

**UNIVERSITY OF PÉCS  
MEDICAL DOCTORAL SCHOOL**

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**5. Programme (P-5)  
Border-lines of health  
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**F-31.  
Realization of the effect of social differences  
through the health care system**

***Choice of career and migration  
Nursing students in higher education and on the labour market***

**Thesis (PhD)**

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**Pécs**

**2011.**

## Introduction

The continuous transformation of health care system, higher education and the structure of society itself exposes more and more serious tensions in connection with the future of nursing. Although prestige of nursing was never at the top of the indices of appreciation in the Hungarian society, erstwhile it would be inconceivable to hear that the structural change in health care will require nurses as victims. While because of considerations of economy the employers in certain spheres react on the economic force that is pressed on them with workforce reductions, on the other side the lack of qualified and competent nurses continuously gains ascendancy. The number of students that choose nursing has been decreasing for years, a more and more significant part of those starting the training does not finish the studies and besides the inner migration (finding a job in another profession or in other sphere of the Hungarian labour market) the migration abroad also has been started among the nurses. One, perhaps the most important problem is that we do not have any reliable data which we could refer to in connection with the migration.

In 2004 the World Health Organisation (WHO) confirmed the global importance of the issue of human resources and within this handling the migration with a convention's decision (WHO, 2004). The charge for the delayed-action bomb is provided by the United States where nearly 50% of the actively working nurses will retire on a pension during the next 20 years that is 800 thousand people exit health care (Buerhaus, 2000). It is possible to substitute them only with import of nurses, the American educational system is not able to produce so many nurses within such a short period. A part of the import, because of the language skills and the higher American wages will arrive from England, which means at the same time that England will have to entice labour force from other European countries, such as from our country.

In consideration of the situation's seriousness the International Council of Nurses (ICN) organized an international conference in the subject matter of global migration which accepted concrete proposals for the member states (ICN, 2005). The European Union also started an examination under title NEXT (Nurses' Early Career Exit), which tried to answer in 10 European countries with the help of more than 70 thousand participants the question what after-growth nursing will have in the decades to come (Next, 2005). Relying on data that were collected widely in 2005 it made proposals to the Union's Council to handle the issue of nursing at European level.

The NEXT- survey examined the problem, causing the shortage of labour force among nurses with methodical approach, approaching to it from worst possible idea, from the early abandonment of the profession. In the theoretical model of the NEXT study the mass of those arriving from the training and of the nurses that are imported from abroad is shown as “input” (Figure 1.).

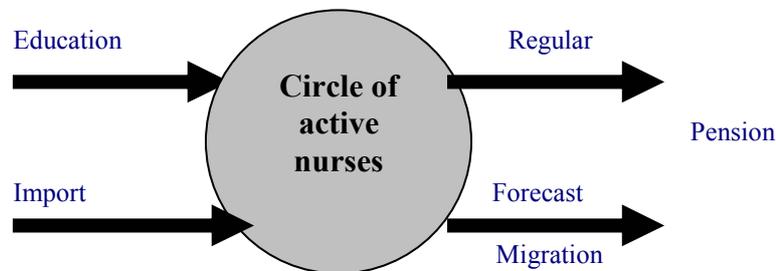


Figure 1: Theoretical model of the NEXT study (NEXT, 2005)

All these constitute the nurses, actively working in their profession, from which the outgoers withdraw with retirement and early career exit. In favourable case the inflow on the input side is much greater than the number of the leaving nurses on the output side. This abstract model is interpreted concretely in figure 2. Starting from the figure’s left side we can see the role of the working environment and the content of the work (1) as well as of the personal position (2). These are affected by different impacts (3). These either aggregate gradually in the course of time or they emerge due to a sudden event. These impacts form also the personal resources (4), these include the age and our state of health as well. Social-economic or the workplace-structural alternatives are added to the foregoing (5), which jointly determine whether we intend to stay or leave and whether finally we stay in the profession or exit from nursing (6).

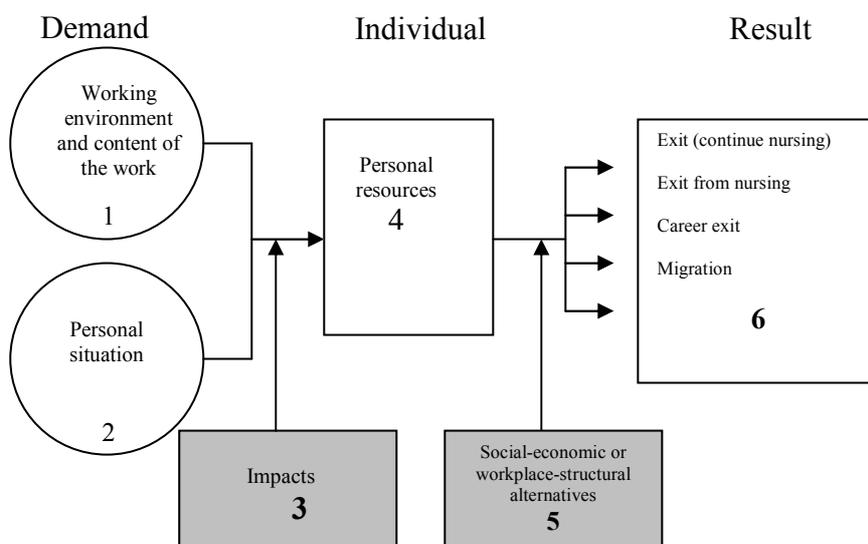


Figure 2: Methodology of the Next –survey (NEXT, 2005)

The NEXT-survey described and analysed the working conditions of the European nursing staff and states the causes because of which the nurses consider exit from the profession. It worded the reasons of the early exit from the profession, identified the risk groups of the early exit and examines the effect of the early career exit on the individual and on the institution. In 2008 the Green Paper of the European Commission also was published (Green Paper on the European Workforce for Health) which makes the future of the European health labour force and of the migration within Europe of high-priority (Commission of European Community, 2008). In this the European Commission summarized the challenges waiting for the health workers of the European Union (EU) that are common in all of the member states. Such challenge is the demographic issues (aging population and health workers), which means that no enough young people enter the system in order to substitute the outgoers, diversity of the health workers; little attraction of the medical workplaces for young people, migration of the health professionals within and outside the EU; the unequal mobility within the EU, especially moving of certain health professionals from the poorer member states to the richer ones and the health brain-drain from the third countries.

In 2009 the Economic and Social Commission for Europe (ESCE) worded its opinion about the Green Paper. It pointed the importance of the high-standard professional training and retraining out. It emphasized the role of the social partners and of the social communication in the establishment of the working and wage conditions of the health workers and the role of the social professions in medical attendance, nursing and thereby in health care too. It suggested collecting statistical data about the health trades, about the cross-border migration (ESCE, 2009).

The Directives of the European Council concerning free mobility and the mutual acknowledgement of the educational achievements (1612/68/EGK) make possible for the nurses to move within Europe easily and to take up jobs in any chosen country. These principles are important means of the nurses' mobility in Europe, since the dramatic changes in the average age of the nurses require the mass replacement of the nursing staff in most of the European countries in the next decade (O'brien, 2007) (Humphries and associates, 2008). This increased demand for the more nurses in Europe takes place when the USA also recruits further 800.000 nurses from abroad with full force to fill the empty nursing posts (De Raeve, 2008).

Indicating the capacity of nursing training in Western Europe, taking the replacement's speed into consideration, a part of the solution has to rely on the enticement of nurses from the eastern part of the continent, on opening more channels for the migration outside the Community. Hungary, which has been part of the European Community since 2004, is not free from the nursing crisis. On 30<sup>th</sup> April, 2010 the number of the persons in the Hungarian operation register is: 137.359 persons, within this the number of ancillary workers is 86.160 persons (EEKH, 2010). According to the Central Statistical Office the number of the posts and the head count of the ancillary workers in Hungary in 2008 was 90.020 persons (CSO, 2008). Up to 2008 the number of the filled full-time and temporary jobs was 3.716 in case of the graduate nurses. (In the period from 1993 to 2008 6.727 diplomas were issued.) This decreasing tendency can be explained with the decay of popularity of nursing, in the last period fewer students with secondary qualification chose nursing (Balogh, 2009).

Another source of the decrease of the head count is the attrition; the students leave the educational institutions early and they not intend to acquire diploma in nursing. The attrition from the training of nurses is less surprising when this is not the student's primary choice or if the student's expectations do not meet the real career opportunities. A separate issue is the issue of the attrition after acquiring the diploma. The I. Medical Human Resources Forum was organized in 2008, which focused on the survey of the position of the Medical Human Resources and the issues of the professional training (Girasek, Eke, Szócska, 2007). Here the fact was announced that on the basis of the survey performed by the Chamber of Hungarian Ancillary Workers (MESZK) among thirty-nine central hospitals and the high-priority ones there is staff shortage of 3.500 - 4000 persons in Hungary (MESZK, 2008). Projecting this on the whole institutional circle the number of workers missing from nursing can be estimated at six-eight thousand (Balogh, 2009).

