two persons (1%) did not provide an answer to that question. Three hundred fifty-six respondents (85%) had not graduated from any other major and did not study concurrently, 32 persons (8%) studied concurrently, and 25 study participants (6%) had already graduated from a different major. Four study participants (1%) did not answer this question.

A voluntary and anonymous survey was conducted with the use of an original questionnaire in May and June 2015. A questionnaire-reliability analysis performed at the Division of Teaching and Outcomes of Education, Faculty of Health Science, Warsaw Medical University demonstrated that it was a reliable research tool to analyze students' knowledge of and attitudes toward the expanding professional competence of nurses and midwives.⁷

There were 3 parts in the questionnaire. The first part consisted of questions concerning the knowledge of the students about the expanding professional competence of nurses and midwives. There were 13 close-ended questions. The second part of the questionnaire was comprised of questions about the attitudes of the students toward the present issue and it consisted of 26 statements on

the expanding competence. Attitudes towards the statements were assessed by the study group on a Likert scale (1 – strongly disagree, 3 – no opinion, 5 – strongly agree). The third part of the questionnaire was devoted to the socio-demographic data of the study group and was comprised of 8 questions about gender, birth year, major, year and mode of studies, concurrent studies, taking up employment in the chosen profession and present experience in learning medical law.

The authors of the present study did not receive the approval of the Ethical Review Board of Warsaw Medical University for the study due to the fact that, according to the communication of the Ethical Review Board of WMU, "The Ethical Review Board do not give any opinion on surveys, retrospective, and other non-invasive studies".⁸

Results

Nearly half of the study group (42%) correctly identified the legal act that introduces the amendments expanding the professional competence of nurses and midwives with reference to prescribing medicines, writing out prescriptions and referring for diagnostic tests. Most study participants knew this Act. See Table 1 for detailed data.

Almost 1/3 of the study participants (31%) knew the effective date of the amendments concerning the new powers of nurses and midwives. Half of the study group of Nursing students and only 1/4 of the Midwifery students knew when changes to the legal provisions with respect to expanding the professional powers in question became effective (Table 2).

More than half of the study participants (53%) knew that the new regulations giving nurses and midwives the authority to prescribe medicines, write out prescriptions and refer for diagnostic tests are their rights, not duties. A vast majority of Nursing students (76%) had that knowledge (Table 3).

Students participating in the study were not familiar with the detailed rules on the specific groups of nurses empowered to prescribe medicines and write out prescriptions independently (Table 4), to prolong medical orders for certain medicines and write out prescriptions for these drugs independently (Table 5), and to refer patients for diagnostic tests independently (Table 6).

Half of the study group knew that the rights of nurses and midwives to refer patients for selected diagnostic tests will be limited exclusively to the list of tests laid down in a separate regulation. Still, the correct answer was provided by a majority of Nursing students (68%) (Table 7).

Only 1/4 of the respondents (25%) knew that the expanded powers of nurses and midwives not only concern prescription of medicines, but also foodstuffs intended for particular nutritional uses and medical devices (Table 8).

Table 1. Students' knowledge of legal acts amended to introduce new professional qualifications for nurses and midwives

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Which Act has been amended with changes that expand the professional qualifications of nurses and midwives with reference to prescribing certain medicines and writing out prescriptions on their own:	the Act of May 12, 2011 r. on the Reimbursement of Medicines, Foodstuffs Intended for Particular Nutritional Uses and Medical Devices	28 (7%)	9 (6%)	8 (7%)	5 (6%)	6 (7%)
	Nurses and Midwives Act of July 15, 2011	174 (42%)	22 (15%)	73 (68%)	42 (53%)	33 (40%)
	Act of July 1, 2011 on Professional Self-Government of Nurses and Midwives	8 (2%)	3 (2%)	–	5 (6%)	–
	Nurses and Midwives Act of July 5, 1996	42 (10%)	14 (10%)	6 (6%)	7 (9%)	15 (18%)
	I do not know	160 (38%)	144 (66%)	18 (17%)	19 (24%)	28 (34%)

n – number of students participating in the study.

