

**Health for Public, Public
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in V4 countries**

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Knowledge and attitudes of Medical University of Warsaw nursing students towards expanding professional competences of nurses and midwives

ABSTRACT

Introduction

From 1st January 2016, due to amendment, certain groups of nurses and midwives (N&M) will be entitled to prescribe some drugs and issue referrals for certain diagnostic tests. Level of competences will depend on level of education of nurse or midwife.

The aim of study

To assess knowledge and attitudes of Medical University of Warsaw (MUW) nursing students towards expanding professional competences of nurses and midwives.

Material and methods

106 nursing students of MUW: 50 bachelor students and 56 master students; 103 females and 3 males. The mean age was equal 25 years (min. 21, max. 55, mode and median 23, SD=7,27). Voluntary and anonymous study; questionnaire prepared by authors and assessed using Cronbach α -coefficient. 13 questions concerning knowledge with one correct answer; 26 statements concerning attitudes assessed in Likert scale (1÷5).

Results:

Cronbach α -coefficient: 0,782. 50% of students knows when the amendment will come into force, and 21% knows the criteria for independent nurse prescriber. 57% of respondents think, that the amendment is needed in Poland. 65% of students claim, that new competences seems to be only new duty to N&M.

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Conclusions:

1. The value of Cronbach α -coefficient shows, that the questionnaire is valid and can be apply in further research.
2. In the research group, knowledge concerning the amendment is unsatisfactory and needs urgent improvement, particularly since new competences will directly affect respondents after graduation.
3. The research group have generally positive attitude to amendment, but they concern about rising amount of duties.
4. Due to the fact, that research have a preliminary character, further studies in wider group of students shall be conducted.

Introduction

There have been a few reforms recently introduced in Polish health care system. The reforms primarily concerned medical professions. Among others, legislator tried to define the legal status of public health specialists, and physiotherapist [1, 2]. However one of the most significant amendment concerned so called non-medical prescribing.

From 1st January 2016, due to the amendment of Law on profession of nurse and midwife [3], certain groups of nurses and midwives will be entitled to prescribe some drugs and issue referrals for certain diagnostic tests. Level of competences will depend on level of education of nurse or midwife.

The first new right of nurses and midwives is possibility to prescribe medicines ordered before by a physician (as a continuation of i.e. chronic diseases treatment). Entitled to this activity will be nurse or midwife with bachelor studies and additional course (form of post-graduate education). In further part of the article authors will define this right as Supplementary Nurse Prescribing (SNP).

The second competence is possibility to order certain drugs independently and to prescribe them. From this medicines, strong substances and psychotropic drugs have been excluded. Detailed list of substances, which can be ordered and prescribe by nurses will be defined in regulation of the Ministry of Health. This right will cover nurses and midwives with master degree or with so-called specialization. Additional post-graduate course will be also required in both cases. In further part of the article authors will define this right as Independent Nurse Prescribing (INP).

The last one new competence of nurses and midwives is possibility to issue referrals for certain diagnostic tests (excluding procedures with high risk

of complications). All of the procedures will be defined by Ministry of Health as in case of list of drugs to INP.

Nursing students are group of future nurses, who will be directly covered by all aspects of the reform. They will be entitled at least to prescript drugs as continuation of treatment and to issue referrals. Some of them (master students) will also have a possibility to order medicines independently. Their knowledge about the amendment and attitudes regarding the reform will have a direct impact on introducing this competences into force.

The aim of study

The aim of study is to assess knowledge and attitudes of Medical University of Warsaw (MUW) nursing students towards expanding professional competences of nurses and midwives.

Material and methods

In the study took part 106 nursing students of the Medical University of Warsaw. 50 of them were bachelor students and 56 – master students; 103 respondents were females and 3 were males. The mean age was equal 25 years (min. 21, max. 55, mode and median 23, SD=7,27).

The study was voluntary and anonymous. Questionnaire prepared by authors and assessed using Cronbach α -coefficient have been distributed among 200 students. In relation to number of respondents, the respond rate was equal 52,5%. The questionnaire included 13 questions concerning knowledge with one correct answer and 26 statements concerning students attitudes assessed in Likert scale (From 1 – I strongly disagree to 5 – I strongly agree). Descriptive statistics have been performed using StatSoft Statistica 12.0 (license of Medical University of Warsaw).

Results

The Cronbach α -coefficient can presuppose value between 0 and 1. The higher value means better internal coherence of questionnaire. The value of coefficient, assigned for statements concerning students attitudes, assessed in Likert scale was equal 0,782.

