

HOW THE ROLE OF A PHARMACIST HAS CHANGED - A COMPARISON OF THE ESTONIAN AND LITHUANIAN HEALTHCARE STUDENTS AND TEACHERS OPINIONS

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Annotation

Pharmacies and pharmacists are expected to provide quick and flexible service as well as good communication. Nowadays a pharmacist mainly offers medication information and health counselling, thus being an important link between the doctor and the patient. More and more attention is given to informing patients/clients about the side effects and contraindications of medications.

This presentation explores how the role of a pharmacist has changed and what is the direction of these developments.

The study was conducted in Tallinn Health Care College and Kaunas University of Applied Sciences, faculty of Medicine by applying quantitative method (questionnaire survey). The questionnaire in Estonian had 23 questions (first used by Daisy Volmer in 2003), including 4 questions concerning social-demographic background information and 19 questions about the pharmacy services and tasks of pharmacists. The questionnaire in Estonian was translated to Lithuanian and two questions concerning the differences between the services of a pharmacy technician and a licensed pharmacist were added. The survey was conducted in Estonia 28 November 2013 – 8 December 2013 and in Lithuania 14 March – 1 April 2014. In Estonia the questionnaire was filled in by 312 and in Lithuania by 327 respondents.

Over three-fourth of respondents (77%) considered pharmacists as competent counsellors in Estonia in 2013. As a positive example it should be brought out that almost half of participants (48%) considered pharmacists as health care workers, although during the period of conducting the survey pharmacists were not yet officially included among the health care workers in Estonia. Statistically significant differences occurred in the opinions of the respondents in Estonia and Lithuania in this regard, that in Estonia pharmacists were more often seen as health care workers, producers of medications, sellers and good communicators ($p < 0.001$). Almost two-thirds of respondents (63%) reported that they turned to their family doctor in case of milder diseases in Lithuania in 2014. The respective number in Estonia was 37% smaller ($p < 0.001$).

In the study were found statistically significant differences in the opinions of the respondents in Estonia and Lithuania. The possible reasons for the differences between two Baltic countries are explained by the differences in the healthcare and pharmaceutical systems. In Estonia the healthcare and pharmaceutical systems include: eHealth, e-Prescription and the responsibility of assistant pharmacists to work and make decisions independently. The study population covered a sample of Estonian and Lithuanian healthcare students and lecturers. The findings of the study may not be generalized to whole population of Estonia and Lithuania, as the environment and circumstances prevailing in the health care college and medical faculty may impact on responding. There is a possibility that the responses of participants may differ from those who did not participate.

Key words: pharmacist, healthcare, education, counselling.

Introduction

Throughout the last decades there have been several important changes in primary level health care to better meet the needs and expectations of service users. Quick changes have occurred also in the pharmacy system. In comparison with the past decades the competition has risen significantly. Pharmacies and pharmacists are expected to provide quick and smooth service as well as good communication. This has changed the role of a pharmacist towards concentrating on client/patient-centred service, which includes medicament counselling and promoting healthy lifestyle. Pharmacists are expected to turn more attention to their communication skills, empathy and professional knowledge that are all needed to provide service for the pharmacy clients. As the network of pharmacies in bigger cities is tense, clients always have a possibility to choose a pharmacy with better service, where for example medicament information, counselling on self-medication, pharmaceutical care and/or health

check are provided. The previously known role of a pharmacist as a professional who prepares and dispenses medicaments has changed over the decades. Nowadays a pharmacist mainly offers medication information and health counselling, thus being an important link between the doctor and the patient. More and more attention is given to informing patients/clients about the side effects and contraindications of medications (Lill et al, 2014; Sepp, 2015).

This article is mostly based on the research articles published in 2014-2015 (Lill et al, 2014; Sepp, 2015; Daunys et al, 2015). Current article explores how the role of a pharmacist has changes and what is the direction of these developments.