Table 2. Students' knowledge of effective date of amendments concerning new responsibilities of nurses and midwives

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
When will the changes that expand the professional qualifications of nurses and midwives with reference to prescribing certain medicines and writing out prescriptions on their own come into force:	July 1, 2017	6 (1%)	1 (1%)	1 (1%)	3 (4%)	1 (1%)
	January 1, 2017	52 (12%)	15 (10%)	11 (10%)	15 (19%)	11 (13%)
	July 1, 2016	41 (10%)	4 (3%)	13 (12%)	18 (23%)	5 (6%)
	January 1, 2016	129 (31%)	41 (28%)	53 (50%)	20 (25%)	13 (16%)
	I do not know	187 (45%)	82 (57%)	29 (27%)	23 (29%)	52 (63%)

n – number of students participating in the study.

Most students knew that the range of new competences of nurses and midwives with reference to prescribing medicines, writing out prescriptions and referring for diagnostic tests will depend on their education (Table 9).

Students did not know that a list of medicines that nurses and midwives will be entitled to prescribe independently and write out prescriptions for will be specified in the Regulation of the Minister of Health (Table 10).

The students did not identify correctly which forms of undergraduate and postgraduate education will allow, according to the new legal provisions, nurses and midwives to prescribe certain medicines (Table 11), to prolong prescriptions for medicines ordered earlier by doctors (Table 12), and to refer patients for selected diagnostic tests independently (Table 13).

Discussion

A great number of publications on prescribing medicines by nurses and midwives in numerous European and world countries have been found in the available world

scientific literature (PubMed, SCOPUS, ProQuest, key words: *nurse prescribing*, years: 2000–2015).^{9–12} The issue has been broadly discussed in the literature, presenting the experiences of various countries in introducing powers relating to the possibility of prescribing medicines by nurses and midwives: problems associated with the new powers, attitudes of health care staff towards these entitlements, and economic analyses.^{9–12}

No publications devoted to the present issue have been found in the available Polish scientific literature (Polish Medical Bibliography, key words: *nurses AND prescriptions*, years: 2000–2015). Many publications on prescribing medicines are more available in specialist journals than in scientific literature and they mostly discuss the scope of the powers and required qualifications of nurses and midwives rather than describe any study results on the knowledge of or attitudes towards the new powers of nurses and midwives among selected groups of health care professionals. Publications by the present author and authors of the present study are the only scientific papers devoted to the present issue available in the Polish literature.^{1–6}

Table 3. Students' knowledge of whether the new authority of nurses and midwives will be their duties or only their rights

Question	Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82	
Will prescribing certain medicines and writing out prescriptions on their own be nurses and midwives' duties:	yes	87 (21%)	21 (15%)	15 (14%)	28 (35%)	23 (28%)
	no	220 (53%)	62 (43%)	81 (76%)	37 (46%)	36 (44%)
	I do not know	107 (26%)	59 (41%)	10 (9%)	15 (19%)	23 (28%)

n – number of students participating in the study.

Table 4. Students' knowledge of the particular groups of nurses and midwives authorized to prescribe certain medicines and to write out prescriptions independently

Question	Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82	
Will each nurse and midwife be able to prescribe certain medicines and write out prescriptions independently?	yes, each nurse and midwife	17 (4%)	4 (3%)	5 (5%)	8 (10%)	–
	only nurses and midwives with a Master's degree	51 (12%)	12 (8%)	16 (15%)	13 (16%)	9 (11%)
	only nurses and midwives with a Master's degree who graduated from a specialised training in this field as well	114 (27%)	26 (18%)	52 (49%)	22 (28%)	13 (16%)
	only nurses and midwives with a Master's degree or specialisation who graduated from a specialised training in this field as well	91 (22%)	26 (18%)	22 (21%)	20 (25%)	23 (28%)
	I do not know	133 (32%)	70 (49%)	11 (10%)	16 (20%)	35 (43%)

n – number of students participating in the study.

