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„Annals of Nursing” is the official journal of the Medika College of Vocational Studies in Healthcare, Belgrade, Serbia. It is a quarterly international open-access peer-reviewed journal that covers all aspects of nursing in hospitals, families, and communities. The papers published in “Annals of Nursing” are freely available to all internet users for non-commercial use. The focus of the journal is on the role of nurses in the promotion of health and quality of life, the prevention of illness, the care of disabled and ill people and all suffering individuals, and rehabilitation after illness.

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LETTER OF THE EDITOR-IN-CHIEF

Dear Readers,

We are proudly completing the first volume of *Annals of Nursing*. In the fourth issue, there is the Book of Abstracts of the International Conference “Developmental Educational Path of Nursing in the Balkans” that will be held in Loznica and Tršić, Serbia, from November 2–5, 2023. From the letter of Dr. Željko Vlasisavljević, the conference chairman, you will have the opportunity to learn in more detail about the topics that will be presented and discussed at the conference.

In a professional paper on psychiatric nursing, authors Živanović et al. present the importance of mental hygiene in nursing patients at psychiatric wards. The lack of educated psychiatric nurses is evident worldwide. There is a need to integrate psychiatric nursing into healthcare through health systems. Nurses should be educated about interpersonal skills, and an empathetic approach is a must in healthcare.

Paunović et al. are bringing a comprehensive review of HPV testing for the prevention and early detection of cervical cancer. HPV 16 and 18 genotypes are the focus of scientific research due to their highest oncogenic potential. Cervical cancer screening with HPV testing offers greater protection against cervical precancer and cancer compared with cytology-based screening. That is why an overwhelming majority of countries switch from cytology to HPV testing.

We will do our best to continue publishing good papers that are of interest for theoretical education and developing the practical skills of nurses and medical technicians.

Kind regards,

Goran Belojević

Editor-in-Chief

Annals of Nursing

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BOOK OF ABSTRACTS

INTERNATIONAL CONFERENCE

“DEVELOPMENTAL EDUCATIONAL PATH OF NURSING IN THE BALKANS”

ORGANIZER: MEDIKA COLLEGE OF VOCATIONAL STUDIES IN HEALTH CARE, BELGRADE, SERBIA



2-5 NOVEMBER 2023

LOZNICA-TRŠIĆ

SERBIA

SUPPORT: LOZNICA ASSOCIATION OF HEALTH WORKERS

Dear All,

I would like to point out the conference objectives:

Exchange of experiences on education, identification of differences as well as problems in the application of acquired titles in the health care system among nurses; Adopting a common position on possible ways of action to solve these problems.

This conference is dedicated to medical education in the Balkan region (Republic of Slovenia /EU/, Republic of Croatia /EU/, Republic of Serbia, Republic of Bosnia and Herzegovina with Republic of Srpska, Republic of Montenegro, Republic of North Macedonia). Many problems that appear to be common in the exchange of experiences, we will try to adopt a common position and propose measures for the improvement of nursing in these areas.

In the Republic of Serbia, nurses are educated at vocational schools (three years, six semesters 180 ESPB) or academic studies (four years, eight semesters 240 ESPB).

Education of nurses at the academic studies of the Faculty of Medicine in Belgrade:

The Faculty of Medicine in Belgrade has participated in the process of educating nurses since the establishment of the first medical school in Belgrade. The first professors at the medical school were from the medical faculty, except for the lectures, the first textbooks came from the professors of the faculty. On the initiative of Professor Trbojevic, vocational specialist studies for nurses lasted two years and 120 ESP points were launched in 2011. In 2014, the basic academic studies for nurses were accredited, lasting four years, 240 ESP points, which are acquired through 3060 hours of theoretical and practical classes, independent work of the student, practice in health care institutions and preparation of a diploma thesis. Currently, there are no nurses in the medical faculty, the nurses are assistants

for practical teaching at clinical bases. Health care is taught by a neurosurgeon, and there are also no books intended for nurses.

The education of nurses in Serbia at **higher vocational schools** began in the fifties of the last century. Now, after finishing school, nurses can continue to study at the Vocational Master's program (two years, four semesters and 120 ECTS) or at one of the private schools they can complete a professional specialization in a duration of one year (two semesters, 60 ECTS). Until a few years ago, there was professional specialization at vocational schools and medical faculties lasting two years (four semesters and 120 ECTS). Vocational specializations were abolished at state schools. In practice, no level of education is recognized other than the completed higher professional health school, and if nurses complete master's and doctoral studies, they are invisible in the health system.

The problems or challenges in Serbia are requalifications, which mean that hairdressers, butchers, and construction technicians are requalified as nurses within a year, one of the problems is the non-existence of building an academic career for nurses in the health system, which will be addressed through topics at the round table:

In addition to the implementation of formal training of nurses in healthcare, the conference will introduce numerous topics, related to all levels of education of healthcare workers, which should be presented as:

1. How to build an academic career in nursing?
2. Education of secondary school personnel.
3. Nostrification of diplomas in EU countries.

4. Harmonization of the curriculum for all medical higher education institutions at the republic level.
5. Is the number of hours of practical teaching sufficient compared to theoretical teaching?
6. Practical teaching - disadvantages, possibilities and advantages
7. Prequalification, problem or challenge?
8. Continuous education of healthcare workers in the Republic of Serbia.
9. Education as stimulation, vision or not?

In this book, there are the abstracts of our invited lecturers and participants on the topics concerning the education and training of nurses.

Best wishes and good luck in your work,

Prof. Željko Vlasiavljević, PhD, RN, BScN - President of the Organizational and Scientific Committee of the conference

Snežana Moretić-Mičić, Ph.D., assistant professor, Medical School of Vocational Studies

"Medika" - lecturer and editor for English language

Conference Paper

MILESTONES IN SLOVENIAN NURSING EDUCATION: A LOOK BACK AT KEY EVENTS AND THEIR IMPACT OVERVIEW

Ljubiša Pađen

College of Health Sciences, University of Ljubljana, Slovenia

Published Online: 30 October 2023

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DOI: 10.58424/annnurs.839.kqf.gdq

Abstract

Background: Nursing education has undergone many changes over the years, adapting to new health, social and technological challenges. During those changes, nursing as a profession stayed true to its values, namely providing competent, compassionate, and committed care to patients, their loved ones, and the community.

Aim: The aim was to explore the evolution of nursing education in Slovenia, emphasizing the key moments and individuals that have helped shape the education and profession itself.

Methods: Descriptive and comparative method was used. The sources were searched through COBISS system. There was no limitation regarding language, publishing year or type of publication.

Results: Nursing education in Slovenia has come a long way since its formal establishment in 1923, evolving from a one-year to a comprehensive three-year program. With the high demand for health care workers after World War II, an upper secondary educational program was introduced, and later in 1951, a college nursing degree program was established. The

Pađen LJ. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):16-17.

college eventually merged with other healthcare-related colleges and became an integral part of the University of Ljubljana in 1976. With the introduction of professional bachelor's degree programs and alignment with EU directives and the Bologna reform, nurses can pursue 2nd-cycle master studies (y. 2007) and 3rd-cycle doctoral programs (y. 2016), creating a complete vertical in nursing education.

Discussion and Conclusion: Nursing in Slovenia has a rich educational and professional history, although it did not follow Nightingale's initiative for nursing development. While the long-term goal of achieving a doctoral degree in nursing has been achieved, new challenges have emerged. These challenges include developing specialist and advanced practice nursing that are responsive to contemporary challenges and trends in the EU and global health.

Keywords: education, historical aspects, nursing, universities

Conference Paper**NURSING EDUCATION IN CROATIA****Štefica Mikšić**

Department of Nursing and Palliative Medicine, Faculty of Dental Medicine and Health
Osijek, J. J. Strossmayer in Osijek, Croatia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.5r6.3dg.3j3**Abstract**

Background: The European Union (EU) has defined the process and norms of nursing education. As a source of data, Directive 2005/36/EC and Directive 2013/55/EU was used together with Croatian laws and regulations which are related to nursing education. Nursing education in Croatia is carried out through high school education and also at the university level.

Aim: To present and explain the nursing education system in Croatia.

Methods: The presented data was obtained by reviewing the literature, extracting data from key facts, interpreting them synthesizing knowledge, and presenting integrative comments on the available literature and written traces on the course of nursing education in Croatia.