Vast majority of asked students knew, that the new competences were introduced by the amendment to the Act of July 15th 2011 on professions of nurse and midwife. 14% pointed wrong Act. 16% admitted, that they do not know it. Half of the respondents knew when the amendment will come into force. Also half of the students knew, in what legal act they should look for executive regulations concerning new competences i.e. list

of medicines, which can be independently ordered by a nurse or midwife. However, 3 out of 4 respondents are aware, that new competences of nurses and midwives will not be a duty – only a right.

Generally, less than a half of asked students knew criteria, which nurse or midwife shall meet to gain certain competences. For example, only one of five respondents knew, that only nurse or midwife with master degree or specialist nurse or midwife, who graduate additional specialist course concerning new competences will be enabled to order medicines and right out prescriptions. 29% was aware, that only nurse or midwife with bachelor degree, who graduate additional specialist course will have an opportunity to prescribe medicines as a continuation of treatment ordered by a physician. Requirements for referring patient for diagnostic tests knew only 6% of students, although almost 70% were aware, that high risk tests are excluded from this authority. Detailed data, regarding knowledge of nursing students have been presented in the Table1.

Table1. Knowledge of nursing students of the Medical University of Warsaw regarding extending professional competences of nurses and midwives.(correct answers have been bold by authors)

Question	Answer	% of answers
1.To what legal act have been introduced amendment, which enable certain groups of nurses and midwives to order medicines and issue prescriptions?	To the act of May 12th 2011 on reimbursement of medicines, Foodstuffs Intended for Particular Nutritional Purposes and Medical Devices	8%
	To the act of July 15th 2011 on professions of nurse and midwife	69%
	<i>To the act of July 1st 2011 on self-government of nurses and midwives.</i>	0%
	To the act of July 5th 1996 on professions of nurse and midwife	6%
	I do not know	16%
	Lack of answer/missing data	2%

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2. When the new competences regarding ordering medicines and issuing prescriptions by nurses and midwives will come into force?	From the July 1st 2017	1%
	From the January 1st 2017	10%
	From the July 1st 2016	12%
	From the January 1st 2016	50%
	I do not know	26%
3. Will authority to order certain medicines and issue prescriptions be a duty of enabled nurse or midwife?	Yes	14%
	No	75%
	I do not know	9%
	Lack of answer/missing data	1%
4. Will every nurse and midwife be enabled to order certain medicines and issue prescriptions?	Yes, every nurse and midwife	5%
	Only nurse or midwife with master degree	15%
	Only nurse or midwife with master degree, who graduate additional specialist course concerning new competences.	49%
	Only nurse or midwife with master degree or specialist nurse or midwife, who graduate additional specialist course concerning new competences.	21%
	I do not know	9%
	Lack of answer/missing data	1%

5. Will every nurse and midwife be enabled to prescribe medications as a continuation of treatment ordered by a physician?	Yes, every nurse and midwife	5%
	Only nurse or midwife with bachelor degree	4%
	Only nurse or midwife with bachelor degree, who graduate additional specialist course concerning new competences.	29 %
	Only nurse or midwife with master degree, who graduate additional specialist course concerning new competences and every nurse or midwife who can prescribe certain medicines independently.	39%
	I do not know	23%
	Lack of answer/missing data	1%
6. Will every nurse and midwife be enabled to refer patient for certain diagnostic tests?	Yes, every nurse and midwife	4%
	Only nurse or midwife with master degree, who graduate additional specialist course concerning new competences.	25%
	Only specialist nurse of midwife and nurse of midwife with bachelor degree	6%
	Only specialist nurse of midwife and nurse of midwife with master degree	42%
	I do not know	24%
	Lack of answer/missing data	1%

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7. Will the competence to refer patient for diagnostic tests be somehow limited?	No, nurse or midwife will be able to refer patient for every diagnostic procedure.	1%
	Yes, nurse or midwife will be able to refer patient for diagnostic procedures excluding laboratory tests.	9%
	Yes, nurse or midwife will be able to refer patient for diagnostic procedures excluding high risk tests.	69%
	I do not know	20%
	Lack of answer/missing data	1%
8. New competences of nurses and midwives concerning ordering medicines and issuing prescriptions will refer to:	ordering OTC medicines	5%
	ordering reimbursed medicines	8%
	Ordering medicines, Foodstuffs Intended for Particular Nutritional Purposes and Medical Devices	36%
	Ordering medicines and Medical Devices as a result of physicians' order	20%
	I do not know	30%
	Lack of answer/missing data	1%