The issues of prescribing medicines, writing out prescriptions and referring for diagnostic tests by nurses and midwives constitute a new topic in the Polish scientific literature and a very up-to-date one due to the ongoing preparations for the implementation of changes in the law beginning on January 1st, 2016. Previous studies by the present author devoted to this issue focused on analyzing the attitudes of departmental² and divisional nurses employed in a children's teaching hospital.⁵ A study involving students was just a pilot qualitative focus study conducted among a rather small group of students participating in medical law workshops.^{1,6} No results of studies conducted among a greater number of Nursing and Midwifery students have been published yet, and studies among other groups of students, e.g. of Medicine or Public Health, have not been performed at all. Therefore, the present authors decided to include in the study a group of students not directly related to the new powers.

The level of knowledge of the expanding powers of nurses and midwives with respect to prescribing medicines, writing out prescriptions and referring for diagnostic tests was insufficient among the study group of Warsaw Medical University students of Nursing and Midwifery as well as of Public Health and Medicine.

Most students knew that the new powers of nurses and midwives will be their rights and not duties, but only less than half of the study participants knew that the amendments expanding the powers of nurses and midwives were introduced to the Nurses and Midwives Act of July 15, 2011. However, it is worth emphasizing that most of the Nursing (68%) and Midwifery students (53%) participating in the study knew this particular act but as little as 15% of the students of Medicine indicated the correct answer. An analysis of the question about the effective date of introducing the new powers of nurses and midwives produced similar results: 31% of the respondents indicated the date of January 1, 2016. However, similarly to the question about the legal act, 50% of the Nursing students and only 25% of the Midwifery students and 16% of the students of Public Health knew the correct answer.

Most respondents knew that the level of authority of nurses and midwives with respect to prescribing medicines, writing out prescriptions and referring for diagnostic tests will depend on the level of education of the nurses and midwives, but only 1 in 4 of the study participants knew that the expanded powers of nurses and midwives will cover not only medicines, but also foodstuffs intended for particular nutritional uses and medical devices.

Table 5. Students' knowledge of the groups of nurses and midwives capable of prolonging medical orders for certain medicines and writing out prescriptions for these drugs on their own

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Will each nurse and midwife be able to prescribe certain medicines and write out prescriptions independently?	yes, each nurse and midwife	25 (6%)	5 (3%)	5 (5%)	11 (14%)	3 (4%)
	only nurses and midwives with a Bachelor's degree	16 (4%)	5 (3%)	4 (4%)	3 (4%)	3 (4%)
	only nurses and midwives with a Bachelor's degree who graduated from a specialised training in this field as well	79 (19%)	18 (13%)	31 (29%)	16 (20%)	13 (16%)
	only nurses and midwives with a Bachelor's degree who graduated from a specialised training in this field as well and nurses and midwives with the right to prescribe medicine	127 (30%)	32 (22%)	41 (38%)	28 (35%)	26 (32%)
	I do not know	164 (39%)	81 (56%)	25 (23%)	22 (28%)	36 (44%)

n – number of students participating in the study.

Table 6. Students' knowledge of the groups of nurses and midwives capable of referring patients for diagnostic tests independently

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Will each nurse and midwife be able to refer patients for diagnostic tests independently?	yes, each nurse and midwife	28 (7%)	–	4 (4%)	20 (25%)	4 (5%)
	only nurses and midwives with a Bachelor's degree who also graduated from a specialised training in this field	66 (16%)	9 (6%)	26 (24%)	16 (20%)	14 (17%)
	nurses and midwives with a Bachelor's degree or a specialisation	19 (5%)	6 (4%)	6 (6%)	4 (5%)	3 (4%)
	nurses and midwives who graduated from a specialised training in this field and a Master's degree programme	11 (26%)	29 (20%)	44 (41%)	16 (20%)	20 (24%)
	I do not know	188 (45%)	99 (69%)	26 (24%)	22 (28%)	40 (49%)

n – number of students participating in the study.