Discussion: Croatia is the only country that trains general care nurses at the level of five-year secondary vocational education. It is also the only secondary education in Croatia that lasts five years with a program of 4600 hours in three years of secondary vocational school for nurses and the previous two years of general education. In the Republic of Croatia, only secondary schools for nurses have a 10-year basic education: 2 years of general education + 3

Mikšić Š. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):18-19.

years of vocational education. By finishing the first cycle of nursing study students gather 180 ECTS credits and become bachelors of nursing. The education at first cycle with a uniform curriculum is provided in four educational institutions in Croatia. Every year about 300 students enroll in nursing studies. After finishing the first cycle a nurse can continue studying nursing on master studies/nursing specialisations and gather another 120 ECTS credits. There are two nursing specialisations in Croatia at the moment; Management in nursing and Public health. Upon completion of the university graduate study, participants acquire 120 ECTS credits and the title of Master of Nursing, which allows them to continue their education in one of the doctoral studies. For the time being, the enrollment of the doctoral study is enabled at the medical faculties or at other faculties within the University. So, as conclusion we can say that in Croatia we have a five-year vocational education as a basic nurse education, then we have undergraduate professional and university nursing studies, then we have graduate professional and university studies in nursing, and finally doctoral studies in biomedical sciences which bring us to 14 different terminology for nurses.

Conclusion: The forms of nursing education in Croatia are provided at different levels (undergraduate, graduate, professional and university nursing studies), but on the other hand the health system does not recognize and valorize us as experts. Regardless of education, the largest number of highly educated nurses receive a bachelor's salary. Some exceptions depend on the workplace and the institution of employment (management position, nurse educators...).

Keywords: education, nurses, nursing

Conference Paper

NURSE EDUCATION YESTERDAY, TODAY, TOMORROW

Goran Stojanović

Academy of Vocational Studies Belgrade, College of Vocational Studies in Healthcare,
Belgrade

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Abstract

The traditional orientation of the international organization of the Red Cross to support and raise nursing as a relevant factor in the achievement of goals and the transfer of work programmes towards the protection and improvement of people's health, contributed to the Red Cross of Serbia developing its activity towards the increasingly complex training of health care personnel. The path was covered from lower schools for child care workers in republican centers, through a high school for nurses in Belgrade, to the eminent higher school for nurses - "College in Simina Street", the founder, together with the health service, planned to employ the first generations in key places in the teaching bases of the school and in schools for nurses, in order to ensure quality staff for raising the level of professional work and for inclusion in the processes of education and upbringing of generations of nurses to come. The Higher Medical School in Belgrade was founded in 1958 with two departments: the Department of Senior Nursing Technicians and the Department of Senior Sanitary Technicians. The education of senior nurses in Serbia until 1973 was carried out in two schools, namely in the Higher School for Nurses of the Yugoslav Red Cross and in the

Stojanović G. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):20-21.

Higher Medical School in Belgrade. Already in 1971, the idea of integrating the Higher School for Nurses of the Yugoslav Red Cross with the Higher Medical School in Belgrade was initiated. Since 2007, the transformation of the school from higher to high has begun, and a study programme of basic vocational studies for nurses has been created. This programme was accredited by the decision of the Ministry of Education of the Republic of Serbia dated April 30, 2007. The goal of the programme is the higher education of nurses who should be qualified to work in the field of theoretical and practical nursing and to take on responsible tasks for the protection and improvement of health.

The school's specialist study programmes have a clearly defined role in the system of higher education of nurses, and they follow on from the basic professional studies. The new study programme Vocational master's nurse - clinical nursing lasts two school years and is realized through five modules within the framework of theoretical work, exercises, independent work of students, professional practice in health institutions and the preparation of a master's thesis under the supervision of a mentor.

Keywords: education, nurse, nursing, program, schools, teaching

Conference Paper

THE EDUCATION PATHWAY FOR NURSES IN MONTENEGRO

Dijana Lalović

Medical College, Faculty of Medicine University of Podgorica, Montenegro

Published Online: 30 October 2023

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DOI: 10.58424/annnurs.la.4hr.hhp

Abstract

Nursing education in Montenegro has a relatively long tradition. Due to the great need for medical personnel in Montenegro, in 1946, a school for paramedics, caretakers, and nurses was opened in Cetinje, located in the facilities of the former Girls' Institute. Since the establishment of the first school, there have been several reforms in nursing education. In Montenegro, nursing practice begins after the completion of nine years of general education. At both the secondary and higher education levels, there are two types of nursing education. After completing four years of secondary school, one can obtain the title of health technician. The educational program for the health technician was developed in accordance with occupational standards for pediatric and medical nursing. The development of a modular educational program for Health Technicians is currently underway. The Health Technician curriculum is based on occupational standards for various fields, including Health Technician for hospital work, Health Technician for primary healthcare institutions, Health Technician for preschool institutions, and Health Technician for geriatric and palliative care institutions. A person can acquire the title of nurse by completing a three-year higher education

Lalović D. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):22-23.

programme, consisting of applied basic studies (bachelor's degree). In addition to the basic studies, there are also one-year postgraduate applied specialist studies in healthcare and two-year Master's studies in healthcare. In 2017, following the reaccreditation of the Faculty of Medicine in Podgorica, a study model was designed based on the 3+2 principle. This nursing education program, in alignment with European directives, enables the training of qualified personnel to provide healthcare services. Graduates of this program will have degrees recognized outside the borders of Montenegro.

Keywords: Nurse, health technician, Montenegro, education, Europe, legislation

Conference Paper**EDUCATION OF NURSES IN THE INSTITUTIONS OF BOSNIA AND HERZEGOVINA****Jelena Pavlović**

University of Eastern Sarajevo, Faculty of Medicine Foča, Republic of Srpska, Bosnia and Herzegovina

Published Online: 30 October 2023

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Abstract

Background: In times of daily change, it is necessary to turn to the progress of the nursing profession, precisely through permanent learning in programs of continuous education and training. The aim of this work was to show the levels of education of nurses in the areas of Republika Srpska, Bosnia and Herzegovina. Secondary and higher medical schools, some of which grew into health faculties, played a significant role in organizing quality health care in Bosnia and Herzegovina. For a long time, secondary and senior medical staff could not be educated in B&H due to the lack of educational institutions, but also due to the lack of teaching staff. Until 2002, nurses in B&H acquired knowledge through secondary and higher education (two years). At the B&H level, the establishment of nursing studies was started in Sarajevo (2002), Tuzla (2005/2006), Zenica (2005), Bihać (2006), Mostar (2008), and then in Foca, Banja Luka and Prijedor (2007). Also, master's and doctoral studies for nurses are organized in Bosnia and Herzegovina. There are no specializations for nurses in the education system in Bosnia and Herzegovina. Respecting the Directives of the European Council, in which the processes and norms of the education of nurses are precisely defined, some

countries have equalized the competences and levels of education of nurses. Changing nursing reform requires professional recognition in society and the entire healthcare system. Education partially follows practice in terms of degree recognition. There is no Chamber of Nurses in the Republic of Srpska. In numerous institutions, internal and external education for nurses is organized. The Federation has a Chamber for nurses, and after passing a professional exam and registration in the Register of Chamber members, a request for a license is submitted with the documentation prescribed by the Rulebook on the License Issuance Procedure. The independent and interdependent work of nurses is in a highly interactive relationship and constitutes a unique field of nursing practice that must be understood and nurtured to maintain and develop a professional nursing identity. Therefore, it can be said that the purpose and goal of the nursing education strategy are pragmatic and visionary, and excellence can only be achieved through education.

Conclusion: To raise the reputation and state of the nursing profession, it is necessary to define the scope of work and set clear boundaries between the competencies of nurses of different levels of education at the level of the whole of Bosnia and Herzegovina. Part of the strategic plan for the further development of the nursing profession should also be the promotion of the profession in the media and means of public information.

Keywords: education, nurses, nursing

Conference Paper**THE THORNED PATH TO AN ACADEMIC CAREER -
NURSING EDUCATION IN NORTH MACEDONIA****Gordana Beshliovska, Julijana Madzovska**

Association of Nurses, Midwives and Dental Nurse “For Us”, Skopje, North Macedonia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.usj.b5s.ivq**Abstract**

The title of “nurse” is acquired through four years of regular education in a secondary vocational school for nursing. Currently, fifteen schools are accredited to educate students, and several of them are authorized to conduct part-time education organized as formal education for adult retraining (requalification) lasting two years. The students in both cases will acquire the same title and competencies and are eligible to continue to the second level of education at a higher vocational school for nurses. The studies of nurses at higher professional education are a continuation of the education that provides a high professional education, but anyone who has completed secondary school, regardless of whether she or he is in the health profession, is eligible to study nursing. The title of “graduate nurse,” i.e., “graduated medical technician,” is acquired through three years of regular or part-time studies. To study part-time, it is necessary to enclose verification of employment, regardless of whether you work as a healthcare worker or a completely different job. Four state higher vocational schools for nursing and a private one are providing nursing education. The competencies of a graduate nurse and a nurse with secondary nursing school education are

Beshliovska G, Madzovska J. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):26-27.

almost the same in practice. A person acquires the title of "nursing specialist" with the successful completion of the study program of the second degree of studies, with which she or he acquires education and qualifications for performing the health activity of a nurse with a special profile. The highest level of nursing qualification, the doctorate in nursing science or any other field of nursing, does not exist at universities where higher professional schools educate nurses. By obtaining a diploma from the third study program of a foreign higher education institution, where the studies have quality results as per the European directives for regulated professions, you are recognized in the Republic of North Macedonia. Studying abroad for an individual who pays on his own is too expensive, and the state does not provide scholarships, which is why the title is "The Thorned Road to an Academic Career."