Less and less young people choose nursing. The career is not attractive, it does not offer adequate existence for the individuals. The main after-growth on the labour market can be gained from the employees that are graduated at full-time course. Only this head count can be taken into account since they mean quantitative change because those learning on correspondence course already work in the system of provisions. This year this number expectedly will be 99 nationwide on full-time course and 250 on correspondence course. (Balogh, 2009). The situation is worsened by the fact that among those graduated on full-time course few people take up jobs in health care. According to the data of the EEKH compared to 2008 in 2009 triple number of nurses applied to the office to work abroad (2008 - 153 persons, 2009 - 419 persons).

The increasing international attention towards the choice of career, career exit, decrease of head count and migration of the nursing students and the working nurses and the number of the Hungarian researches that examine the nurses' intention is rather small (Frits, 2003); (Kovácsné and associates, 2004); (Zrínyi, 2004); (Szkrajcsics, 2005); (Vízvári, 2005); (Zrínyi and associates, 2007).

Among the questions to be answered – similar to the Green Paper – the following issues stand first also in Hungary: the little attraction of medical workplaces for young people (problems of choosing a career, decrease of the students' number, attrition) from the training's side, the stressed, overstrained, bad working environment and the lack of recognition (intention of career exit) from the side of nursing, the increasing staff shortage (issue of the missing after-growth) from the side of health care system, the circle of demographic problems (aging population, aging health workers), migration of ancillary workers and mobility (problem of brain-drain) from the side of the society.

This is mapped also by the model of the above mentioned Next-survey if we examine the choice of career and attrition of the entrants, the nursing students, the situation of the active workers and their intention to exit the profession and the plans of the outgoers to find employment abroad. These are the main questions and problems to be answered which will be presented in detail in the next chapters. Knowing the problems' common causes can help to solve the problems of nursing related to human resources and to find the possible solutions.

## **Aims**

The topic related to the intention of the nurses to exit the profession and to migrate as well as to its extent is a less researched area in Hungary, contrary to its importance the problem is not given required attention.

This is a very important issue if the health government wants to understand which steps it has to take in the case of the better nursing provision, maintenance and staff organization (motivation and working conditions) in order to balance and stabilize the labour forces. In order to find an answer to the extent of the phenomenon of migration we planned a descriptive, comparative, cross-sectional examination that reveals the connections, performed among the students of nursing and the nurses working in practice.

1. The most important aim of our examination is to know the nurses' intention to exit the profession. We also wanted to find an answer the question how latent phenomenon is the need for migration, to what extent it occurs among the current nursing staff both in Hungary and in the Czech Republic.

2. Our aim is to know the social demographic background of the responding nurses and students of nursing, their opinion in connection with the training.

3. Our further aims include to reveal on the basis of the literature the reasons of the students of nursing to choose this profession and the connection of these with the exit from the profession, to compare those experienced among the students with the related researches of the literature both among the Hungarian and the Czech nurses.

4. The above presented NEXT survey that is applied as a basis also worded similar aims that is why applying its model we considered expedient to examine the "input" side of nursing that is the impetus of those arriving from the training to take a job in nursing after the training and to examine the "output" side as well that is the tendency of those working in practice to exit from nursing early.

5. Not in the last place our aim was to call the attention of those being liable for the health policy to the staff shortage in nursing and the reasons and the possible solutions of this.

## **Material and method of the examination**

In the course of our researches we applied conceptual and measuring approach, similar to the European NEXT-survey (NEXT, 2005). The NEXT-survey applied the combination of complex measures (for example burning out, commitment, balance of stress-acknowledgement, intention to abandonment of the profession, satisfaction with work, love of work, physical load, social working environment, index of capacity to work and workplace-home interaction) (Figures 1. and 2.), the application of which in an unchanged form was not possible. Due to technical, financial and temporal limits we decided to work out an own survey system on the basis of the main principles of the NEXT. In the course of our research we tried to gain representative character from the beginning but while analysing the official sources we came to the conclusion that the different records (Registrar's Departments, Functional Records) sometimes include contradictory data. The situation is similar in the proportion of sexes and in case of the age as well. While elaborating the questionnaire we asked six illustrious experts in nursing to evaluate the questionnaire that we worked out. The aim of the request was the comparison of our questionnaire and the original NEXT-survey.

We sent every newly elaborated means and every means of the NEXT to the experts for comparison. In the course of the procedure at first the questions were sent back to us for correction with 74 % agreement. Finally, due to the corrections the level accepted by the experts increased to 88 %. In order to test the reliability we applied the Cronbach alpha coefficient which was 0,78 among the students and 0,86 among the active nurses. On the basis of our measures our results can be fitted in the input element of the above model and the effect of the certain factors on the abandonment of the profession or staying in it can be examined. The questionnaire was finalized after a trial survey (15 persons). The final form of the questionnaire contains 37 closed questions. Because of the questions that are specific to the students and to the working nurses the number of the respondents sometimes completely differs from each other. When determining the order of the question groups we paid attention to the reduction of the proportion of refusing to answer and of the denial to the minimum. The election took place at random and the exclusion was determined in case of completion below 75%. We evaluated the answers concerning satisfaction and probability on a 5-score Likert-scale. In order to evaluate the answers concerning the career exit and migration we also used the 5-score Likert-scale. We measured the answers concerning the state of health in the last 6 months on a 10-score scale (1= very bad, 10=very good). The survey completed by us had a cross-sectional character, no further survey followed our data collection, contrary to the NEXT. The students' involvement in the sampling took place at random, voluntarily and anonymously and it did not take place in working hours. In connection with the questionnaire those filling the questionnaire in were informed in advance also about that they can retract during the completion of the questionnaire and that they can get acquainted with the results later. We handled the questionnaires anonymously. When publishing the results we strictly attended to the pollees' personal rights, we took the Ethical Code of the Hungarian Nursing Association as a basis. While collecting and publishing data about the certain persons we regarded not to infringe the pollees' personal rights. We did not ask such questions which have private character, we pursue confidentiality, reality and soundness. The summarized presentation of the certain steps during the research is shown in figure 3. The individual items of the figure are explained in detail in the following subsections. We applied the established questionnaire in two research phases, in three stages during the first phase and in one stage during the second phase. In the first stage of the first phase first we applied the questionnaire at three places (Debrecen, Nyíregyháza, Pécs) in 2006. The size of the sampling in this stage was 522 persons (Zrínyi and associates, 2007).

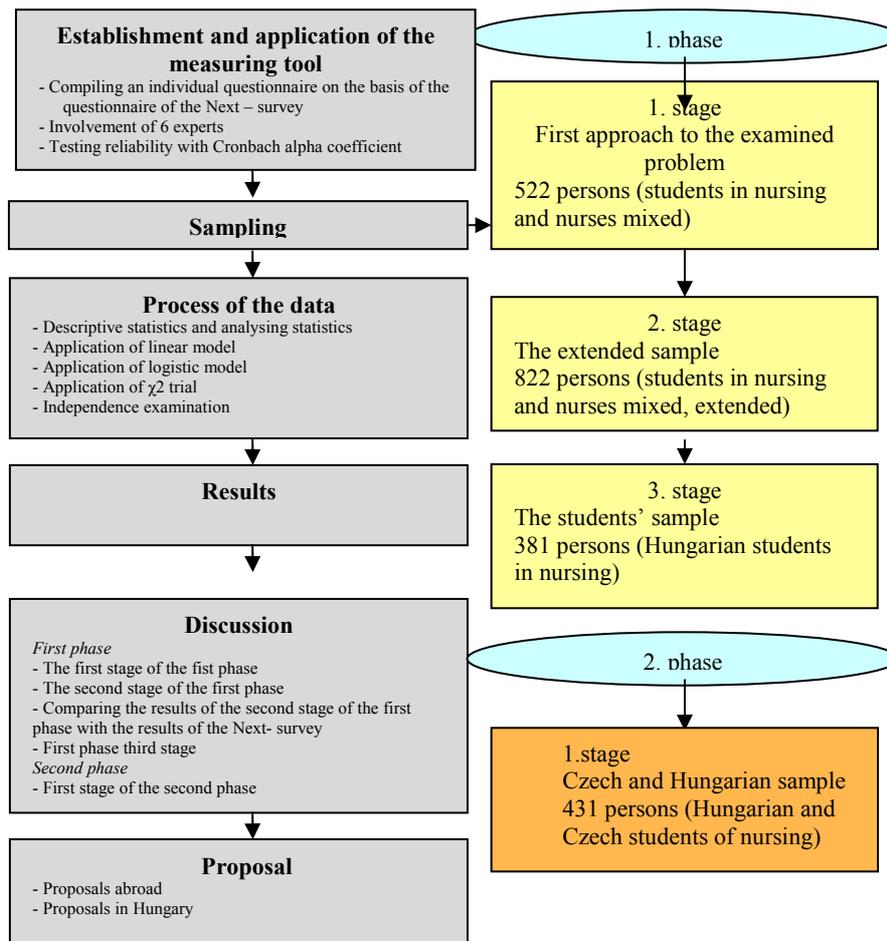


Figure 3: Outline of the research process

While evaluating the results it became clear that the regression models concerning the students can be formed only with extending the relevant sample size. We managed to obtain this in the second stage, with involving a greater sample including nurses and students in nursing in Nyíregyháza. The sample size that is obtained in this stage increased to 822 persons. We took the number of the 86.160 ancillary workers registered in the Hungarian functional record as a fundamental variety in nursing. In our sample (in case of a sample with 828 persons) 441 nurses were involved which means proportion of 0.51 per cent (Ujváriné and associates, 2010). In the third stage we analysed the relations in the training of nurses. We screened the students' sample from the results of the first two stages and at the locations of the previous surveys we had new questionnaires completed. In this case the sample size was 381 persons (Ujváriné and associates, 2010).