Pharmacists themselves have been interested in learning, how is their role and position perceived by the pharmacy clients in contemporary Estonia. Is a pharmacist considered as a counsellor, business person or just a salesperson? These are the main questions student of the Chair of Pharmacy of the Tallinn Health Care College Jana Jakovleva (alumna from June 2014) sought answers for in her course paper titled "The Change of the Role of a Pharmacist During 2003–2013". Her research paper was focused on what is the role of a pharmacist from the point of view of clients and how has this role changed over the last ten years. This research paper studied, if clients receive good quality medication information and counselling from pharmacies and how important is the role of a pharmacist in the point of view of the clients. At this stage of the research process a pharmacy student from the Kauno Kolegija, Lithuania Dovydas Daunys came to study at the Tallinn Health Care College and it came out that he had conducted a similar study in Lithuania (Jakovleva, 2014; Daunys, 2014). The next topic will be about pharmacist education in Tallinn and Kaunas.

Pharmacist education in Estonia and Lithuania

During the Soviet era pharmacist education was provided according to relatively unified programmes. Nowadays there is a lot in common in pharmacist education in Estonia and Lithuania, but there are also some rare differences. In Estonia as well as in Lithuania it is possible to study to become a pharmacist only in one higher education institution in the country: Tallinn Health Care College, Estonia offers 3 years long study programme (180 ECTS), Kauno Kolegija in Lithuania has exactly the same study period and volume. The volume of pharmacology in the study programme is also similar. In comparison to pharmacist education in Lithuania, the respective education in Estonia, concerning the main courses of pharmacist education, the volume of pharmaceutical chemistry is bigger by 4 ECTS, the volume of pharmacotherapy is bigger for 2 ECTS and the pharmacy practical training is longer for 8 ECTS. In Lithuania the volume of pharmaceutical technology is bigger by 4 ECTS and the volume of the final exam is bigger by 7 ECTS (Tallinn Health Care College..., 2009; Kaunas University of Applied Science..., 2012).

Comparison of pharmacy services in Estonia and Lithuania

The biggest difference between Estonian and Lithuanian pharmacies and pharmacy services was that in addition to preparing medications *ex tempore*, pharmacists in Lithuania are only allowed to sell medications under the supervision of a university-level pharmacist (Daunys, 2014; Daunys et al, 2015).

The comparison also brought out that services provided in Estonian and Lithuanian pharmacies are a bit different. In addition to selling medication and counselling clients, Estonian pharmacies offer different services that were not offered in Lithuania in 2014. The service provided in Estonia that was most interesting for Lithuanian colleagues was our digital prescription system. Furthermore, our e-pharmacy service with a possibility for counselling was new to Lithuanian colleagues and students. In addition to that, some Estonian pharmacies offer private counselling in a special counselling office. Pharmacies that have bigger number of clients regulate queue with a queue number machine and have different desks for selling non-prescription medications and prescription medications, thus offering quicker service to clients who buy only non-prescription medications or prescription medications. These pharmacy services that are widespread in Estonia and have developed quickly were not implemented in Lithuanian pharmacies in spring 2014 (Daunys, 2014; Daunys et al, 2015).

Research methods

This study was conducted in Estonia and Lithuania by applying quantitative method (questionnaire study). In addition to that comparative analysis was used by comparing the evaluations to pharmacy services by the pharmacy clients of Estonia and Lithuania. A questionnaire study was used because of the following: the researcher has no influence on the subject; the research process is simple and short in comparison to the interview method. As the

researchers were not able to be at two different places at the same time, they decided to use web-based method in *SurveyMonkey®* survey environment (*SurveyMonkey®, 2014*). This method and environment was used because it enabled conducting the research and collecting data in a more simple, cheap and fast way.

Questionnaire

The questionnaire in Estonian had 23 questions (first used by Daisy Volmer in 2003) (*Volmer et al, 2007*) including 4 questions concerning social-demographic background information and 19 questions about the pharmacy services and tasks of pharmacists. The questionnaire in Estonian was translated to Lithuanian and two questions concerning the differences between the services of a pharmacist and a university-level pharmacist were added.