Keywords: education, North Macedonia, nurses, nursing

Conference Paper**THE INFLUENCE OF MENTORSHIP ON THE PROFESSIONAL AND PERSONAL DEVELOPMENT OF NURSES****Silvija Piškorjanac**

University J.J. Strossmayer Osijek, Faculty of Dental medicine and Health Osijek,
Department of Nursing and Palliative medicine, Croatia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.21g.ij6.0fh**Abstract**

Background: In the “century of knowledge” in which we live, to become and remain a part of contemporary trends in society, it is necessary to constantly learn and acquire the skills necessary for better coping, both in personal and professional life. Contemporary scientific, technological, and educational currents in society impose new tendencies on us in life, work, and education. It is the same with the concept of mentoring in nursing, which has not been known “since yesterday, but only now is its value and true meaning formally recognized

Aim: The objective is to examine the impact of mentoring on the professional and personal development of nurses and mentors.

Subjects and Methods: The research was conducted prospectively during June, July, and August 2023 at University Hospital Osijek, at the clinics and departments that are the teaching bases of the Faculty of Dental Medicine and Health in Osijek. Participants were bachelor’s and master’s degrees in nursing, external collaborators, and mentors of clinical

practice for undergraduate students of nursing at the Faculty of Dental Medicine and Health in Osijek. The criterion for inclusion was: active mentors during the academic year 2022-2023. The research instrument was a questionnaire consisting of seven questions about the general characteristics of the respondents (gender, age, years of work experience in the profession, level of education, additional education, and jobs they perform). The second part of the questionnaire consisted of a structured instrument of 57 questions divided into four categories, which were designed according to the „Mentorship Evaluation Form" (School of Medicine, University of Virginia) and the “Mentor Evaluation” (Connecticut Mentoring Partnership, Business Guide to Youth Mentoring, authors: Diane Hale, Susan Patrick, and Dr. Susan Weinbergeron). Five questions were also taken from the questionnaire that was used in the research ”Mentoring in nursing education: Perceived characteristics of mentors and the consequences of mentorship” by Sabine Huybrecht, Department of Healthcare Sciences, Arthesis University College Antwerp, Belgium.

Results: Clinical mentors with experience of mentoring for 5 to 7 years think that the most significant indicator of their personal development is the development of skills. Other indicators did not show any kind of significance. Clinical mentors with clinical experience for 21 to 30 years think that the most complicated things regarding the mentorship are personal factors, while clinical mentors with working experience for less than 20 years think that it is about professional factors. Clinical mentors with clinical experience for more than 40 years think that they don't have any complicated factors regarding their mentorship as well as professional and personal development.

Conclusion: Mentorship has a big influence on the professional and personal development of nurses as clinical mentors. Mentorship is a valuable informative strategy within all levels of nursing and health care educational settings. A mentoring relationship gives back to the

profession by instilling gratification and encouraging professional growth for both the mentor and the mentee.

Keywords: mentors; mentorships; nursing; students

Conference Paper**HEALTHCARE FROM THE CLASSROOM TO CLINICAL PRACTICE****Vesna Paunović**

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Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.xmp.6jk.cy8**Abstract**

Background: Nurses work in the fields of health promotion, disease prevention, treatment, and rehabilitation. After finishing high school, the title of nurse-technician is obtained, and they can be employed in primary, secondary, or tertiary healthcare institutions in basic medical care jobs up to the complex requirements of progressive care. The ability to transfer theory from the classroom to clinical practice is a key skill in nursing education. This transfer refers to students' ability to adapt classroom knowledge to different clinical practice situations. In order to provide nursing care that meets the standards of professional care, medical school students must accurately and effectively transfer theoretical knowledge to address specific patient care situations. Nursing education programs prepare students through a variety of learning opportunities that include simulated situations in health care offices and real-world situations in clinical-hospital settings. Education takes place in classrooms, laboratories, and clinics. While the classroom environment provides students with mostly theoretical information, the clinical environment provides opportunities to put theoretical

information into practice.

Aim: To show the importance of practical teaching in the education of nurses.

Method: Literature review, synthesis, and extraction of key professional and contemporary literature.

Conclusion: Medical school students can acquire quality skills for patient care to the extent that they are able to implement them through theoretical knowledge in the clinical environment.

Keywords: medical schools, teaching, patient, nursing, nurses

Conference Paper**REFORM IN THE EDUCATION OF NURSES IN SECONDARY MEDICAL SCHOOLS: ANALYSIS OF THE COMPARISON OF PLANS AND PROGRAMS FROM THE ESTABLISHMENT OF THE SCHOOL FOR NURSES TO REFORM IN THE EDUCATION OF NURSES (2015)****Ivana Stevanović, Lena Kenić, Bojana Đinđić**

Zvezdara Secondary Medical School, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.g1j.v36.6ix**Abstract**

The Secondary Medical School "Zvezdara" was founded in 1921 with the support of the United Kingdom as the first school for the education of nurses in our region. In our educational system, since 2000, various educational reforms have been implemented, affecting the education of nurses through innovation and change of plans and programs with changes in goals and outcomes of nursing education. The aim of the paper was to make a short critical review of the education of nurses from 1921 to 2021, with a focus on the history of the school institution as the oldest school institution for the education of nurses in this region. A qualitative analysis of the plans and programs was done, and then, by comparing the analyzed plans and programs, an insight into the changes in education that influenced the change in goals and outcomes of education was shown. The paper will highlight the advantages and disadvantages of the reform of the education of nurses. Available plans and programs and school monographs were used for the preparation of the paper, which were

Stevanović I, Kenić L, Đinđić B. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):33-34.

qualitatively analyzed, and then a comparative analysis was carried out. In the paper, the authors suggest the necessary changes that should be implemented in the future so that plans and programs better meet the educational needs of students and thus enable the development of the professional competencies of future nurses.

Keywords: secondary medical schools, nurses, education, program

Conference Paper**ATTITUDES OF PROFESSIONAL NURSE DEGREE STUDENTS ON THE ROLE OF PROFESSIONAL NURSES IN THE HEALTHCARE TEAM****Ana Rodić**

Sirmium Training and Business Informatics College of Applied Studies, Sremska Mitrovica, Serbia

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Abstract

Background: The unique role of a nurse is to assist an individual, sick or healthy, in performing activities that contribute to health or recovery (or a peaceful death), which the individual would perform independently if they had the necessary strength, will, or knowledge. Virginia Henderson (1897–1996) A nurse today, apart from possessing professional knowledge and skills, must be an emotionally mature and stable person in order to be able to understand and deal with human suffering, emergencies, health problems, and ethical dilemmas. She should be ready to accept responsibility and work independently and in a team. Nurses have an important role in solving public health problems. They provide safe, high-quality, effective, and efficient health services, which makes this profession particularly important for the protection and improvement of people's health.

Aim: To examine the attitudes and opinions students about the role of nurse as a mandatory

member of the health team, the satisfaction of the position, and the respectability of the nurse profession in Serbia.

Material and Methods: The research was conducted as a cross-sectional study over a period of 2 months. The research was conducted electronically, and the sample consisted of 95 students majoring in professional nursing at the Preschool Teacher Training and Business Informatics College of Applied Studies “Sirmium” and the Preschool Teacher Training and Medical College “Mihailo Palov” in Vršac, students of different genders and ages who actively attended studies at the time of questioning.

Results: Most of the surveyed students were female, 85%, while the other 15% were male. Out of the total number of surveyed students, 46.4% do not agree at all or mostly agree with the statement that other members of the team value professional nurses. The majority of students agree with the statement that continuous education is necessary (83.4%). The largest number of students agree with the statement that the job of a professional nurse is as responsible as the job of other members of the healthcare team (92.5%). The opinion of the majority of students is that the job of a professional nurse is more valued abroad than in Serbia (87.5%).