As the continuance of the research we compared the students' material of the second stage with a Czech sample. Our aim was to extend our research results. The main achievement of the model established as a result of the comparison is the possibility to forecast the Hungarian relations in the future (Ujváriné and associates, 2010).

## Results

### **The first stage of the first phase**

Firstly, the data of step one of phase one – 522 persons – have been analysed. The dependent variable was the probability whether the person will work as a nurse in the next one year, the independent variable was the age, the health status, the time spent in the health care, the marital status, whether there is any health worker in the family, the intent to learn, the knowledge of any foreign language, and the satisfaction with the workplace / education. The number of the students' cases was too low to set up an effective model in their circle. The variables used for the active nurses gave unsatisfactory explanation why the respondent will keep working in this job next year. The shift schedule and the knowledge of foreign languages were negative factors; the older age, the satisfaction with the shift schedule, and the opportunities for further development made the nurses stay.

### **The second stage of the first phase**

In the second stage of the first phase the data of 822 persons were analysed. 8.7 % of the 383 persons pursuing studies currently took part in lower than collegial education, 88.5 % in collegial and 2.7 % in university education. The average 2.76 scores given on the 5-score scale in connection with the quality of the education indicates that only 29.3% found it good and only 6.1 % was satisfied. 12.5 % was unsatisfied, 40.39 % found it appropriate and 11.9 % could not decide. They had a similar opinion about the time of the practice, how the practices are organized and about their standard. The average score in this case also was 2.76. They were more satisfied with the trainers' know-how. 65.7 % was unsatisfied with the expected financial and moral recognition of nursing, altogether 5.2% found it good. The average value of the scale was 1.58. The majority has not thought to discontinue their studies, similarly, the majority does not want to continue their studies in other fields but one fourth of them would choose the higher nurse education (college, university studies) with a high probability. Only one fifth of them would recommend others to participate in the nurse training. Half of them were not encouraged to leave the nurse training in the past months. Half of the respondents will complete their studies for sure. The majority of the active nurses is dissatisfied with their salaries; they were satisfied / dissatisfied with the conduct of the colleagues in about 50-50 percent; the majority was not satisfied with their working conditions and their equipment etc. Almost the majority of the sample was dissatisfied with the flexibility of the working hours, with the schedule and the number of overtime.

One-fourth of them are dissatisfied with the opportunities for further development, higher training and career advancement. With the elasticity of the working hours, the arrangement, the number of the overtimes 40.7 % was unsatisfied, 40.7 % suited but for good one only 25.9 % found it. The average value of a scale the 2.84. this result indicates that it is a lot in a case tend themselves are felt for overburdened one, for exhausted one. With the developmental opportunities, professional development, career 25.9 are dissatisfied with advance %, satisfied 5.3 % was. Scale average value 2.4. To the question whether they have thought to give up the career as a nurse in the past 6 months and find a job in another field of the health care: forty-one percent have not thought of it at all, the others rarely, or occasionally, frequently or constantly have thought of it. Scale average value 2.2. To the question whether they would start a career beyond the health care one-third of the respondents said that they have thought of it occasionally, and one-fifth of them frequently or constantly. Scale average value 1.92. Almost half of the sample wants to continue working as a nurse in the next one year for sure. Scale average value 3.99. The same rate of the respondents would or would not choose the career as a nurse, but less would recommend this career to others for sure than the number of persons who would not recommend it at all. The majority was not encouraged to give up their career. Two third of the sample had no colleague who was not a citizen of Hungary; the rest of them had one to six colleagues without Hungarian citizenship. From among the questions referring to the intent of the nurses and nurse students to work abroad the first question inquired about the knowledge of European foreign languages and the answers given to these questions showed that sixty three percent speak no foreign languages at all, one-third of them speak a foreign language at elementary level, and only a minimum proportion speaks a foreign language at intermediate or advanced levels. More than one-fourth of them have already thought to work abroad. Thirteen percent has already contacted a job agency offering jobs abroad. The basis of the motivation to work abroad is the location, but other important reasons are the better work conditions, and the better developmental (career) opportunities. Eighty percent of the respondents think that an employment abroad would be the chance to emerge from the present bad situation which shows that they find no positive future prospects in this profession in Hungary. The majority would prefer working in Germany/ Austria or in Great Britain. Within the linear regression model the foreign language skills and the number of shifts influence the commitment to the career negatively, while the flexible working hour management, the help of the colleagues, the opportunities for higher training and the age influence the commitment to the career slightly positively.

The loglinear analysis has shown that sixty six percent of the nurses with elementary foreign language skills would work abroad. More than half of the nurses in colleague education, and half of the persons in basic education, 39 percent of the respondents living in a relationship, and 61 percent of the singles would work abroad.

### **The third stage of the first phase**

In step three of phase one we have narrowed the results of the first two steps down to the students, moreover, we made people complete new questionnaires at the places of the previous studies. Our objective was to examine the conditions/circumstances of the education in details. We have analysed 381 completed questionnaires. As for the indices of satisfaction the students were clearly not satisfied with their career opportunities. The satisfaction with the education and the support received from the schools were high on the list.

### **The second phase**

*In phase two* the data of 128 Czech nurses were compared to the data of 303 Hungarian nurses. In the Czech sample there were more graduated nurses while in the Hungarian one there were more OKJ (National Educational Register) nurses. The proportion of the students that only learn was greater in the Hungarian sample and the proportion of those learning and working at the same time was greater in the Czech sample. The training's standard was significantly higher in the Czech sample at the collegial and university level than in the Hungarian one. The language skills were higher in the Czech sample at every grade than in the Hungarian one. In the Czech sample there were more students being satisfied with the education than in the Hungarian sample. The greater proportion of the Hungarian students considers not finishing their studies than their Czech associates. The standard of education is much higher in the academic institutions (colleges, universities) in the Czech sample than in the Hungarian one. The foreign language skills are higher in the Czech sample at every level than in the Hungarian one. Our aim was to extend the results of our researches. The main advantage of the model formed from the comparison is that the future Hungarian conditions can be forecast. The demand of career exit and migration was present in our sample in a different way but unequivocally. More characteristic was the desire to enter another field of health care or another profession. In case of the students in the training we forecasted 10% sure drop-out. The arguments for working abroad were the language skills and the higher qualification. The most important motivating factors of staying in the profession were the flexible working time and the possibilities of improvement and career.

## Conclusions

### **The first stage of the first phase**

The want of abandoning the career and migrating was clearly present in both samples but differently. Typical was the want of switching to another health profession or to another profession. In the case of the students we have predicted that the certain attrition rate will be ten percent. The arguments in favour of the employment abroad are the foreign language skills and the academic qualification. The best motivating factors of continuing the career were the flexible working hours and the developmental and career opportunities. In this sample the want of abandoning the career and migrating abroad were demonstrably present. In order to avoid that a higher percentage abandons this career and migrates it seems important to reorganize the work schedule and to create a career structure.

The results of the first stage are similar to the results of the second stage. The differences can be unequivocally explained with the sample part that was involved later. The topic of migration and career abandonment is judged similarly in both stages. The regression models involve almost the same changes in the analysis.

### **The second stage of the first phase**

Our objective was to assess the nurses' intent to abandon their career and/ or to work abroad, moreover, to estimate the number of the nurse students who want to work after finishing the school and the likelihood that the active nurses will work as nurses in the next year. Most often we have examined the „input” (training) side of the nursing.