Conducting the survey

The survey was conducted in Estonia 28 November 2013 – 8 December 2013 and in Lithuania 14 March – 1 April 2014. In Estonia the questionnaire was filled in by 312 and in Lithuania by 327 higher education institution students and lecturers.

Respondents

The respondents of the survey in Estonia were students and lecturers of the Tallinn Health Care College. The respondents in Lithuania were students and lecturers of the faculty of medicine of the *Kauno Kolegija*. The respondents were special in this regard, that they were all connected to the field of health care and medicine: lecturers and students of nursing, midwifery, dental technology, pharmacy etc. They all had wide experiences in the health care system, including the pharmacy system. They were all also clients of pharmacies, thus making them suitable respondents. Analysing the answers of these respondents it was possible to receive new information about how the role of pharmacists and the pharmacy services have changed in Estonia and Lithuania. It was also interesting that the number of respondents in both countries was very similar (see table 1). In order to calculate the sample and the respondent a theoretical model of *SurveyMonkey®* was applied. This model enables to calculate the confidence interval and the error rate. The questionnaire was sent to the respondents by e-mail and answers were collected in about two weeks. *IMB SPSS Statistics 19* programme was used for conducting the statistical analysis. The answers of the respondents of Estonia and Lithuania were used for conducting the comparative analysis. Cross tabulation and percentage frequency distribution were applied as method of analysis. Significant statistic differences were studied using the t-test and χ^2 -test.

Table 1

The populations, samples and respondents in Estonia in 2013 and in Lithuania in 2014

Tallinn Health Care College	Kauno Kolegijos Medicinos fakultetas
Study population N=1740	Study population N=1740
Required number of respondents n=340 (Response rate 20%)	Required number of respondents n=340 (Response rate 20%)
*Confidence interval 90% (n=215)	* Confidence interval 90% (n=215)
*Confidence interval 95% (n=278)	* Confidence interval 95% (n=278)
*Error rate 10% (n=88)	* Error rate 10% (n=88)
*Error rate 5% (n=278)	* Error rate 5% (n=278)
Actual number of respondents n=312	Actual number of respondents n=327

*These numbers are hypothetical

Results and discussion

The results of the survey show that 41% of the respondents in Estonia in 2013 turned to pharmacists in case of milder diseases. In Lithuania the number of respondents in 2014 who turned to pharmacists concerning milder diseases was 6% smaller than that of Estonia. On the other hand, the number of respondents in Lithuania who turned to their family doctor was 37% bigger than the respective number in Estonia ($p<0.001$). Compared to the study of D. Volmer in 2003, in 2013 the number of people who search information from the internet concerning milder diseases has increased significantly. In 2003 only 6% of the respondents sought help from the internet (*Volmer et al, 2007; Volmer, 2010*), ten years later it is 31% of respondents. This change is connected to the wider use of search engines like *Google*. The amount of goods and services sold via the internet has increased, including pharmacy services and products. Thus it has nowadays become more common to search health-related information as well as products and services from the internet. This tendency is also confirmed by the fact that with ten years 25% less of all respondents turned for pharmacists for help and 21% less of the respondents

turned to their family doctor (see table 2) (Jakovleva, 2014). In contrast, in Lithuania it was most common to turn to a family doctor. 63% of the respondents in Lithuania turned to their family doctor and this number is statistically significantly different from the results collected from Estonia in 2013 ($p < 0.001$).

Table 2

Responses of Estonian and Lithuanian healthcare students and teachers to the question:
"Who do you turn to for help concerning milder diseases?"

	¹ 2003 Estonia % (n=727)	² 2013 Estonia % (n=312)	³ 2014 Lithuania % (n=327)
Pharmacist	66	41	35
Family doctor	47	26	63
I trust only myself	31	23	20
An acquaintant health professional	36	—*	—*
My family, acquaintances	24	44	41
I find information from the internet	6	31	23

*In 2013/2014 this question was not posed

The table is based on the following literary sources ¹Volmer 2007, ¹Volmer 2010, ²Jakovleva 2014, ³Daunys 2014.