Conclusion: Based on the results of the research, we can conclude that there is a prevailing dissatisfaction among students with the position of professional nurse in the health team. Students believe that the job of a professional nurse is just as responsible as the job of other members of the health team, and the continuous education of the nursing staff would contribute to the respectability and adequate position of the nursing profession in Serbia.

Keywords: nurses; nursing, attitude; delivery of health care, students

Conference Paper**THE INFLUENCE OF TEACHING MODELS IN THE COVID-19 PANDEMIC CONDITIONS ON THE DEVELOPMENT OF PRACTICAL SKILLS OF SECONDARY MEDICAL SCHOOL STUDENTS****Radmila Antić, Uroš Tomić**

Zvezdara Secondary Medical School, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.dzk.bgt.br1**Abstract**

Background: The school's statute determines the annual work plan of the school. This plan includes institutions as teaching bases, with the lesson fund from the course plan for practical teaching. A teaching base may be a social or health institution that is appointed by the minister of education.

Since March 6, 2020, when the first case of the COVID-19 pandemic was diagnosed in Serbia, it has not been possible to perform practical lessons in teaching bases. Instead, practical teaching has been done on the school premises; thus, we encountered the problem that students could not fully adopt theoretical knowledge and practical skills. One of the main motives that led us to this research was what are today's students' opinions about their education and whether the pandemic brought them relief or difficulties in education.

Aim: To examine the students' attitudes about the practical skills they developed during .

remote health care practice.

Methods and Respondents: The respondents were 120 students in the fourth grade of secondary medical schools who were surveyed and tested with a specially created questionnaire and knowledge test for the purpose of this research.

Results and Discussion: Most students realize the shortcomings of a distance health care teaching model. Certain percentages of students believe that distance learning decreases the motivation of medical school students for further education and work in the field of healthcare.

Conclusion: Students have different opinions about the impact of distance learning model in health care on developing their practical skills. Research indicates a reduced quality of students' practical skills.

Keywords: COVID-19, pandemic secondary medical schools, students, teaching

Conference Paper**THE IMPORTANCE OF CONTINUOUS EDUCATION OF HEALTH CARE TEACHERS ON INNOVATIVE METHODS IN HEALTHCARE****Radmila Antić, Uroš Tomić**

Zvezdara Secondary Medical School, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.xfc.on4.ni9**Abstract**

Background: The term "innovation" comes from the Latin language and represents something new: a product, methods, ways, etc. Innovations are related to new ways of managing health institutions as well as new methods of providing health services. Innovative methods in healthcare represent the introduction of new methods of treatment, modern techniques for carrying out diagnostic and therapeutic procedures, and the use of modern medicines. The objective is to make these innovative methods better for patients, which means that they are less harmful and more precise, and the procedures take less time. Innovative methods in nursing represent the modification of existing standards and the introduction of new standards in the work of nurse-technicians that they use in providing health care to patients. Further education is the right and obligation of every healthy employee, and it represents his further professional development with the objective of

maintaining and improving the knowledge and work of every health worker in accordance with the law.

Aim: To point out the importance of further education of health care teachers about innovative methods in health care.

Methods and Respondents: The respondents are 50 teachers of health care in medical schools in Belgrade who were surveyed and interviewed with a specially created questionnaire and knowledge test for the purpose of this research.

Results and Discussion: Most teachers are motivated to participate in further education about innovative methods in healthcare. Health care teachers assessed the availability of continuous education on innovative methods in health care. The teachers presented several ways in which they participated in continuous education in healthcare.

Conclusion: Further education of health care teachers about innovative methods in health care is of great importance. Further teacher training is of great importance for the teacher as an individual.

By participating in further training on innovative methods in healthcare, the healthcare teacher improves the quality of his knowledge and skills that he uses in working with students.

Keywords: education health care teacher, teaching methods

Conference Paper**EDUCATION AS A STIMULUS FOR DEVELOPING NEW KNOWLEDGE IN THE DIRECTION OF DISCOVERING THE MEDICAL MANAGEMENT OF POLYPHENOLS FOR NURSES****Spomenka Babić Banković**

Higija Pharmacy, Arandjelovac, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.681.5gv.2bu**Abstract**

Background: Polyphenols are a class of secondary plant metabolites that have a wide range of biological activities, including antioxidant, anti-inflammatory, and anticancer activities. Nurses are at the forefront of healthcare and play an important role in health promotion and disease prevention. The education of nurses about polyphenols and their medical management is the key to improving patient care.

Aim: To present education as a stimulus for developing new knowledge in the direction of discovering the medical management of polyphenols for nurses.

Method: This summary was written based on a review of the literature on polyphenols and their medical management, as well as on educational programs for nurses on polyphenols.

Babić Banković S. Book of Abstracts of the International Conference „Developmental Educational Path of Nursing in the Balkans“, Loznica and Tršić, Serbia, 2-5 November 2023; Ann Nurs 2023; 1 (4):41-42.

Conclusion: A brief report on the data obtained: Polyphenols are widely distributed in nature and are found in many plant products, such as fruits, vegetables, spices, and teas. Polyphenols have a wide range of biological activities, including antioxidant, anti-inflammatory, and anticancer activities. Nurses play an important role.

Keywords: education, nurses, polyphenols

Conference Paper**CONTINUOUS EDUCATION OF NURSES AND
PHYSIOTHERAPISTS AS A PREREQUISITE FOR
ENHANCING COMPETENCIES IN PLANNING AND
ORGANIZATION****Anita Kovačić Popović**

Medika College of Vocational Studies, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.pvd.8i5.a5w**Abstract**

Background: Nurses and physiotherapists play a pivotal role in providing high-quality healthcare and patient rehabilitation, underscoring the importance of possessing a high level of expertise in planning and organizing their activities. The healthcare sector continually evolves and refines itself due to technological advancements, making it imperative for professionals to remain open to continuous learning and adapt to new information and techniques. Consequently, the maintenance and development of essential competencies through continuous education play a crucial role.

Aim: To examine the significance of continuous education for nurses and physiotherapists in the context of enhancing their competencies in healthcare service planning and organization.

Results and Discussion: The findings demonstrate that continuous education is essential for maintaining relevance and improving skills in the dynamic environment of contemporary professions. However, it is frequently accompanied by challenges such as financial constraints, time limitations, motivational issues, and technological adaptation barriers. Regarding the methods of continuous education available to nurses and physiotherapists, these encompass formal education, professional workshops, seminars, practical training, online education, and mentorship. A combination of these methods can contribute to the development and enhancement of healthcare professionals and competencies in their practice. Furthermore, attention is directed towards key competencies in healthcare service planning and organization, encompassing time management, teamwork, communication skills, decision-making, and problem-solving.

Conclusion: It can be inferred that continuous education not only contributes to improved practice and patient care but also ensures that healthcare professionals stay aligned with changes within the healthcare system and the latest techniques and technologies.

Keywords: healthcare systems, education, nurses, physical therapists

Conference Paper**NURSE IN THE HEALTHCARE QUALITY SYSTEM****Jasmina M. Veličković**

Medika College of Vocational Studies, Belgrade, Serbia

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As health professionals, nurses actively and directly participate in achieving the best possible welfare for the patient and have a direct influence on the patient's health outcome. By applying professional standards, nurses can take responsibility for professional conduct, the quality of care they provide, and their own practice. This work is focused on the principle of improving care and improving the overall quality of treatment, which contributes to safe treatment aimed at achieving favorable health outcomes, thereby reducing treatment costs for the individual, family, employer, and society. To look at the improvement and development of the quality of health care (patient safety) requires knowledge, selection, and application of specific methods and tools adapted to the capabilities of individual health institutions. Current nursing practice is burdened with problems that can affect the quality of care provided, the safety of patients, and the safety of nurses in the workplace. The establishment of clearly defined standards is necessary, given that they represent the framework for the implementation of all nursing activities. Standards are the basis of nursing action that ensures legal, professional, and scientifically based action. They serve as a measure of the quality of

practice and the development of the nursing profession. Employers have a responsibility to ensure a support system, including human and material resources, that will enable standards to be met. Quality control provides nurses and other healthcare systems, education, nurses, physical therapists workers with feedback on the quality of their work as well as on how it can be improved. Users should also be actively involved in determining the quality of organizational care.

Keywords: nurse, nursing, quality of healthcare

Conference Paper**APPRENTICES TRAINING FOR INDEPENDENT WORK IN HEALTH CARE INSTITUTIONS****Sofija Kurtović**

University Children's Hospital, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.w7g.2bk.i2m**Abstract**

Background: The plan and program of apprenticeship for nurses, among other things, stipulate that the apprenticeship aims to introduce to the nurse the essence of healthcare, complement the knowledge acquired during schooling, and enable independent work after passing the professional exam. The apprenticeship program fundamentally complements the knowledge acquired in school institutions as well as the basics of the health care process. During the apprenticeship, the apprentices can determine and complement, and through practical work, train themselves for independent work with healthy and diseased people, family, and the social community, with the aim of achieving the highest possible level of health and independence in work.