In accordance with our results a relatively small number of the students in nursing plans to leave school and not to finish his/her studies. Those that have already made efforts in order to acquire their diploma, half-way do not risk losing their investments. We experienced similar reactions in case of changing from studies in nursing to another branch as well. On the basis of all these issues we stated that two-third of the students feel motivation to complete their studies and to stay in the nurse training. Less than one percent feel that they have made a wrong decision when they have chosen the nurse training. This picture has changed when we have asked the students about the graduation. The total percentage of the students who were unsure about the completion of their studies and of the ones who definitely did not want to complete their studies was around sixteen percent. We called this proportion a drop-out proportion in this sample.

This data is disturbed by the fact that our sample includes both students of full-time courses and correspondence course as well as students working at the same time. First we thought that the proportion of the students that do not want to graduate will be much lower in the subgroup of the full-time students. Contrary to this, when we separated the groups, the situation did not change. Our first assumption concerned the question how many students will finally finish their studies; theoretically we deemed dropped out 61 students from 384. But we must not think that this will mean immediately the lack of 61 nurses in the future. Some correspondence students of our sample acquire their university diploma either working at the same time or not. Despite of this there are 78 full-time students that are really committed to nursing but probably will not acquire their diploma. Counting with 16% attrition rate we can tell about at least 12 students that they will actually abandon their studies. This is much less than the earlier estimation. Further 18% reported that after graduating they will not take a job in nursing. This number summarizes 2 important things. First: this 18% shows the dropped out nursing students (that will never work in health care) and the students that will the most probably change their nursing profession as soon as they acquire their university diploma.

To support the assumption we have chosen the correspondence course students who are absolutely sure that they will not work as a nurse after graduation / finishing the school and we have examined their answers given in the topics “working beyond health care”. We were not surprised to find cross-sectional accordance. Therefore, based on our second conclusion some students obtain degree in the health care to find “breakout points” from the nursing later. After revising the previously estimated rate of attrition we can state that another forty five nurses disappear from nursing after graduation. The average was 2.76 ( $\pm 1.177$ ) in case of the education and 2.76 ( $\pm 1.169$ ) in case of practice that is the standard of the education and the practices can be said average according to the respondents. The low level of satisfaction of the nursing students and the nurses working in practice in connection with their profession also was proved. The average of 1.58 ( $\pm 0.916$ ) shows that the students are unsatisfied with the expected financial and moral recognition of nursing. Our next assumption was that the intention of the nursing students and the nurses working in practice to stay in the profession is influenced by the salary, the working conditions and the possibilities of progress. This also was confirmed. Our next assumption was that the intent of the nurse students and active nurses to continue their career is affected by the salary, the working conditions and the opportunities for further development. This fact has also been proved. According to the students’ intent to stick to this career most of them plan to complete their studies. The average of taking a job as a nurse in the next one year was 3.84 ( $\pm 1.243$ ).

In case of the workers the intention to continue working as a nurse was 3.99 ( $\pm 1.184$ ) on the average. So there is no significant difference between the two groups as concerns the ideas for the future. The satisfaction with the working conditions was 2.17 ( $\pm 1.205$ ) in case of the workers. The workers were satisfied with the development possibilities according to the value of 2.4 ( $\pm 1.203$ ) on the average. As the possible cause of the profession abandonment in the next one year the workers indicated choosing another workplace within health care and further education as the most important arguments.

Our hypothesis that the intent of the nurse students and active nurses to abandon their career is affected by the foreign language skills has also been proved.

Based on the results of our linear regression model the foreign language skills adversely affect the commitment to the career while the flexible working hours, the number of overtime, the opportunities for higher training and the age affect the commitment to the career slightly positively. Also, it has been proved that there is correlation between the higher school degree and the career's abandoning among the students and active nurses. Fifty eight percent of the graduate nurses would work abroad. Only 48 of their percentages would work on foreign countries if they came in for a beginner's training.

Our assumption that there is correlation between the foreign language skills and the employment abroad of the students and the active nurses has been statistically proved. If they have at least elementary language skills 66 percent would work abroad. However, if they do not even have elementary language skills thirty five percent would work abroad. Also, we have found correlation between the marital status and the employment abroad of the students and the active nurses. Our last hypothesis that there is correlation between the students and the active nurses' age and their intent to abandon the career has not been supported. We found a context between the nurse listeners' and the nurses' working in the practice marital status and a foreigner's employment. 38 of their percentages would work on foreign countries if the respondents have a relationship. On the other hand only 62 of their percentages would work on foreign countries if the respondents live alone. Our last hypothesis concerning the section, according to which it is nurse listeners and the age of the nurses working in the practice, and there is a context between his career change intention we did not find this out certainty. It is interesting that in the second stage in a part of the questions the population divided into two parts. We did not examine this research course in detail but in our opinion considering the practice of nursing and the time spent in work as parameters the working burning out is also present in these results. This will be the subject of a later planned examination.

### **Compare of the first stage of the first phase with the Next-study results**

We have compared the results of step two of phase one with the results of the NEXT test. We have examined the nurses' intent to change their jobs if they stayed within the health care. Based on our results Hungary's situation does not differ from the situation of the other NEXT countries. The rate of the nurses who want to change career but stay within the health care is only higher in Germany. Both in Hungary and in the European countries where the migration of the nurses within the health care was examined this rate was eighteen percent regardless of the country and the size of the sample. Our next assumption was that eighteen percent of the nurses in Europe would be ready to change jobs within the health care. More tests would be required to find out the reasons, whether it is boredom, lack of interest or other reasons. When we compared the Hungarian results with the average results of the NEXT we found that Hungary is in a little better position as regards the intention of career abandonment. Except for Belgium and the Netherlands the rate of the persons wanting the exit from nursing is relatively low in Hungary. This statement is supported by the fact that Hungary's situation regarding the nursing labour force is not unique; the nurses have to face the same problems throughout Europe. It is unfortunate in connection with the Hungarian data that hundred nurse may exit from nursing out of the six hundred and fifty respondents based on their answers.

Another frequent phenomenon is that nurses abandon their career in our samples. Sixteen percent of our sample thinks of a work abroad quite often; this result is somewhere halfway between the Slovakian data (eleven percent) and the Polish data (twenty one percent) measured during the NEXT survey. The most popular target countries are Germany and Austria presumably due to their geographical proximity and the volunteers' foreign language skills. This situation will change soon. The next generation of the Hungarian nurses will have to pass an intermediate-level English language examination to receive their degrees. For the new generation of the Hungarian nurses it is obligatory to pass a language examination in English at intermediate level in order to acquire their diploma. The regulation that has been valid since 1993 also takes part in the promotion of the employment of the Hungarian nurses abroad. Unfortunately, we do not have comparable data from the period before 1993 in connection with the employment of the nurses abroad. In the NEXT survey the researchers examined a rather frequent phenomenon as well in Slovakia and Poland taking the migration into account. A great part of the migrating Slovak and Polish nurses was young, they had few family ties, they were less educated, less committed to their profession and mainly to their institution and they had less recognition at the workplace. In our survey it also turned out that the intention to work abroad decreased with 50% if the individual had a stable relationship.

Therewith we experienced the opposite of this when examining the training's standard and the professional experiences. The loglinear analysis has revealed that the likelihood that graduated nurses who speak no foreign languages would work abroad is one and a half times higher than the likelihood that nurses with basic qualification who speak a foreign language would work in a foreign country.

This is alarming for Hungary because of at least 3 causes:

1. the economic loss is much greater concerning those with university diploma, partially because the training/financial investment is also greater.
2. the economic loss is greater in case of a person with university diploma also because the productivity level of such a nurse is higher than of a nurse that has not acquire a diploma yet.
3. nurses with diploma function as teachers as well thus their migration puts the future of the whole Hungarian nursing training system in a risk.

The most important argument for working abroad is the language. Those speaking at least one European language would work abroad with 2.9 greater probability compared to those that speak only Hungarian.

We also asked the respondents to list the reasons why they would work abroad. This was not the part of our original analysis but it can be fitted here well. There was at the top of the list the "higher salary, the improvement of the financial situation", this was followed by the "improvement of the working conditions" and the "better career possibilities and self-realization". The list confirms the NEXT examinations, according to which the less recognized nurses (both from financial and from career aspect) have a leaning towards such systems where these conditions can be met. Finally we examined two regression models which analysed the employment of the nurses after graduation (students' model) and functioning as a nurse in the next year as well (model of those working in practice). Both models mediated an important message. Examining the students, the satisfaction with the training and the positive learning experiences influenced the employment after graduation to a great extent. We also experienced that after graduation the nurses participating in higher education more probably return and continue their work as nurses. It is interesting that a spouse or family member working in health care affects the students' intention to work in this profession negatively. We expected the opposite of this. We could only speculate about that the family member with more experiences, being more unsatisfied and standing at higher level of burning out would not like his/her child or spouse to make the same "mistake". This assumption requires more research because no data were collected in this survey to prove this statement.