Who is a pharmacist in the opinion of Estonian and Lithuanian healthcare students and teachers?

The biggest number of respondents in Estonia in 2013 considered pharmacists as competent counsellors (77%). 45% of the respondents considered pharmacists as specialists in the field of medications and diseases, but 41% of the respondents thought that pharmacists were ordinary sellers. As a positive example it should be brought out that 48% of the respondents considered pharmacists as health care workers, although during the period of conducting the survey pharmacists were not yet officially included among the health care workers (see Figure 1). Significant statistic differences occurred in the opinions of the respondents in Estonia and Lithuania in this regard, that in Estonia pharmacists were more often seen as health care workers, producers of medications, sellers and good communicators ($p < 0.001$).

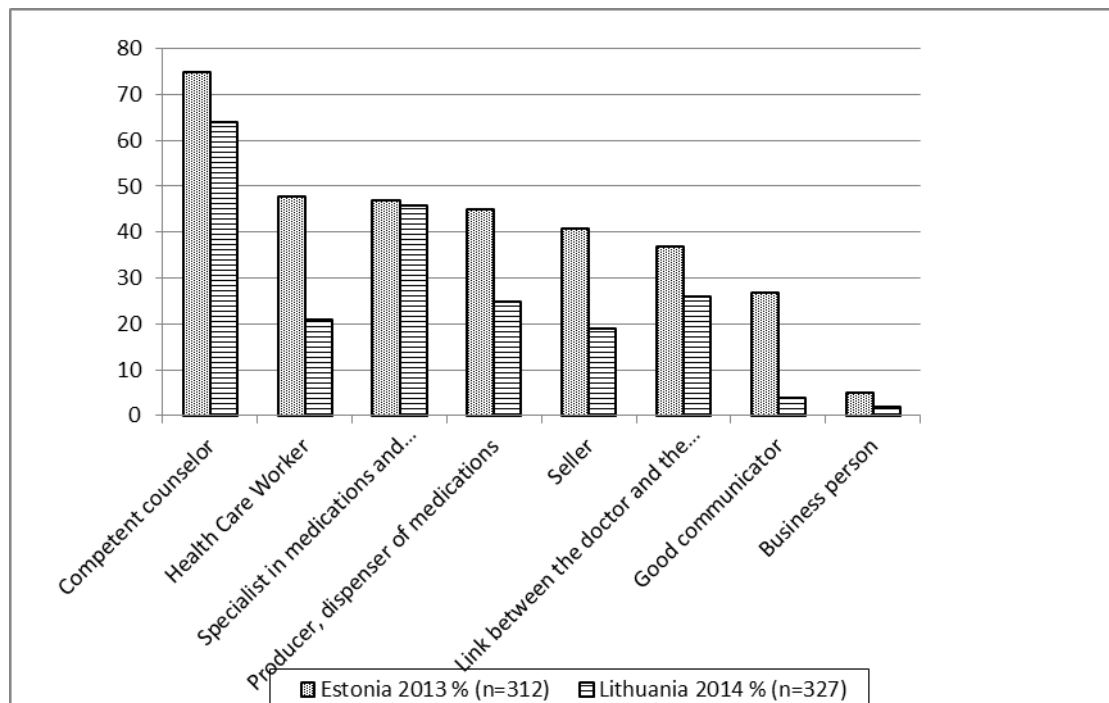


Fig. 1. This figure shows who is a pharmacist in the opinion of Estonian and Lithuanian healthcare students and teachers. This figure is based on the following literary sources: Jakovleva 2014 and Daunys 2014.