Aim: Perceiving of methodical approach of apprentice training for independent work in health care institutions,

Methods: The observational indirect method was used in the research. The working method

for data collection in this research was a survey. Two surveys were included in the research: for employed nurses and apprentices in health care institutions. The sample was 50 nurses and 50 apprentices, as random samples. In order to obtain realistic research results as much as possible, the respondents were from six different hospital institutions in Serbia.

Results: Based on the goal and tasks of the research, the results of the survey showed that, on the national level, it is not specified who can train apprentices, the issue of organized training in health care institutions that train apprentices to do independent work, and the evaluation of acquired knowledge and apprentices' skills. In health care institutions, the organized training of apprentices exists in a very small percentage. Apprenticeship training, at the largest percentage, is performed by nurses with many years of working experience. Mentors are not recognized as someone in charge of apprentices training for independent work. The satisfaction of apprentices with the training provided during the apprenticeship is not at an enviable level. Due to a lack of confidence in the quality of apprentices training, they undergo additional training after employment.

Conclusion: Improving the process of apprenticeship training in the form of establishing standards, defining the conditions for apprentices training in health care institutions, evaluating training, defining the conditions for the health care institution itself that trains apprentices for independent work, recognizing the role of nurse mentors, and establishing the conditions for their mentoring are the basics for increasing the quality of the provided health care, faster independence in the work of newly employed nurses, and increased safety of patients in inpatient health care institutions.

Keywords: nurses, mentors, training

Conference Paper**DEVELOPMENTAL EDUCATION PATH OF NURSES AND MEDICAL TECHNICIANS IN HOME CARE IN THE REPUBLIC OF CROATIA****Vlatka Mrzljak**

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Croatian Catholic University, Zagreb, Croatia
Ivanić-Grad College, Ivanić-Grad, Croatia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.hbo.14p.fvq**Abstract**

Background: Health care in the home is an activity in the system of primary-level health care that is carried out independently by nurses and medical technicians with the corresponding authorization for independent work. Although all the necessary nursing interventions are carried out in accordance with the order of the patient's chosen doctor and in cooperation with other members of the multidisciplinary team (patient service, palliative care coordinator, mobile team), the fact is that the nurse or medical technician who performs nursing interventions for a patient in need is on-site alone. This is precisely the leading reason for the premise of the high importance of investing in one's own education for the purpose of expanding competencies and ensuring quality, efficient, and effective health care. The background of the problem of this scientific paper is also the daily presence and increasing frequency of the need to carry out increasingly demanding nursing interventions (for

example, complex patients) in the place of residence or residence of the patient (most often in is apartment or house) by nurses and medical technicians of health care at home.

Aim: To show and examine the willingness of nurses and medical technicians to be included in the process of lifelong education in correlation with the need for highly educated health personnel who provide health care for patients, and to show the models of education of nurses and medical technicians in home health care that have been applied so far.

Methods: Research was conducted from January to February and June to August of 2022. The criteria for inclusion in the research were computer literacy and employment in the field of health care at home. The first survey included 92 participants, and the second included 100 participants. The data were processed using the usual statistical methods. In addition to the research conducted using Google Forms, a search of available literature was also conducted.

Results: The first survey shows that 78% of participants expressed the desire and need for additional training, while the second shows 87.9% of them with a clear indication of the areas or procedures in which they think training is necessary. Also, an insight into professional and scientific literature leads to clear knowledge about previous and current models of education in nursing, specifically with nurses and medical technicians in home health care.

Conclusion: The significant contribution of this scientific paper is primarily the nomination of a nurse and a medical technician for home health care as key factors in providing quality, accessible, and continuous health care at the patient's home at the level of primary health care. Furthermore, the need and readiness of health personnel for additional training are confirmed. The model of existing education is clearly presented, and the vision of further innovative approaches and models in the education of nurses and medical technicians in home health care is presented. It is suggested to carry out further survey research in the form

of an examination of the efficiency and effectiveness achieved in daily work through additional competences achieved after the completion of new innovative models of education in nursing, primarily with regard to home health care activities.

Keywords: health care, home care services, education, nurses

Conference Paper**HISTORY OF NURSING IN SERBIA****Radenka Ćirković**

General Hospital, Loznica, Serbia

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The first secondary medical school in Serbia was founded in 1921. Its name was "School for Nurses", with the involvement of the Red Cross Society from Geneva and the Red Cross Society from Belgrade, and at the suggestion of Dr. Reeder, head of the American mission. The first headmistress of the school was the English Miss Edith Newton, a student of Florence Nightingale. In 1924, the first generation of 18 sisters graduated. Most of them were assigned to medical facilities in southern Serbia; two were sent to America at the expense of the Rockefeller Foundation, and one to England for training at the expense of the League. In 1952, the Higher School for Nurses of the Red Cross of Yugoslavia was opened. Today, there are a large number of secondary medical schools, both private and state. School today lasts for four years.

Keywords: education, secondary schools, historical aspects, nurses, nursing

Conference Paper**FLORENCE NIGHTINGALE – THE MONUMENT OF HUMANITY IN THE CRIMEAN WAR 1853.-1856.****Milan Spaić**

Medika College of Vocational Studies, Belgrade, Serbia

Published Online: 30 October 2023**Published in Print:** 1 November 2023**DOI:** 10.58424/annnurs.aka.12x.g3e**Abstract**

Background: Ms. Florence Nightingale (F.N.) has been recognized as the founder of modern nursing. She had a prominent role in organizing the medical service for the British army in the Crimean War.

Aim: The goal of the research was to determine the role and contribution of F.N. to the medical service during the Crimean War, her original organizing arrangements, and novel treatment modalities in the setting of a mass casualty situation. The impact of her war experience on her psychological condition has been assessed.

Methodology: The research was done through a review of the historical documents, considering the work and the role of F.N. in the British Army medical service during the Crimean War.

Result: The passionate work of F.N. in the field hospital earned her the nickname Angel of Crimea. She introduced novel methods of nursing and sanitation that reduced the mortality rate in the British Army by 70%. However, after the war, on her return home in England, she

showed mood changes consistent with what is nowadays known as posttraumatic stress disorder.

Conclusion: Engagement in the medical service during the war carries the inevitable risk of the development of posttraumatic stress disorder. This should be considered a real and obvious threat for medical personnel involved with the treatment of the injured during the war, i.e., the mass casualty situation. The contribution of F.N. to the organization and efficacy of the military medical service of the British Army has been discussed.

Keywords: Florence Nightingale, Crimean War

Conference Paper

DEVELOPMENT DIRECTIONS OF PROFESSIONAL NURSING EDUCATION

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Abstract

Background: With the signing of the Bologna Convention by the Republic of Serbia, higher schools were reformed into higher vocational schools for a period of three years. The paper analyzes the education programs of professional healthcare workers and their importance for the business of modern healthcare institutions.

Method: A survey was conducted that included the gender, age, and educational structure of the respondents, the number of children and household members they live with, the length of service and the type of employment relationship of the respondents, and the attitudes and opinions of health workers.

Results: The results of a survey conducted among students of specialized studies at the High School of Professional Studies in Belgrade are shown in tables. The importance of higher

education for healthcare workers for the successful operation of healthcare institutions was confirmed.

Discussion: The authors dealt with this problem in the course of their work as professors, and their observations, which they presented at expert meetings, were cited in the literature.

Conclusion: Based on the results of the work, the conclusions were reached that knowledge from the management of the work organization helps in acquiring managerial positions in the institution and that the acquired skills and abilities encourage the staff in carrying out the social mission. Health workers have shown that they want to improve their profession and support changes and additions to the school's program contents in accordance with the progress of medicine.