In the course of the NEXT-survey health and personal factors (burning out, general state of health), family circumstances (workplace – home conflict, financial situation, time spent with the partner), social working environment (nature of the management, relationship with the matron, relationship with the doctors), satisfaction with the job (quantitative requirements, exposure to aggressive patients, exposure to diseases, suffering, noise, climate) and organization of work (development possibilities, effects of the workplace, performing tasks that are not related to nursing, contradictory order, effects when organizing the schedule, pressure of time) played the role of the most important forecasting factors in the examination of the intention to abandon the profession. Our group working in practice included many of the above factors as the important forecasting factors of staying in the profession (the intention to abandon the profession decreased). The working conditions and the organization of the work (flexible schedules, number of shifts and development possibilities) and the social working environment (support from the management and colleagues) were frequent forecasting factors in both surveys. The personal state of health, however, did not occur in our survey as a significant factor. This may be due to the differences measured in the state of health or to the fact that in the Hungarian society this is not a determining factor of the employment. Therewith the language skills are significant forecasting factors in our survey (in the course of the European survey the language skills were not included among the analysed fields). The language skills decreased the probability of working in nursing. This means that not only the outside but the inside labour market recognizes the nurse applicants that have better language skills. It is more and more frequent among the nurses that many of them search and find jobs outside health care, for example at multinational companies, because of their communication skills. Also related to the language skills, nurses often occur in commerce, in marketing positions. The biggest difference between our survey and the NEXT model was in the determination of the role of stimuli forecasting staying in the profession. The European model emphasized the appropriate salary and the development possibilities, which have important role in deciding to stay in the profession. The Hungarian model did not examine the role of salary in case of staying in the profession. This is a contradiction to our data. When we involved the salary among the independent variables in our regression model, the results did not differ significantly. When, however, we asked the subjects to range the most important reasons for working abroad, the better salary and the financial safety were at the top of the list. The difference between the European and Hungarian results can be explained with the used indices. We did not really collect any information about how the nurses are paid currently.

Instead of this we used the expression “satisfaction with salary” for measuring the financial recognition. If we had used factual data to examine the nurses’ income, we could have intended another role for the salary as well in the prediction of staying in the profession.

Finally we examined carefully the assumption made by Aiken and his associates about the differences in the age as regards the intention to abandon the profession. The Aiken group (2001) found that the nurses below 30 would exit nursing with greater probability than their older colleagues. To some extent we also found evidence for this in our model: the age has determining relationship with continuing nursing. But when we separated the results of the nurses below 30 from the others, we did not find evidence of the fact that the intention of those below 30 to abandon the profession would differ from the other members of the nursing society. One of the possible reasons why our survey could not measure this factor appropriately could be that the Aiken group worked with much greater sample. (43.000)

### **The third stage of the first phase**

The primary aim of this paper was to establish the rate of attrition in a Hungarian sample of nursing students. Authors observed that attrition was prevalent in the sample investigated, although its level has varied according to the question studied. Roughly 7-8% of students reported their intent not to complete their nursing studies or changing to another field of interest (medicine or outside health).

This figure, compared to international data, is in line with the attrition rates from US anesthesia programs but is significantly less than reports by other sources. This difference may well be due to the student cohorts compared; this paper sampled final year students while other papers reported outcomes of first year students.

We assume that the rate of attrition in final years must be much lower, considering the personal investment nursing students have made throughout the program, as opposed to first year students, who have less to lose when they decide to exit shortly after they began their studies. When we used combined measures of attrition, numbers greatly increased. These figures of 20 to 25% attrition in this paper conformed to rates of 19 to 27% cited by earlier studies. Differences in attrition rates between our research and other studies highlighted the problem of no unified measurement and definition of attrition. Strictly speaking, one should only accept clear negative statements as evidence for attrition when asking about the intent to graduate from a nursing program (How certain are you that you will graduate? = ‘very uncertain’).

When we include students whose answers are ‘maybe’ or ‘can’t decide’, we open the field for speculation about future behaviors we can’t verify.

Therefore, to be able to compare real figures researchers must agree on what responses should be counted for as ‘attrition’ and what responses should not be included for further analysis. That is, it is time that a unified instrument to measure nurse attrition in education be developed for international research purposes. We also observed that a smaller proportion (7.2%) of nursing students who reported no intent to work beyond graduation. This figure is way below that of Lai and associates’ (2006) who reported the same intent to be of 65% in the Taiwanese sample. Our sample stayed far behind even when we included additional response categories, thus increasing work related attrition to 25%. This huge difference may be a characteristic of the Taiwanese sample or was due to the differences in measurements used by the two teams. We managed to confirm the claim by Palese and colleagues (2009) who argued that leadership qualities of medical directors and charge nurses were not a primary concern for new graduates to decide on a nursing career. We also included an item concerning satisfaction with leadership qualities of future managers for this study which did not reach significance as a predictor of intent to work after graduation.

However, we could not confirm the gender specific claim by Pryjmachuk and colleagues (2009) and Stott (2007). These authors argued that due to isolation and social exclusion attrition favors male nursing students more than female counterparts.

We included a demographic survey item to identify respondents’ gender; nevertheless, using gender driven analysis showed no significant differences between the two sexes when graduation or work intent was considered. Why we failed to detect gender outcomes may have been due to the large disparity of genders in the current sample (6% vs. 94%).

Finally, our study provided additional evidence for the critical role of faculty support in keeping prospective graduates on the nursing track.

Sadly, we also observed a growing influence of family and peers trying to derail students from graduating and choosing a nursing career. Especially, having a family member who worked in healthcare, as opposed to no such next of kin, was clearly a dragging force for students. The more students had been pressured by family and peers to leave nursing during the last 6 months prior to our study, the less likely they seemed to finish their studies at all. The good news is however that faculty support outweighed the negative influence of family and peers in our regression model. Students were more likely to graduate and begin working as a nurse when they perceived faculty support, clinical experiences and support from clinical staff focused on their individual needs. The take home message is as clear as it has been reported by investigators earlier: while students may be influenced by several impulses to rethink their career in nursing, there is no influence stronger than the faculty's own example giving students support, direction, values and morale, the very things that make a nurse a good nurse. On the other hand, we must not overlook the alarming fact that prior working experience in nursing made students less likely to choose a nursing career after graduation.

Whether this is because their socialization into nursing and on the job training programs miss the proper elements of professional nurse education or because they have to face often strenuous working conditions too early on we couldnot tell from this research.

Our findings only highlight the need to carefully revisit factors that are believed to be key in student retention, and expand our thinking beyond influences throughout the schooling years. We often take for granted that prior experiences in healthcare are to catapult students towards a professional career in nursing, but as was the case in our study, these experiences may equally pull them back in the last moment from taking this choice.

We believe that future research should address in more detail how earlier imprinting in nursing may lead to experiences that later become a barrier to graduation and work.

As for the predictive accuracy of our regression models, authors acknowledge that this set of independent variables explained only part of the variance in the dependent variables (23% and 34%). This also means that 77% of the variance was left unexplained by the current set of independent variables in why students decided to graduate, and 66% of the variance was also unexplained in why students decided to work after graduation.

There may be several additional variables that can explain student decisions we did not measure with our instrument. This is not to say that the instrument used in this research was not valid, rather it is a call for the refinement of our instrument to make it better fit for future research.

Last but not least, the pulling force of international migration was also visible in our sample. Students were more likely to choose work after graduation if this opportunity included working abroad. We cited Lai and colleagues (2008) who reported that nursing was not the primary choice for 19% of their Taiwanese student sample. From another point of view, those who had been ‘often’ and ‘always’ thinking about working abroad made up 19.4% of our sample. In the study of Lai and colleagues, it may be that this 19% represented a pool of students who would be lost before graduation, in other words, their attrition rate was at least 19% from the beginning. Our attrition rate however was equally 19% should we consider migrating new graduates a loss to the profession and society in general, hence attrition to Hungary at least. Our latent attrition was also an inherent trait of the student pool, which manifested at the end of their studies. This is also to acknowledge that sampling strategies that exclusively target first or final year students may be biased to the extent that early or latent motivations will not be observed. However, to capture the full range of behaviors that may lead to student attrition, more student groups should be involved in future research.

This discussion established that attrition was prevalent in the sample under study. We confirmed that the role and support of academic faculty has the greatest weight for students to decide positively about choosing a nursing career. We also observed a significant negative influence of family and peers on students’ intent to graduate and work beyond graduation. This is a finding that was not reported before and deserves more scrutiny in future research. From the methodological point of view, we agree with Gaynor and colleagues (2006) who called for more unified methods to quantify international attrition rates in nursing education.

While we know that our instrument developed for the assessment of factors that contribute to student attrition is incomplete and experimental in nature, we hope that other investigators will refine our approach and complete our initial indicators with additional assessment that will better predict why students decide to stay with nursing or leave the profession. We conclude that attrition is a serious problem of nursing education that has to be tackled from multiple angles.