Table 7. Students' knowledge of the authority of nurses and midwives with respect to referring patients for diagnostic tests

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Will the nurses and midwives' power to refer patients for diagnostic tests be limited?	no, nurses and midwives will be able to refer patients for any diagnostic tests	18 (4%)	3 (2%)	1 (1%)	10 (13%)	4 (5%)
	yes, nurses and midwives will be able to refer patients for diagnostic tests except for laboratory diagnosis	25 (6%)	3 (2%)	10 (9%)	7 (9%)	5 (6%)
	yes, nurses and midwives will be able to refer patients only for those diagnostic tests that are specified by a regulation	209 (50%)	57 (40%)	73 (68%)	38 (48%)	38 (46%)
	I do not know	158 (38%)	77 (53%)	22 (21%)	25 (31%)	34 (41%)

n – number of students participating in the study.

Table 8. Students' knowledge of the group of medicines to be covered by the extended powers of nurses and midwives

Question	Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82	
Changes in extending professional qualifications of nurses and midwives shall concern	prescription of OTC drugs	18 (4%)	3 (2%)	5 (5%)	6 (8%)	4 (5%)
	prescription of reimbursed drugs	32 (8%)	10 (7%)	9 (8%)	7 (9%)	5 (6%)
	prescription of medicines, foodstuffs intended for particular nutritional uses and medical devices	106 (25%)	31 (22%)	38 (36%)	17 (21%)	20 (24%)
	prescription of medicines and medical devices on medical order	64 (15%)	18 (13%)	21 (20%)	12 (15%)	11 (13%)
	I do not know	191 (46%)	80 (56%)	33 (31%)	37 (46%)	41 (50%)

n – number of students participating in the study.

Table 9. Knowledge of students of selected universities about extending the professional competence of nurses and midwives with regard to prescribing medicines, writing out prescriptions and referring for diagnostic tests

Question	Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82	
Nurses and midwives with a Bachelor's or a Master's degree will have a different level of professional powers with respect to prescribing certain medicines and writing out prescriptions on their own	yes	224 (54%)	63 (44%)	70 (65%)	45 (56%)	44 (54%)
	no	47 (11%)	7 (5%)	13 (12%)	16 (20%)	11 (13%)
	I do not know	143 (34%)	73 (51%)	23 (21%)	19 (24%)	27 (33%)

n – number of students participating in the study.

Table 10. Students' knowledge of the legal act in which a list of the medicines that nurses and midwives will be entitled to prescribe on their own will be published

Question	Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82	
Will the nurses and midwives' power to refer patients for diagnostic tests be limited?	Regulation of the Minister of Health	127 (30%)	27 (19%)	54 (50%)	21 (26%)	24 (29%)
	new Nurses and Midwives Act	48 (12%)	9 (6%)	14 (13%)	12 (15%)	12 (15%)
	Act amending the Nurses and Midwives Act	86 (21%)	23 (16%)	22 (21%)	21 (26%)	19 (23%)
	I do not know	152 (36%)	82 (57%)	17 (16%)	26 (33%)	27 (33%)

n – number of students participating in the study.

The study group did not know which forms of undergraduate and postgraduate education will, in accordance with new legal arrangements, entitle nurses and midwives to prescribe certain medicines, prolong prescription for medicines ordered earlier by doctors and refer patients for selected diagnostic tests independently.

The students were not familiar with the detailed rules on the specific groups of nurses empowered to prescribe medicines and write out prescriptions independently, to prolong medical orders for certain medicines independently and write out prescriptions for these drugs, and to refer patients for diagnostic tests independently.