Keywords: attitude, education, students, nursing, nurses, schools

Professional Paper**PSYCHIATRIC NURSING AS AN INTEGRAL PART OF NURSING PRACTICE IN THE PSYCHIATRIC WARD - A NARRATIVE REVIEW****Srdan Živanović¹, Jelena Pavlović¹, Natalija Hadživuković¹, Olivera Kalajdžić¹, Ljubiša Kucurski²**¹Faculty of Medicine Foča, University of East Sarajevo, Republic of Srpska, Bosnia and Herzegovina²Medical College, Prijedor, Republic of Srpska, Bosnia and Herzegovina**Received:** 12 October 2023; **Revised:** 25 October 2023; **Accepted:** 27 October 2023; **Published:** 30 October 2023**DOI:** 10.58424/annnurs.t36.r1e.4qk**Abstract**

Psychological care involves caring for the patient's psychological needs using a range of skills such as listening, perceiving, communicating, and empathizing, with the ultimate res of alleviating human suffering. The nurse spends the most time with the psychiatric patient; she is with the patient from his admission to the hospital, during his stay, until he leaves the hospital. Observing the patient's behavior, she determines problems in health care. In order for a nurse to solve this problem, she must be educated, experienced in her professional vocation, and have a good knowledge of the healthcare process, because that is the only way she can make an appropriate plan and choose the most appropriate interventions. In addition to knowing the process of health care, a nurse must also be extremely patient and possess certain communication skills due to the nature of the illnesses of patients suffering from psychiatric disorders. Therapeutic communication is actually the core and essence of all interactions between a nurse and a patient. It is often stated that it is the nurse who takes care

of the psychiatric patient and who has the most face-to-face contact with patients. The nurse deals with the total personality of the psychiatric patient, and therefore she applies models that make the assessment of the patient's needs the basis of health care. The main goal of this scientific review is to investigate and analyze the role of psychiatric nursing as an indispensable element in nursing practice, explore its importance for improving the quality of health care and patient well-being, and provide guidelines for the integration of psychiatric nursing in nursing practice.

Keywords: communication, nursing, nurse, patients, psychiatry, psychology

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Introduction

Nurses have a professional obligation to create a zone of mental comfort in their work environment - a pleasant atmosphere, acceptance, understanding, tolerance, empathy, and trust. In her definition of nursing, Virginia Henderson states that nurses contribute to health, healing, and a peaceful death¹. This task cannot be achieved without the component of psychiatric nursing². Psychiatric nursing involves caring for the patient's psychological needs using a series of skills such as listening, perceiving, communicating, and empathizing, with the ultimate goal of alleviating human suffering³. The World Health Organization warns that there is no health without mental health. Mental health is an integral part of normal functioning in everyday life and constitutes harmony between physical and mental health. Over the last two decades, there has been a growing trend in the number of hospitalizations due to psychiatric disorders⁴. The lack of specialists in psychiatry, both in terms of psychiatrists and psychiatric nurses, is evident worldwide⁵. The nurse spends the most time

with the psychiatric patient; she is with the patient from admission to the hospital, during their stay, until they leave the hospital. By observing the patient's behavior, she identifies healthcare problems. In order for a nurse to solve this problem, she must be educated and have a good knowledge of the health care process, because that is the only way she can make an appropriate plan and choose the most appropriate interventions. In addition to knowing the healthcare process, the nurse must be extremely patient and possess certain communication skills due to the very nature of the mental illness of patients who are treated in a psychiatric ward⁶.

Integrating psychiatric nursing through therapeutic communication with psychiatric patients

Back in the late eighties of the 19th century, Florence Nightingale indicated the importance of "the communication that is established between the nurse and the patient"⁷. Her quote from that period is often mentioned: "Always sit within the patient's line of sight, so that when you talk to him, he does not have to turn his head to look at you, where she clearly indicated the importance of establishing non-verbal and therapeutic communication with the patient"⁷. Communication, as a very complex process, is a professional competence that a nurse has during the provision of health care. Communication skills are of great importance in the relationship between a nurse and a psychiatric patient because careless communication can create numerous misunderstandings and problems, such as increasing the patient's anxiety and aggressiveness. On the other hand, good communication between the psychiatric patient and the medical staff is one of the most important prerequisites for accepting the disease, starting treatment, and cooperating—that is, providing health care to such a patient⁸.

There are few professions in which people are so oriented towards others, i.e., to interacting with other people, such as the job of a nurse. To understand the patient, the nurse must possess, in addition to professional competencies, communication skills. Communication is the sending of verbal (voices, words) and non-verbal (facial expression, body movements, etc.) signs for the purpose of exchanging information or emotions between two or more people. Whenever human beings interact, some kind of communication takes place between them. The patient's first contact with the healthcare staff marks further cooperation. It is the nurse who creates, initiates, leads, and ends the first communication. That first communication can be good or flawed, depending on the expertise of the nurse and her communication skills. For cooperation with the patient to be of high quality, the first meeting and communication with the patient should be warm, accommodating, and professional. The conversation should start spontaneously, effortlessly, and patiently, without nervousness or limiting the time of communication. Every patient needs professional help from a doctor and a nurse, which includes a conversation that will help the patient accept his health problems and needs. A nurse should discuss with the patient:

- calm (no rush, same tone of voice),
- precise (no redundant words and data, no terminological ambiguities or uncertainties),
- argued (use only verified data, never guesses or partial information)⁹.

Psychiatric departments of health institutions have always been considered extremely stressful environments for staff who directly deal with and care for patients with aggressive and unpredictable behavior. Psychiatric wards include numerous patients suffering from

several types of mental disorders. Most often, it is difficult for a nurse to establish effective communication with such patients, even in the case of an experienced nurse¹⁰. A psychiatric nurse, as a member of a psychiatric medical team, uses a patient-oriented approach, i.e., tries to help the psychiatric patient mobilize his resources and abilities for the purpose of improvement, recovery, and maintenance of mental health. This patient-centered approach is a nursing process that includes assessment, planning, nursing diagnosis, implementation, and evaluation. All steps of the health care process and interaction with the psychiatric patient are dependent on therapeutic communication. Therapeutic communication is still important as the core and essence of all nurse-patient interactions. It is often stated that the nurse, as a member of the professional team caring for the psychiatric patient, has the most face-to-face contact with the patient. The nurse doesn't just address the patient's current health issues but also the complete personality of the psychiatric patient, applying the healthcare process as a multi-step, scientifically based method in nursing practice¹⁰.

The communication we use to help others has therapeutic value. Therapeutic communication helps the patient make plans, solve problems, and alleviate negative emotions. Any communication achieved in interaction with the patient can be therapeutic, whether it is a short phone call, history-taking, or similar¹¹.

Therapeutic communication helps nurses to:

- Establish a therapeutic nurse-patient relationship.
- Determine the most important concerns of the patient at that moment.

- Assess the patient's perception of the problem while it is happening; it includes detailed activities (behavior and messages) of people involved in the patient's thoughts and feelings towards the situation, others, and himself or herself.
- Make it easier for the patient to express emotions.
- Teach the patient and family the necessary care and nursing skills.
- Recognize the patient's needs.
- Apply interventions designed to take care of the patient's needs.
- Lead the patient towards establishing a plan of action for a satisfying and socially acceptable resolution of situation¹².

The psychiatric nurse tends to concentrate on a structured hospital routine that allows for short periods of interaction between the nurse and the patient. This is a big problem because it is impossible for a nurse to cope with the burden of nursing work and, at the same time, have time for therapeutic communication with the patient¹⁰. Therefore, nurses, especially in clinical hospital practice, should have auxiliary nursing staff, who do not need professional nursing knowledge and experience but nursing instructions and supervision. Without support staff, nurses are professionally undervalued and abused, and their precious time, which they should dedicate to patient care and health care work, is wasted².

In a meta-analysis conducted by O Popa-Velea et al., which included a series of 15 bibliographic references in indexed journals from 1975 to 2010, it is stated that there is a positive correlation between communication skills and adherence to health recommendations. Also, good communication skills affect easier tolerance of chronic diseases, reduction of

additional psychiatric comorbidities, reduction of treatment costs, and a better feeling of patient control, which is directly instructed by therapeutic communication by a health worker, is cited as a key element¹³.

Interpersonal skills

The interpersonal skills that nurses learn are based on social psychology research on communication and social skills, combined with ideas from counseling psychology and psychotherapy. These skills are not specific to mental illnesses or psychotic conditions and disorders; instead, they involve generic listening skills (eye contact, body position and orientation, attention, whispering, use of open-ended questions, reflection, paraphrasing, summarizing, questioning, demonstrating empathy, etc.) coupled with identification of the underlying problem and approaches to resolution¹⁴.

Effective interpersonal skills are central to the nurse's ability to create a strong therapeutic relationship with the patient. As part of health care for psychiatric patients, communication skills form the basis of any intervention. These skills represent the building blocks, or, as Stevenson describes them, "alpha and omega—basic techniques and principles in which anyone involved in the clinical practice of caring for psychiatric patients must be highly skilled." To communicate effectively, a psychiatric nurse must be skilled in the use of communication tools, and this implies knowing which skill to use and why and the ability to skillfully move from one skill to another when the purpose of the interaction requires it. In addition, realizing that different clients and patients have different needs, it is inevitable that

the medical psychiatric nurse will use different skills with different patients in different circumstances in psychiatric institutions. As Stevenson points out, "one size does not fit all".