Provision of strong, continuous support to faculty members by the school administration seems the best, but not the only counter attack against student attrition.

Limitations of this study included the use of a self-developed instrument for which only content validity was established. Non-stratified and geographically less inclusive sampling was another limitation which may have returned a non-representative sample of Hungarian nursing students.

Finally, authors acknowledge that intent to graduate and intent to work are only proxies for actual behaviors. In order to estimate the real proportion of nurses who indeed left nursing before graduation, or who graduated but not showed up in the workforce, a longitudinal research design with proper follow-up monitoring is the appropriate method for such inquiry.

### **The second phase**

The Hungarian and the Czech samples were compared and the found similarities show the similar behaviour of the nurses in both countries. From among the differences the standard of the qualification is rather remarkable which reflects the high standard of the Czech academic (college and university) education.

Taking the age and the related variables (number of children, etc.) into account as well such a model can be established according to which the Czech students either entered the education with nursing experiences or they entered a higher educational level after finishing the college level. After we had agreed the results with the foreign colleagues we have found that the Czech students have strong positive attitude towards the doctor's profession. Many students consider the nurse training and the professional experience as an intermediate step to achieve their objective.

Based on these facts we can expect that the changes in the foreign language skills in Hungary will affect the nurse training and the employment abroad. Among the secondary school students who apply for academic studies these tendencies can already been noticed in these days. The Czech results will tendentious in Hungary 3 years later.

## Suggestions

These facts may serve as a basis to make the following recommendations. It would be purposeful to increase the number of the students choosing the nurse career and of the students graduating as nurses. It would be necessary to restructure the system of the education and to make the intermediate-level education more attractive by reducing the time of the training and to include part of the learned curriculum into the future BSc education. It is necessary to achieve that the competences of the graduate nurses (nurses with BSc degree), the university graduate nurses (nurses with MSc degree), and of the special nurses graduating from higher advanced special trainings after their graduation as BSc/MSc nurses (such as emergency and triage special nurses, intensive special nurses, surgery special nurses, dialysing special nurses, acute nurses) would be determined by an order. The headcount, the minimum number of nurses should be determined in the light of the capacity. It would be important to try to achieve stability, calculability and safety. Moreover, the appreciation should be increased, the salaries should be normalized and a life career model should be elaborated and applied to increase the prestige of the nursing profession. It would be necessary to reduce the stress level, to elaborate helping services and to improve the working conditions. Within the Human Resources Strategy it is required to reduce the staff shortages and to meet the demographical challenges. It is crucial to achieve that more people choose this career and to reduce the number of those abandoning their nursing career. The above study shows that the system of the domestic conditions must be improved to discourage the nurses from working abroad.

## Acknowledgements

First of all I would like to thank everyone that started me in my career. *Margit Szicsek* academic docent who started the “first swallows” in Gyula at the College Faculty for Health of the University of Debrecen. *Dr. András Csontos* dean’s advisor, who has smoothed the way for me from the beginning in my career, helped me to start as a nursing teacher, introduced me into the science of nursing, called my attention to the possibilities which I would have never discovered without his professional wisdom and approach, mentioning here the steps of professional career, the possibilities to participate and learn at nursing conferences and the importance of persistence as well. Furthermore, I would like to thank *Dr. István Kalapos* dean who believed in me and supported me during my academic years and PhD studies and helped my way as my employer. I would like to express thank and gratitude to my doctoral director of studies *Dr. József Betlehem* who found me deserving to accept me as a doctorand and helps my career with undiminished energy. Besides, as the chairman of the Hungarian Nursing Association (MÁT), he supported me in getting into the MÁT, my membership in the management and who has hundreds of times given evidence of the development of nursing in Hungary as an excellent teacher, researcher and leader.

I would like to express thank and appreciation to *Dr. Miklós Zrínyi* who was a source of ideas in my migration research and who always believed in me and in the success of our work and to whom besides me the Hungarian nurses can owe very much both for his editorial work in the *Nővér* (Nurse) journal and for his constructive professional proposals and critiques. Furthermore, I would like to thank *Dr. Éva Becka* professional directress who invited me to the National Institution of Basic Attendance, supported and acknowledged my work and with whom we have made common efforts for years to work out the nursing competences and to have them acknowledged. In addition to this I would like to express thank to my colleagues, the students that helped my work during the research and the completion of the questionnaires. I would like to thank my *parents* that always encouraged and supported me in my studies, making great sacrifices for my professional improvement and that bore the sufferings of the examination periods many times. Of course, last but not least, I would like to thank my *husband* for his persistent patient, support, his more intensive work in the family life during my work and *my child Diána* for her love and tolerance with which she understood and accepted at four years old the importance of her mother’s work to make her dissertation.

## Publications

### List of own, original publications related to the topic of the dissertation (19 pieces) (Impact factor: 2,096)

1. Adrienn Siket, Zsolt Szombati: **After graduation...**: Nővér 1997; 10 (6): 39.
2. Adrienn Siket: **Research of education and training**: Nővér 2000; 13. (4): 15 -23.
3. Adrienn Siket: **The place and role of graduate nurses in the health care system, in the basic attendance**: Medicus Universalis 2000; 33. (6): 395 – 401.
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5. Adrienn Siket, András Csontos: **Examination of the effectiveness of training graduate nurses and of the satisfaction and competence of the graduated nurses**: Nővér Praxis, 2002; 5 (5): 12-16.
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10. Adrienn Ujváriné Siket, Éva Becka: **The current tasks of the nurses and their future possibilities in the small regional attendance**: Medicus Universalis 2007; 40. (4): 143-147.
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16. Adrienn Ujváriné Siket: **Connection between the situation of human resources with the career abandonment in health care:** College of Nyíregyháza, Szent Atanáz Catholic Theological College, University of Debrecen Faculty of Health: Volume of studies of the II. Doctorand Conference
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## **II. List of own editorial letters, short comments related to the topic of the dissertation (2 pieces) (Impact factor: 1,664)**

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1. Adrienn Siket: **Remembrance**: Jubilee Almanac 2003; Imiprint Press. 79-83.
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5. Adrienn Ujváriné Siket, Éva Becka, Ildikó Tóth, Dr. Miklós Zrínyi: **Examination of the need for nursing and of the social means based on the state of health:** Medicus Universalis XLII. vol. 1. Issue, p. 13.
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Aggregate Impact Factor:

- |      |        |
|------|--------|
| I.   | 2,078  |
| II.  | 1,664  |
| III. | 12,676 |

Total: 16,418

**Lecture and poster abstracts: (71 pieces)**

1. Attila Bánkúti, Adrienn Siket

**Is there any hope...? The place of graduate nurses in the current Hungarian health care**

Pándy Kálmán County Hospital Scientific Conference of Ancillary Workers

Gyula, 9<sup>th</sup> July, 1996.

Lecture – MÁE special prize

2. Adrienn Siket

**Healing love**

Pándy Kálmán County Hospital Scientific Conference of Ancillary Workers

Gyula, 10<sup>th</sup> July, 1996.

Lecture – MÁE special prize

3. Attila Bánkúti, Adrienn Siket

**Is there any hope...? The place of graduate nurses in the current Hungarian health care**

IX. National Conference of Ancillary Workers

Gyula, 22-23-24 August, 1996.

Lecture – Congress prize

4. Adrienn Siket

**Healing love**

IX. National Conference of Ancillary Workers

Gyula, 22-23-24 August, 1996.

Lecture

5. Adrienn Siket

**Innovation possibilities in the nursing practice**

IX. National Conference of Ancillary Workers

Békéscsaba, 6-8 August, 1998.

Lecture

6. Adrienn Siket

**Development of higher education in Hungary; presentation of the College Faculty of Health of the DOTE**

Scientific Conference in teaching nursing, researching nursing

Sopron, 27-28 October, 1998.

Lecture

7. Adrienn Siket

**Place and role of graduate nurses in the active medical attendance**

Oncological Days Gyula

Nyíregyháza, 3<sup>rd</sup> September, 1999.

Lecture

8. Adrienn Siket

**Issues of higher education. Reasons for the existence of the medical colleges. Dynamism of training graduate nurses**

XII. National Conference of Ancillary Workers

Budapest, 29<sup>th</sup> September – 2<sup>nd</sup> October, 1999.

**Poster**

9. Adrienn Siket

**Research of education and training**

XII. National Conference of Ancillary Workers

Budapest, 29<sup>th</sup> September – 2<sup>nd</sup> October, 1999.

Poster

10. Adrienn Siket

**Place and role of graduate nurses in the active medical attendance**

II. National Meeting of Graduate Nurses

Nyíregyháza, 15<sup>th</sup> October, 1999.