9. Will the level of competences regarding ordering medicines and issuing prescriptions would differ between nurses and midwives with bachelor and master degree>	<u>Yes</u>	66%
	No	12%
	I do not know	21%
	Lack of answer/missing data	1%
10. The list of medicines to independent prescribing for nurses and midwives will be specify in:	Regulation of health ministry	51%
	New act on nurse and midwife profession	13%
	Amendment to act on profession of nurse and midwife	21%
	I do not know	15%

Attitudes of nursing students concerning introducing new competences into profession of nurse and midwife are ambiguous. Students are convinced, that it will have positive impact on patient situation and will improve health care system. Vast majority of respondents claim, that “nurse prescribing” authority will make shorter waiting lists, and make the health care system more patient-friendly. Almost 80% agree, that reform will save time of patient. Detailed data have been presented on chart 1.

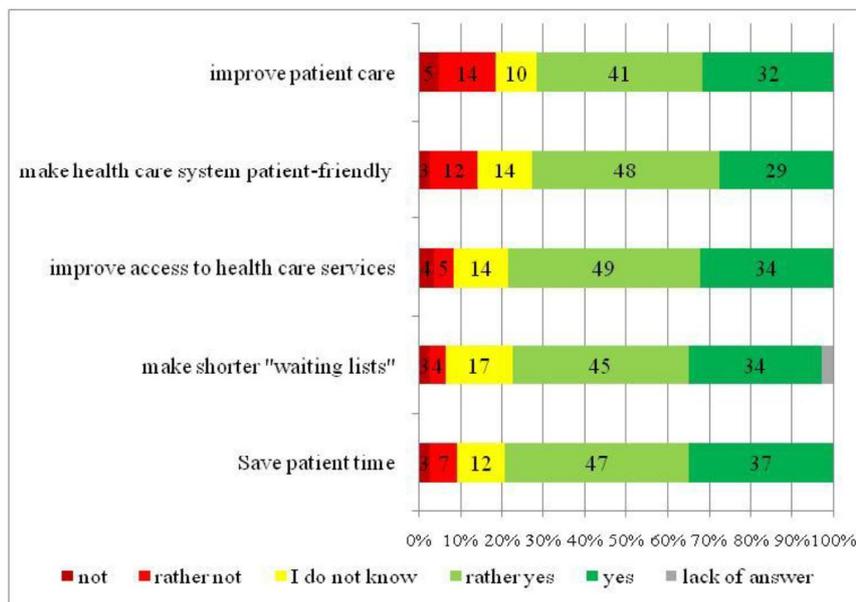


Chart 1. Predicted results of introducing the new competences into profession of nurse and midwife concerning ordering certain medicines and issuing prescriptions for patients. (Question – Amendment in nursing law will...)

The students were more sceptical about the consequences of introducing new law for the professions of nurse and midwife. Some of them are concerned about increasing number of medical malpractice cases with connection with extended authority of nurses and midwives. Respondents are also aware, that new competences will increase level of professional and legal liability of these professions. From the other side, majority of asked nursing students admitted, that it will increase prestige of the professions too. Almost 80% think, that prescribing authority will increase control of nurse or midwife on treatment process. In the same time, only about 20% claim, that it will decrease physician's control on this process. Detailed data have been presented on chart 2.

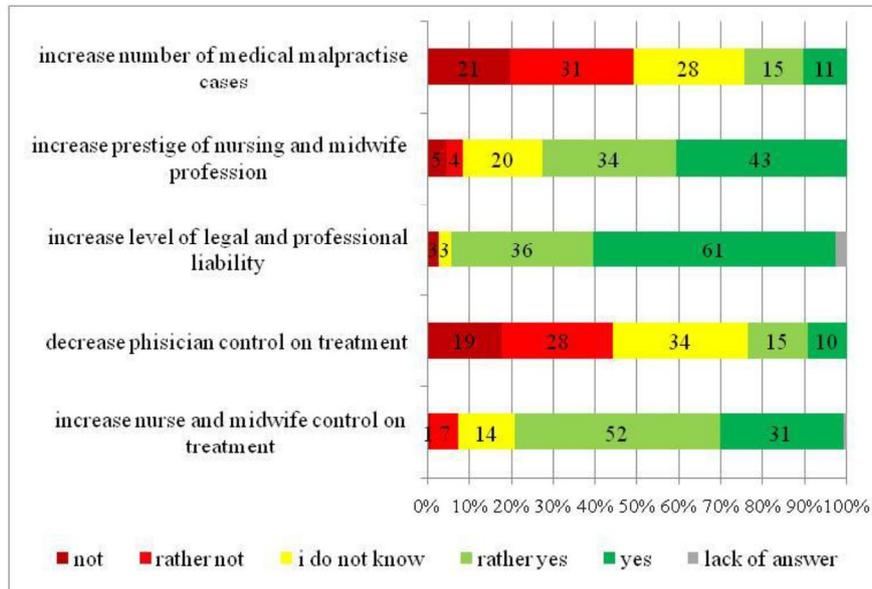


Chart 2. Predicted results of introducing the new competences into profession of nurse and midwife concerning ordering certain medicines and issuing prescriptions for nurses and midwives. (Question – Amendment in nursing law will...)