The communication skills mentioned include:

- Listening
- Paraphrasing
- Summarizing
- Examination
- Non-verbal communication¹⁵.

Empathetic approach of the nurse - greater patient safety during treatment

When arriving at the hospital, the patient is scared, insecure, and distrustful, so he tries to find all this in a positive sense in the medical staff, which he shows in his own way. It is important for him to feel safe, and security is provided by the medical staff, who, with their communication skills, empathic approach, and individual approach, have a great influence on creating a positive effect on the ward. The approach of the nurse when distributing medicines is also important. The patient counts the pills and is sometimes confused by the lack or excess of pills, which happens when the doctor changes the therapy. He is confused by the change in the color of the tablet (yellow for one, green for another, blue for the third, etc.). The nurse is the one who will explain to him and tell him what is happening. A calm, steady voice will give the patient the assurance that he is getting the right medicine in the right way. In such situations, the skill of the nurse in dealing with the patient comes to the fore. The patient lives in his own world, in which he sometimes feels fear and panic and seeks help from the nurses. He asks to be fixed in a protective shirt because he states that he feels safe in it for himself and his surroundings. A nurse is a person who recognizes the patient's fear and looks for a

way to help him. We can often see that the patient crawls into bed and covers his head. The nurse must have the ability to discover the reason for the bed crawl and provide the patient with security and confidence through conversation. A frequent problem is moving patients from one room to another (from acute rooms to a quieter part of the ward). Their words are: "I learned to be here. You are close to me. What if I get sick in the other room? How will I get to you?". Every confession by the patient that he feels bad, that he has voices, and that he feels fear is a sign that he feels safe with the nurse because he knows that she will help him. Sometimes the patient perceives the nurse as a mother. For some patients, the mere presence of a nurse provides security¹⁶.

Conclusion

Any illness, especially hospitalization, leaves negative consequences for all people, affecting all aspects of health. A warm word, psychological support, encouragement, and understanding provided by a holistic approach to the patient act as personal sedatives ordered in the psychiatric ward. Health care as a scientific discipline in the nursing profession has long relied not only on physical care. Psychiatric nursing, together with obstetrics, the therapeutic aspect of care, and health education, form an integral part of modern nursing practice. By integrating psychiatric nursing into practical work with the patient, nursing acquires a new dimension in comprehensive healthcare through the health care system.

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Review Article

HPV TYPING AS THE METHOD OF CHOICE IN THE PREVENTION AND EARLY DETECTION OF CERVICAL CANCER

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Abstract

Background: Human papillomavirus (HPV) is recognized as the primary cause of cervical cancer (CC), and significant coexisting factors have also been identified. CC is considered a curable disease because it has a long preinvasive period. It is possible to organize effective screening, and the treatment of preinvasive lesions is successful.

Aim: To show the importance of HPV typing in the early detection of premalignant cervical disease.

Method: Literature review, synthesis, and extraction of key professional and contemporary literature.

Results: Depending on the methods used in identification, the presence of different types of HPV was identified in about 90% of intraepithelial neoplasia and CC samples. HPV genotyping plays an important role in the detection of dysplasia and helps to reduce the number of false-positive Pap test results. Randomized controlled trials have shown that CC screening with HPV testing offers greater protection against cervical precancer and cancer compared with cytology-based screening. To date, it has been proven that HPV 16 and 18 genotypes have the highest oncogenic potential. These two genotypes are responsible for about 70% of all squamous cell carcinomas, 30–40% of vulvar cancers, and about 85% of cervical adenocarcinomas. According to a recent report, 48 (35%) of 139 countries recommended HPV-based cervical screening, with most currently switching from cytology to HPV testing.

Conclusion: HPV typing can be of great benefit in the early detection of malignant transformation of infected cells and the prevention of CC.

Keywords: cervical cancer, human papillomavirus, screening

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Introduction

Today, it has been proven that infection with oncogenic types of human papillomavirus (HPV) is the main etiological factor for the development of cervical cancer CC^{1,2}. There are over 200 HPV genotypes, and only 50 infect the epithelial cells of the skin and mucous membrane of the anogenital region³.

Papillomaviruses are DNA viruses and belong to the Papillomaviridae family^{4,5}. The key event is the entry of the virus into the cell⁶. The virus enters the basal and parabasal layers of the epithelium through damage to the epithelium in the cervical transformation zone (Figure 1)⁷. The virion binds to the cellular receptor $\alpha 6$ integrin^{8,9}. Different types of HPV penetrate cells by different mechanisms. The malignant potential of HPV depends on the frequency of viral integration and is different for different types of HPV. After the virus enters the cell, HPV infection can take three different forms: latent, which can only be detected by molecular biological methods (HPV typing), subclinical, which is diagnosed by colposcopy and exfoliative cytology, and clinical. Most genital infections are latent and subclinical^{10,11}.

Most HPV infections in young women resolve spontaneously, usually within a 24-month period. The heterogeneous outcome of epidemiological studies may be due to several important factors. First, there appear to be significant differences in HPV prevalence in different populations regarding age, frequency of cytologic abnormalities, and diversity of HPV genotypes. Second, multiple sampling and HPV-DNA detection techniques were used, with different sensitivities and specificities, which can significantly affect detection rates¹².

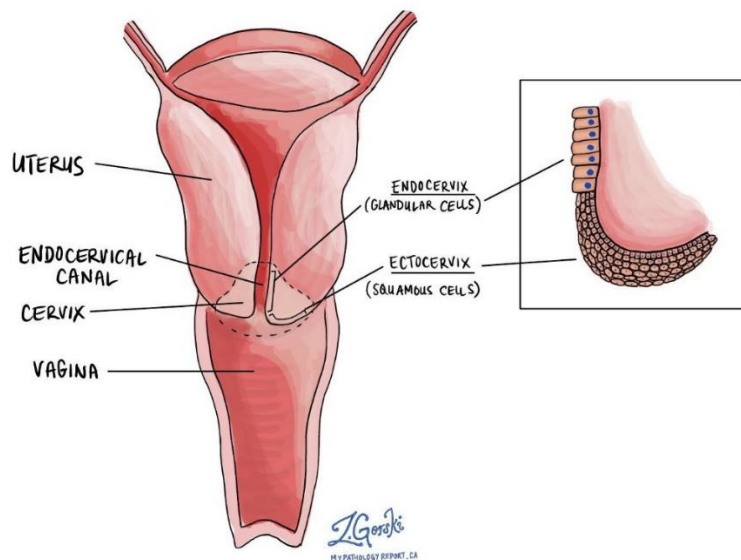
In over 99% of cases, the appearance of CC is preceded by persistent infection of the cervical epithelium with high-risk types of HPV^{3,4}. In cases of persistent infection, there is a shedding of the viral ring and the integration of the viral genome into the host genome in the basal cells of the squamous epithelium^{6,12,13}. The natural course of HPV infection, including the mode of transmission of the virus, the development of persistent infection, clearance of the virus, and interaction with the immune system, is only partially known. There is currently no established definition of persistent HPV infection. One study suggested that women with mild or moderate dyskaryosis should be referred for treatment only after persistent HPV infection for at least 6 months. However, the detection of HPV-DNA in a consecutive sample should include genotyping or even analysis of molecular variants to confirm the persistence of the same virus over time¹³.

Molecular biological tests have proven that cervical lesions of low-grade LSIL (low-grade squamous intraepithelial lesion) differ from cervical lesions of high-grade HSIL (high-grade squamous intraepithelial lesion)^{6,12}. In cases of HPV infection, 9 to 15 years pass from the appearance of initial, mild, and moderate premalignant low-grade cervical lesions of the LSIL type to the development of high-grade cervical lesions of the HSIL type and CC¹⁴.

Based on epidemiological, molecular, and clinical observations on the association between HPV infection, premalignant cervical lesions, and CC¹⁵, in 2003, the International Agency for Research on Cancer (IARC) proposed a division according to the oncogenic potential of HPV virus¹⁶. According to this division, types of low oncogenic risk include HPV types 6, 11, 40, 42, 43, 44, 54, 61, 70, 72, 81 and SR6108; types of high oncogenic risk include HPV 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, 68, 73 and 82; and types 26, 53, and 66 are currently

considered to be of probably high oncogenic risk^{15,16}. This categorization is not definitive¹⁵ and changes with the discovery of new genotypes. Recent research indicates that the malignant potential of HPV depends on the frequency of virus integration and is different for different types of HPV. To date, it has been proven that HPV 16 and 18 genotypes have the highest oncogenic potential^{17,18}. The oncogenic potential of HPV 16 is about 53%, and HPV 18 is about 18%. These two genotypes are responsible for about 70% of all squamous cell carcinomas, 30–40% of vulvar cancers, and about 85% of cervical adenocarcinomas¹⁴. Other HPV types have less oncogenic potential; HPV 31 is about 3%, and HPV 56 is less than 1%. The most common HPV types with low oncogenic potential are HPV 6 and 11 and they are detected in about 90% of genital warts (condylomas)¹⁸. These types are not associated with high-grade squamous lesions or CC.