Lecture

11. Adrienn Siket

**Place and role of graduate nurses in the active medical attendance**

Scientific Conference on Research of Practice of Nursing

Sopron, 23-24 May, 2000.

Lecture

12. Adrienn Siket

**Place and role of graduate nurses in the patients' rehabilitation**

Provision of Therapeutical Apparatus – Medical Attendance Rehabilitation II National Congress Bükfürdő, 22-24 March, 2001.

Lecture

13. Adrienn Siket

**Possibilities of the graduate nurses to specialize in rehabilitation**

III. National Meeting of Graduate Nurses,

Nyíregyháza, 20-21 April, 2001.

Lecture

14. Adrienn Siket, Dr. András Csontos

**Examination of the effectiveness of training graduate nurses and of the satisfaction and competence of graduate nurses**

XXXII. Congress of Ancillary Workers,

Győr, 15-17 August, 2001.

Lecture, Nívó – prize

15. Adrienn Siket, Dr. András Csontos

**Examination of the effectiveness of training graduate nurses and of the satisfaction and competence of graduate nurses**

Day of Hungarian Science

DE-EFK, 29<sup>th</sup> October, 2001.

Lecture

16. Adrienn Siket

**Possibilities of the credit system in training of graduate nurses, specialization in rehabilitation**

Provision of Therapeutical Apparatus – Medical Attendance Rehabilitation III National Congress Bükfürdő, 14-16 March, 2002.

Lecture

17. Adrienn Siket

**Role of teaching nursing research in the intensification of problem-solving way of thinking**

IV. National meeting of Graduate Nurses  
Gyula, 25-26 April, 2002.  
Plenary lecture

18. Adrienn Siket

**Role of the graduate nurse in the prevention of the cardiovascular diseases**

XXXIII. Congress of Ancillary Workers,  
Szombathely, 21-24 August, 2002.  
Lecture, Special prize

19. Adrienn Siket, Katalin Papp

**New trends in the competence of ancillary workers, Client-teaching health development professional training**

XXXIII. Congress of Ancillary Workers  
Szombathely, 21-24 August, 2002.

20. Adrienn Siket

**Possibilities of the credit system in training of graduate nurses, specialization in rehabilitation**

XXI. Travelling Meeting of the Hungarian Association of Medical Rehabilitation and Physical Medicine  
Szentgotthárd, 19-21 September, 2002.  
Lecture

21. Adrienn Siket

**Role of the prevention nurses in the basic attendance**

Congress of National Basic Attendance  
Budapest, 3-5 October, 2002.  
Lecture

22. Adrienn Siket

**Training of graduate nurses at our college**

National characteristics and European challenges in the training of nurses  
Hungarian – Romanian Border Conference  
Nagyvárad- Nyíregyháza, 10<sup>th</sup> November, 2002.  
Lecture

23. Adrienn Siket

**Training of nurses in Hungary**

Workshop, organized as the continuance of the Border Conference  
Nyíregyháza, 19<sup>th</sup> May, 2003.  
Lecture

24. Adrienn Siket

**Role of the graduate nurse as human resource in the basic attendance**

V. National Meeting of Graduate Nurses  
Budapest, 22-24 May, 2003.

Lecture

25. Adrienn Siket, Katalin Papp

**New trends in the competence of ancillary workers, Client-teaching health development professional training**

"From the training into the world of work..." PHARE Conference

Szolnok, 19-20 June, 2003.

Lecture

26. Adrienn Siket

**Role of the graduate nurses in the prevention of the cardiovascular diseases**

XXXIV. Congress of Ancillary Workers

Balatonaliga, 22-23 August, 2003.

Lecture, special prize

27. Adrienn Siket

**The structure of nursing education in Hungary. Research in training and education**

2<sup>nd</sup> South Bohemian Nursing Days

Ceske Budejoviče, 25<sup>th</sup> -26<sup>th</sup> September 2003.

Lecture in English language

28. Adrienn Siket

**Role of the graduate nurses in the prevention of the cardiovascular diseases**

Congress of National Basic attendance

Budapest, 3-5 October, 2003.

Lecture

29. Adrienn Siket

**Competence of nurses in the medical adviser's praxis**

XVI. National Conference of the Inspectors of Medical Adviser's Medicine

Siófok, 27-28 March, 2004.

Lecture

30. Adrienn Siket

**The national and European situation of the training of nurses. Presentation of the Graduate Nurse Branch of the College Faculty of Health of the University of Debrecen**

Days of Internal Medicine in Debrecen

Debrecen, 19-24 April, 2004.

Lecture

31. Adrienn Siket

**Community-oriented nurse training within the framework of the PHARE project**

VI. National Meeting of Graduate Nurses

Szeged, 28-29 May, 2004.

Lecture

32. Adrienn Siket

**How can we have the therapy accepted by the patient, how can we achieve its maintenance and the observance of our regulations? How can the assistant increase the patient's compliance?**

Conference on Medical Adviser's Practices  
Budapest, 13<sup>th</sup> November, 2004.  
Lecture

33. Adrienn Siket

**Structural and content changes of higher education. Teaching patient moving and rehabilitation**

Provision of Therapeutical Apparatus – Medical Rehabilitation V. National Congress  
Bükkfürdő, 18<sup>th</sup> March, 2005.

Lecture

34. Rózsa Bodóné Erős, Dr. Adrienn Fábry, Adrienn Siket

**Prevention possibilities of child-care depression**

XIV. Congress of the Public Health Scientific Association (NETT)

Szeged, 20-22 April, 2005.

Poster

35. Adrienn Siket

**Preventive tasks of the nurse in order to increase the standard of attendance**

V. Health Quality Days in Debrecen Together for the improvement of the quality of health care

Debrecen, 19-20 May, 2005.

Lecture

36. Adrienn Siket

**Role of the graduate nurse in the prevention of the cardiovascular diseases**

International Conference of the Hungarian Health Association, the American Hungarian Medical Association, the Association of the Sub-Carpathian Hungarian Ancillary Workers and of the Semmelweis Association - Germany

Keszthely, 22-27 May, 2005.

Lecture

37. Adrienn Siket

**Theory, research and education in nursing**

Univerzita Komenského v Bratislave Jesseniova lekárska Fakulta v Martine Ústav ošetrovatel'stva

Martin, 25-26. May, 2005. (Slovakia)

Lecture in English language

38. Adrienn Siket

**Living and working conditions of district nurses, their state of health**

XXXVI. National Congress of Ancillary Workers

Nyíregyháza, 18-19 August, 2005.

Lecture, section prize

39. Adrienn Siket

**Training of health workers**

Hungarian Association of Family and Women Protection

Budapest, 29-30 August, 2005.

Lecture

40. Adrienn Siket, Dr. Éva Becka

**Living and working conditions of district nurses, their state of health**

National Congress of Basic Attendance

Budapest, 7-8 October, 2005.

Lecture

41. Adrienn Siket

**The topic of the competence of district nurses**

National Congress of Basic Attendance

Budapest, 7-8 October, 2005.

Lecture

42. Adrienn, Siket Dr. Éva Becka, Dr. Klára Dotterweichné Józán

**The topic of the competence of district nurses**

Conference of the Hungarian Nursing Association

Pécs, 15<sup>th</sup> October, 2005.

Lecture, chairwoman of the meeting in English language

43. Adrienn Siket

**Living and working conditions of district nurses, their state of health**

Day of the Hungarian Science

Nyíregyháza DE-EFK

22<sup>nd</sup> November 2005

Lecture

44. Adrienn Siket

**The topic of the competence of district nurses**

First County Conference of the Hungarian Chamber of Ancillary Workers

Nyíregyháza, 25<sup>th</sup> November, 2005.

Lecture

45. Adrienn Siket

**The topic of the competence of district nurses**

XI. Days of Medical Advisers in the Mátra

Mátrafüred, 10-12 February, 2006.

Lecture

46. Adrienn U. Siket, Valéria B. Kiss, Gabriella G. Maráczsi

**The educational and training situation of The Gypsies in Hungary**

7<sup>th</sup> IUHPE European Conference on Health Promotion and Health Education, Globalization and Equity: Consequences for Health Promotion Policies and Practices,

18-21 October 2006 Budapest, Hungary

Poster

47. Adrienn Ujváriné Siket

**The current tasks of the nurses and their future possibilities in the small regional attendance**

VI. Days of Medical Advisers

Balatonfüred, 18-20 May, 2007.