The present authors believe that the insufficient level of knowledge of students about the new authority of nurses and midwives is due to insufficient information on the new powers provided in specialist journals, scientific literature, and during the course of studies. Due to the fact that the new powers have not yet entered into force, the curricula do not include the issues in question. However, the curricula of Nursing and Midwifery did begin covering the issues related to the new authority of nurses and midwives beginning in the academic year 2015/2016. Still, it is worth emphasizing that, not surprisingly to us, Nursing and Midwifery students had

Table 11. Students' knowledge of the forms of education that, in accordance with new legal arrangements, will entitle nurses and midwives to prescribe certain medicines independently

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Please indicate which of the following forms of education will, in accordance with the new legal arrangements, entitle nurses and midwives to prescribe certain medicines independently:	"specialization" and/or graduation from a Master's degree programme and a specialised training	128 (31%)	33 (23%)	49 (46%)	22 (28%)	22 (27%)
	"specialization" and a specialised training	28 (7%)	6 (4%)	6 (6%)	11 (14%)	5 (6%)
	graduation from a Master's degree programme and a specialised training	96 (23%)	24 (17%)	34 (32%)	22 (28%)	15 (18%)
	I do not know	158 (38%)	79 (55%)	15 (14%)	24 (30%)	40 (49%)

n – number of students participating in the study.

Table 12. Students' knowledge of the forms of education that, in accordance with new legal arrangements, will entitle nurses and midwives to prolong prescriptions for medicines ordered earlier by doctors

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Please indicate which of the following forms of education will, in accordance with the new legal arrangements, entitle nurses and midwives to prolong prescriptions for medicines ordered earlier by doctors:	"specialization" and/or graduation from a Bachelor's degree programme and a specialised training	95 (23%)	20 (14%)	34 (32%)	21 (26%)	17 (21%)
	"specialization" and a specialised training	34 (8%)	8 (6%)	9 (8%)	13 (16%)	4 (5%)
	graduation from a Bachelor's degree programme and a specialised training	90 (22%)	23 (16%)	31 (29%)	20 (25%)	16 (20%)
	I do not know	194 (47%)	91 (63%)	32 (30%)	26 (33%)	45 (55%)

n – number of students participating in the study.

Table 13. Students' knowledge of the forms of education that, in accordance with new legal arrangements, will entitle nurses and midwives to refer patients for selected diagnostic tests independently

Question		Entire study group n = 417	Medicine n = 144	Nursing n = 107	Midwifery n = 80	Public Health n = 82
Please indicate which of the following forms of education will, in accordance with the new legal arrangements, entitle nurses and midwives to refer patients for medicines ordered earlier by doctors:	"specialization" and/or graduation from a Bachelor's degree programme	117 (28%)	32 (22%)	33 (31%)	27 (34%)	23 (28%)
	"specialization"	34 (8%)	5 (3%)	15 (14%)	10 (13%)	4 (5%)
	graduation from a Bachelor's degree programme	40 (10%)	6 (4%)	18 (17%)	12 (15%)	3 (4%)
	I do not know	221 (53%)	99 (69%)	41 (38%)	29 (36%)	52 (63%)

n – number of students participating in the study.

better knowledge compared to the students of Medicine and Public Health since the changes in question will not be directly related to the latter. The present authors believe that these groups of students also need to be familiarized with the scope of the new authority of nurses and midwives since they will be indirectly involved in executing them.

Limitations of the study results

The present study is just a pilot, due to the fact that it enrolled students of 1 university only. Thus the study needs to be continued among a more numerous representative group of students of different universities. The present authors also believe that Pharmacy students should also

be included in the study, since they, too, will exercise the professional powers of nurses and midwives in the future.

In addition, the present study is a pilot also because the law regulating the new authority of nurses and midwives has already been re-amended and many aspects concerning the powers of particular groups of nurses and midwives that had been unclear have now been sufficiently developed. A further study needs to incorporate the changes and must be based on the newest interpretation of the legal provisions in force in Poland expanding the powers of nurses and midwives to prescribe medicines, write out prescriptions and refer patients for diagnostic tests.

Conclusions

The level of detailed knowledge of students about the expanding professional competence of nurses and midwives with regard to prescribing medicines, writing out prescriptions and referring for diagnostic tests is insufficient and needs to be improved.

The study on students' knowledge of and attitudes towards the new professional competence of nurses and midwives should be continued not only among Nursing and Midwifery students, but also among students of Medicine, Pharmacy, and Public Health.

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