Discussion

Due to the fact that the subject of extending the powers of nurses and midwives is a new issue in Polish scientific literature, no papers (Polish Bibliography of Physicians) concerning knowledge of Polish students regarding these new competences have been found. However there are some papers concerning attitudes of nursing students and nurses towards this reform [4, 5].

Many publications have been found in the world's scientific literature (PubMed, ProQuest, Google-Scholar, search period 1.01.2000-29.03.2015, language: English, keywords: nurse prescribing, nurse prescribers), including meta-analyses relating to the powers of nurses to prescribe and referring for diagnostic tests, as well as evaluations of the implementation of these rights [6-8]. Unfortunately, none of them considered students' opinions.

Firstly, authors would like to discuss validity of the applied questionnaire. The value of Cronbach's coefficient for statements concerning students' attitudes suggest that statements are coherent and the questionnaire can be applied in further research. However, due to some legal changes and

interpretation discrepancy there is a need to correct some questions concerning knowledge of respondents.

Knowledge of Medical University of Warsaw students is only general. Students rather know, which law was amended, and where to find details of the new regulations. On the other hand, most of them do not know about the criteria required for nurse prescribing authority. It is not easy, to compare students' knowledge with other groups, or with findings of other researchers, because this kind of papers were not published yet.

However, there is a British study, conducted by Hay, Bradley and Nolan [6] where the issue of knowledge regarding prescribing authority of nurses have been raised. In Great Britain, 19 years after introducing so-called Independent Nurse Prescribing (INP) authority, in 2003 also Supplementary Nurse Prescribing (SNP) have been introduced. Supplementary prescriber gain power to order and prescribe wide range of medicines, but only under (agreed by physician with patient) clinical management plan. The qualitative research showed, that knowledge of both nurses and physicians about the new regulations was superficial or just weak. Respondents generally knew, that nurse will be enabled to change dose of ordered medicine, but they often used interchangeably terms: nurse prescribing, INP and SNP. Only one respondent knew answered fully correct.

Nursing students views on the new competences of nurses and midwives concerning ordering and prescribing medicines and issuing referrals for diagnostic procedures are positive. Students think, that these legal changes will have a positive impact on health care system, and will improve access to services. This results are similar to findings from qualitative study conducted by Zarzeka and co-workers [5]. In this study, ward nurses agreed, that amendment will have a positive impact on patient. From the other side, they criticized increasing legal and professional liability of nurse or midwife, particularly, when it probably will not be connected with increasing their salaries. Aspect of increased liability of nurses and midwives, who gain prescribing authority have been raised also by respondents in own research.

On the other hand, in paper of Bradley and Nolan [7], issued 2005, nurses claimed, that prescribing competences is "something more" for them, than an additional duty. This power integrate their current competences and makes care more holistic. Bradley and Nolan study had also qualitative design.

Summarizing, the attitudes of nursing students on new competences of nurses and midwives are positive or even enthusiastic. Due to the fact,

that these students, after graduation will be empowered to prescribe medicines (after additional post-graduate course), own study suggests, that the amendment could meet with warm welcome (at least from the future users of the competences). Nevertheless, more important are views of current nurses and midwives.

Limitations

There is necessary to point some limitations of the study. The research group is not wide and the sampling is not random. That is why, there is a need to conduct further research in wider and more representative group of students, including also midwifery students and medical students. Their opinions will also have an impact on introducing new powers of nurses and midwives. Authors feel obliged to indicate, that the study have preliminary character.

Conclusions

1. The value of Cronbach α -coefficient shows, that the questionnaire is valid and can be apply in further research.
2. In the research group, knowledge concerning the amendment is unsatisfactory and needs urgent improvement, particularly since new competences will directly affect respondents after graduation.
3. The research group have generally positive attitude to amendment, but they concern about rising amount of duties.
4. Due to the fact, that research have a preliminary character, further studies in wider group of students shall be conducted.

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