Lecture

48. Adrienn Ujváriné Siket, Dr. József Betlehem, Dr. Miklós Zrínyi, Dr. Ilona Zékányné  
Rimár, Helga Tóth

**The students of medical college in higher education and on the labour market**

Scientific Conference of the Szabolcs-Szatmár-Bereg County Scientific Board of the  
Hungarian Academy of Sciences connected with the XVI. annual General Meeting  
5-6 October, 2007, Nyíregyháza

Lecture

49. Adrienn U. Siket, Gábor Lőw

**State of health and circumstances of life of nurses**

International conference Health and Social Questions of Childhood in European Context II on  
Prevention of health and social pathology  
10 – 11 October 2007, Nyíregyháza, Hungary

Lecture

50. Adrienn U. Siket, Valéria B. Kiss, Gabriella G. Marácz

**The educational and social situation of The Gipsy children in Hungary**

International conference Health and Social Questions of Childhood in European Context II on  
Prevention of health and social pathology  
10 – 11 October 2007, Nyíregyháza, Hungary

Lecture

51. Adrienn Ujváriné Siket

**The activities of the community nurses in the basic attendance**

National Congress of Basic Attendance  
Budapest, 26-27 October, 2007.

Lecture, Round-table moderator

52. Adrienn Ujváriné Siket

**The activities of the community nurses in the basic attendance**

Presentation of informative brochure upon the request of the MESZK  
Northern-Hungarian Regional Conference on Basic Attendance  
Miskolc, 16<sup>th</sup> November, 2007.

Lecture

53. Adrienn Ujváriné Siket, Gábor Lőw

**Phenomenon of profession abandonment, its reasons in health care**

Doctorand Conference in Nyíregyháza

In the organization of the Szabolcs-Szatmár-Bereg County Scientific Board of the Hungarian  
Academy of Sciences

Nyíregyháza, 7<sup>th</sup> December, 2007.

Lecture

54. Katalin Papp, Adrienn Ujváriné Siket, Nóra Farkas, Viktória Törő

**Spheres of activity in medical attendance**

XXXIX. Congress of Ancillary Workers

Kaposvár, 3-5 July, 2008.

Lecture

55. Adrienn Ujváriné Siket

**The situation of human resources and its connection with the career abandonment in health care**

II. Doctorand Conference in Nyíregyháza

PhD/DLA conference organized by the College of Nyíregyháza, Faculty of Health of the University of Debrecen and the Szt. Athanáz Greek Catholic Theological College jointly  
COLLEGE OF NYÍREGYHÁZA, 21<sup>ST</sup> NOVEMBER, 2008.

Lecture

56. Adrienn Ujváriné Siket, Dr. Éva Becka, Ildikó Tóth, Dr. Miklós Zrínyi

**Examination of the need for nursing and the social means based on the state of health**

Social Gerontology in Hungary today

Nyíregyháza, 28-29 November, 2008.

Lecture

57. Adrienn Siket, Ujváriné, RN, MSN, Miklós, Zrínyi, RN, PhD, Helga, Tóth, RN, MSN, Ilona Rimár, Dr. Zékányné, RN, MSN, József, Betlehem, RN, PhD

**Voting with your feet: Is the real exodus of nurses to come?**

Univerzita Komenského v Bratislave Jesseniova lekárska fakulta v Martine, TEÓRIA, VÝSKUM A VZDELÁVANIE, V OŠETROVATELSTVE A V PÔRODNEJ ASISTENCII  
Martin, 21<sup>st</sup> May, 2009.

Lecture in English language

58. A.Siket Ujvariné, R. Papp, S. Balogh, E. Becka, J Betlehem

**The role of primary health care teams in prevention of cardiovascular diseases**

XVIII. European Stroke Conference, [www.eurostroke.eu](http://www.eurostroke.eu)

Stockholm, Sweden, 26-29 May 2009

International Congress

Poster

59. Adrienn Ujváriné Siket, Dr. Éva Becka, Ildikó Tóth, Dr. Miklós Zrínyi

**Survey of the need for nursing and the social means based on the state of health in the basic attendance**

XL. National Congress of Ancillary Workers

9-11 July, 2009. Veszprém

Lecture

60. Adrienn Ujváriné Siket, Dr. Miklós Zrínyi, Dr. Ilona Zékányné Rimár, Helga Tóth  
Dr. József Betlehem PhD,

**Choosing a career and career abandonment among the nurses**

XL. National Congress of Ancillary Workers

9-11 July, 2009. Veszprém

Lecture

61. Adrienn Siket Ujváriné, Éva Becka Dr., Viktória Törő, Nóra Farkas

**Outcomes of community nursing further education based on e-learning in basic health care in Hungary**

International Symposium, nursing of the 21st Century in the Process of Changes

10<sup>th</sup> – 11<sup>th</sup> September, 2009. Nitra, Slovak Republic

Lecture in English language

62. Adrienn Ujváriné Siket, Dr. Sándor Balogh, Dr. Éva Becka, Ildikó Tóth, Dr. Miklós Zrínyi

**Survey of the need for nursing and the social means based on the state of health in the basic attendance**

"Dementia; burden on society, evidence based treatment options, long term care European perspectives. A future time bomb?"

Mini conference of the Corvinus University and the Semmelweis University Neurological Clinic

Budapest, 12<sup>th</sup> November, 2009.

Lecture

63. Adrienn Ujváriné Siket, Dr. József Betlehem PhD, Dr. Miklós Zrínyi, Dr. Ilona Zékányné Rimár, Helga Tóth

**Choice of career and migration intentions of nursing students**

III. Doctorand Conference in Nyíregyháza

Szent Atanáz Greek Catholic Theological College

20<sup>th</sup> November, 2009

Lecture

64. Adrienn Ujváriné Siket

**Migration, career abandonment and decreasing training of professionals among nurses**

V. Scientific Day of the Ancillary Workers of Sz.-Sz.-B. County

DE-EK, 2-4 Sóstói Street, Nyíregyháza

27<sup>th</sup> November 2009

Lecture

65. Adrienn Ujváriné Siket, Dr. Sándor Balogh, Dr. Éva Becka

**The questions of tasks of basic attendance in the health care and social system**

GERONTOLOGY PANORAMA 2009, GERONTOLOGY DAYS IN NYÍREGYHÁZA II., UNIVERSITY OF DEBRECEN, FACULTY OF HEALTH, NYÍREGYHÁZA, PROGRAMME OF THE GERONTOLOGY SCIENTIFIC COORDINATION CENTRE, VII. CONGRESS OF THE PREVENTIVE GERONTOLOGY AND GERIATRICS ASSOCIATION

DE-EK, 2-4 Sóstói Street, Nyíregyháza

27-28 NOVEMBER, 2009.

Lecture

66. Szogedi Muller<sup>1</sup>, N. Alotti<sup>2</sup>, M. Zrinyi<sup>3</sup>, E Juhasz<sup>1</sup>, E. Papp<sup>2</sup>, A. Siket, J. Betlehem<sup>1</sup>  
**CONVENTIONAL VERSUS PROBLEM BASED LEARNING? EVIDENCE FOR CPR TRAINING**  
SCCM abstract decisions for the 39th Critical Care Congress-2010 MAIMI  
IF 2007: 6,28

67. Katalin Papp, Adrienn Ujváriné Siket

**Holistic Aspect in the Elderly Care**

XXIV. microCAD

International Scientific Conference

Section S: Health Science

Katalin Papp, Valéria Tothova, Adrienn Siket Újvári

18-20.March 2010

Lecture

68. Adrienn Ujváriné Siket, Dr. Miklós Zrínyi, Dr. József Betlehem, Dr. Ilona Zékányné  
Rimár, Helga Tóth, Péter Takács, Dr. Valéria Tothová

**Examination of choosing a career, studies in nursing, work of nurses, career abandonment and migration among the Hungarian and Czech nursing students:**

IX. National Congress of Graduate Nurses

Nyíregyháza, 29-30 April, 2010.

Collection of Abstracts, Editors: Dr. A. Oláh, A. Ujváriné Siket, Dr. J. Betlehem, PTE ETK

Lecture

69. Adrienn Ujváriné Siket, Dr. Sándor Balogh, Dr. Éva Becka, Ildikó Tóth

**List of activities of the members of the basic attendance team**

IX. National Congress of Graduate Nurses

Nyíregyháza, 29-30 April, 2010.

Lecture

70. Adrienn Ujváriné Siket, Dr. Sándor Balogh, Dr. Éva Becka, Ildikó Tóth

**Nursing competence and possibilities of development, licence decree**

IX. National Days of Medical Advisers

Balatonalmádi, 4-6 April, 2010.

Lecture

71. Adrienn Ujváriné Siket, Dr. Miklós Zrínyi, Dr. József Betlehem, Dr. Ilona Zékányné  
Rimár, Helga Tóth, Dr. Ildikó Kriszbacher, Péter Takács

**Connections between the support of nursing students and career abandonment**

XLI. National Congress of Ancillary Workers

Kecskemét, 24-27 June, 2010.

Lecture

*„Whithersoever your life takes you, you should have only one aim,  
To help every time and everywhere the other people; Be strong, protect  
the Happy life of every person,  
Learn, teach and be the Heroic spreader of science!”*

*/ Mihály Tompa /*