Collecting information about the over-the-counter selling

This survey shows that 59% from the respondents in Estonia who turned to pharmacists always received counselling by a pharmacist, 34% of the respondents answered that they

received counselling by a pharmacist sometimes. 7% of the respondents indicated that they received counselling rarely or not at all. 73% of the latter brought out the following reasons: there was no possibility for a private conversation, there were too many people in the pharmacy (Jakovleva, 2014). In Lithuania 48% of the respondents claimed that they always received counselling by a pharmacist, 38% answered that they received counselling sometimes. 14% of the respondents claimed that they received counselling rarely or not at all (Daunys, 2014; Daunys et al, 2015). Figure 2 provides an overview of collecting information concerning over-the-counter selling from Estonian and Lithuanian respondents.

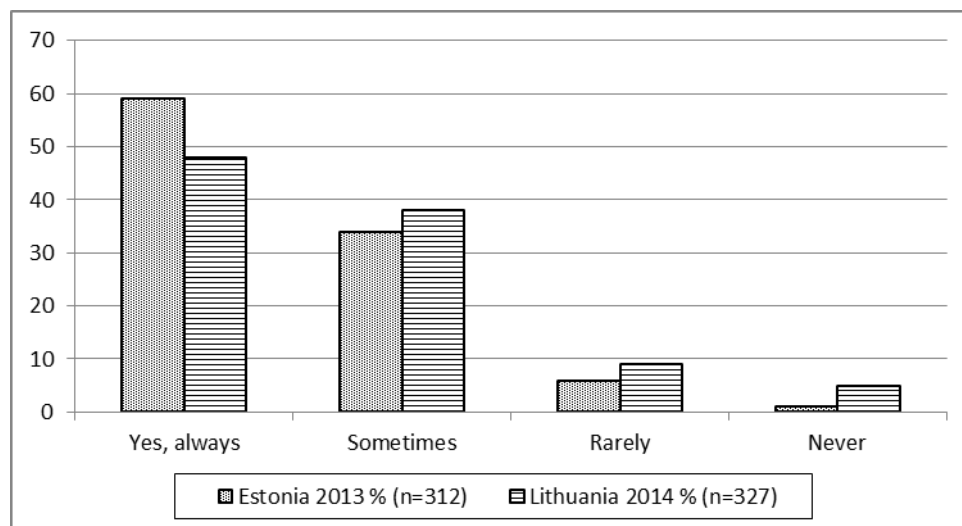


Fig. 2. This figure shows how the respondents evaluate counselling service by a pharmacist. This figure is based on the following literary sources: Jakovleva 2014 and Daunys 2014.

92% of the respondents in Estonia and Lithuania considered pharmacists' knowledge about over-the-counter medications to be very good or good. 36% of the respondents in Estonia answered that pharmacists' knowledge concerning over-the-counter medications was very good. In Lithuania the respective percentage was 27% (see table 3).

Table 3

Estonian and Lithuanian healthcare students and teachers evaluation for the pharmacists' knowledge about over-the-counter medications

	¹ 2013 Estonia % (n=312)	² 2014 Lithuania % (n=327)	Difference %
Very good	36	27	9
Good	56	65	-9
Weak	7	5	2
Very weak	1	3	-2

The table is based on the following literary sources ¹Jakovleva 2014, ²Daunys 2014.

Conclusions

In the study were found statistically significant differences in the opinions of the respondents in Estonia and Lithuania. Pharmacist has an important role in the primary health care. Probably the importance of pharmacies will increase in the future, despite the fact that concerning milder diseases less people turned to pharmacists in 2013 than ten years earlier. Both in Estonia and Lithuania pharmacists are considered as competent counsellors, specialists in medications and diseases as well as health care workers.

The possible reasons for the differences between two Baltic countries are explained by the differences in the healthcare and pharmaceutical systems. In Estonia the healthcare and pharmaceutical systems include: eHealth, ePrescription and the responsibility of assistant pharmacists to work and make decisions independently. The study population covered a sample of Estonian and Lithuanian healthcare students and lecturers. The findings of the study may not be generalized to whole population of Estonia and Lithuania, as the environment and circumstances prevailing in the health care college and medical faculty may impact on responding. There is a possibility that the responses of participants may differ from those who did not participate.

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