Figure 1. Cervical transformation zone



The aim of this work was to show the importance of HPV typing in the early detection of premalignant cervical disease.

Method

Literature review, synthesis, and extraction of key professional and contemporary literature.

Results

Epidemiological aspects of CC risk

Sexual and reproductive characteristics. The risk factors for the occurrence of CC contrast with the risk factors for breast cancer: late menarche (after the age of 15), early first pregnancy (before the age of 18), a large number of births, and abortions¹². The greatest association exists between the cervical canal, preinvasive lesions, and HPV infection. Depending on the methods used in identification, the presence of different types of HPV was identified in about 90% of intraepithelial neoplasia and CC samples¹⁹.

Socio-economic status and ethnic origin. It is considered that socio-cultural habits have a significant influence on sexual habits as well as on reproductive characteristics. Unlike breast carcinoma, CC is more common in women with lower socioeconomic status¹⁹.

Use of hormonal preparations. Several studies, including multinational studies by the World Health Organization, have given conflicting results on the impact of oral contraception as a risk factor¹⁹. It is believed that today, close to 61 million women in the world use oral contraception and that its long-term use is a risk factor for the occurrence of CC²⁰.

Nutrition. The most attention is paid to the amount of fat in the diet. Animal experiments have shown that high-fat foods increase the frequency and decrease the length of the latent period. In later case-control and cohort studies, a rather uneven relationship was found due to

confounding factors¹⁹. The results of epidemiological research indicate the protective action of fruits and vegetables²¹.

Way of life and habits. Physical activity reduces the risk of CC¹⁹. Drinking alcohol 2-3 times a day increases the risk by about 25% compared to non-drinkers²⁰. Many epidemiological studies indicate that smoking increases the risk, and the harmful effect of the number of carcinogens in tobacco smoke has been proven¹⁹.

Family history. The risk of developing CC is 1.5-2 times higher in women whose first-degree relatives have the disease. The risk is twice as low if it is a second-degree relative. The risk increases if the disease is detected in a relative before the age of 40-45. years of life. The onset of the disease at a young age is the strongest indicator of genetic predisposition¹⁹.

Importance of detection and genotyping of HPV

According to the data of the Cancer Registry in the Republic of Serbia for the year 2019, the incidence of the disease in Serbia is between 12/100,000 and even 35/100,000, the highest at the age of 35, but the highest age-specific disease rates are at the age of 50 to in the 59th year of life²⁰. Detection and genotyping of HPV is important for detecting high-risk genotypes that cause CC. In Serbia, unfortunately, between 300 and 900 women die annually from CC²⁰. Today, the detection of high-risk HPV is classified as a diagnostic method through three models¹⁹.

1. The test of choice for women with a borderline cytological finding of the presence of atypical squamous cells of undetermined significance (ASCUS), atypical glandular cells (AGC), and squamous intraepithelial lesions (SIL) that will need further follow-up

2. Primary test - alone or in combination with a Pap test for early detection of CC precursors.

3. Follow-up test after excisional treatment of H-SIL. It has been proven that a positive HPV test after the treatment of SIL has higher sensitivity compared to repeated cytology, and for this reason, the HPV test has been introduced into the follow-up protocols after the treatment of SIL, and double testing with a Pap test and an HPV test six months after the procedure is recommended. Growing knowledge about the relationship between HPV infection and CC has led to the creation of prophylactic vaccines aimed at primary prevention of the disease. Several commercial vaccines for different HPV types are in use today. There are known bivalent (against HPV 16 and 18), quadrivalent (against HPV 6, 11, 16, 18), and nine-valent (against HPV 6, 11, 16, 18, 31, 33, 45, 52 and 58) vaccines¹². HPV genotyping plays an important role in the detection of dysplasia and helps to reduce the number of false-positive Pap test results. Standard laboratory diagnosis of HPV infection involves the application of tests to prove the presence of the virus, viral antigen, or viral nucleic acid in clinical material or serological proof of the presence of specific antibodies^{19,20} (Table 1)

Table 1. Diagnosis of HPV infection

Isolation: cannot be cultivated
Direct virus detection
Electron microscopy
Direct detection of viral antigen, PAP, IF, ELISA
Serological diagnostics - rarely used
Hybridization: Southern blot, dot blot, ISH, filter ISH
PCR

Screening

The goal of screening for CC is to reduce the number of cases and the number of deaths from this disease. In addition, early detection and successful treatment significantly improve the quality of life of women, enable future births, and, from an economic aspect, reduce treatment costs many times over. In countries where screening is well organized, the number of sick and dead women has been significantly reduced. The European recommendations are: starting screening between the ages of 20 and 30 and regular Pap smear examinations every 3 to 5 years, until the age of 60 to 65. The screening program should be organized, with quality control at all levels.

In 2020, the World Health Organization (WHO) announced a global strategy to eliminate CC as a public health priority by reducing the incidence of CC to less than 4 per 100,000²¹. Over the past 40 years, secondary prevention by screening and treating preinvasive lesions has contributed to a significant reduction in incidence and mortality. Primary prevention with HPV vaccination is expected to further reduce the incidence²². In line with WHO recommendations, the Canadian Partnership Against Cancer has proposed an action plan to eliminate CC in Canada by 2030²³. Priorities of this plan include the implementation of CC screening which primarily uses HPV testing, and improved follow-up on abnormal screening results. Primary HPV testing is not currently performed but is expected to happen soon.

The introduction of cytological screening programs reduced the incidence of CC. However, these programs have failed to eliminate CC due to problems including test limitations and suboptimal coverage of screening activities. Randomized controlled trials (RCTs) have shown that CC screening with HPV testing offers greater protection against cervical precancer and cancer compared with cytology-based screening²⁴⁻²⁷. In 2021, the International Agency for Research on Cancer (IARC) reported that, in general, HPV DNA testing is more sensitive than cytology for detecting H-SIL and is associated with reduced rates of detection of these high-risk changes in repeat screenings, as well as greater rates of reduction in cervical cancer incidence than cytological analysis when using the same screening interval²⁸. According to a recent report, 48 (35%) of 139 countries recommended HPV-based cervical screening, with most currently switching from cytology to HPV testing²⁹.

Molecular testing for HR-HPV DNA can detect infection very early. Given that only a small number of women develop a disease that progresses to cancer, there is interest in defining secondary markers that have potential application in identifying women who should be

monitored more intensively because they are at higher risk of developing high-grade lesions, especially due to the fact that the positive predictive value of current screening methods in the vaccinated population will decrease³⁰. Then the impetus for new screening technologies or advances in the developed world is predominantly driven by the need to increase the positive predictive value of molecular diagnostics of HPV infections and reduce the over-management of low and often transient abnormalities. In these situations, several markers are under investigation.

HPV causes CC. The latest scientific evidence shows that screening for HPV is better than screening for abnormal cytology with the Pap test, so HPV testing is being implemented nationally. The main disadvantage is that more women will test positive and be referred for further diagnostics. Most of these infections are harmless and do not require treatment, and a balance must be struck by identifying women who have H-SIL changes and minimizing the unnecessary referral of anxious women³¹. The Randomized Trials in Screening to Improve Cytology (ARTISTIC) sampled 24,510 women undergoing cervical screening in Greater Manchester in 2001–2003. After 3 and 6 years, the same women were tested for HPV³². The patients were then returned for routine screening. They were followed through national cancer screening and registration records until the end of 2015. Comparing HPV results taken at baseline with results collected 3 years later, it was concluded that HPV infections are very persistent. About three-quarters of women with HPV infection but no abnormal cells clear their infections within 3 years. Their risk of developing cancer within 3 years is low (1.5%), so intensive monitoring is unnecessary. Furthermore, 40% of those who remain positive for human papillomavirus (HPV+) have cleared their initial infection, meaning they are also at much lower risk of disease than those with persistent infections³³.

Conclusion

Organized screening is of great importance for reducing the incidence and mortality of malignant tumors, but it is organizationally very demanding, as confirmed by the results obtained so far. It is necessary to continue working on strengthening organized screening for CC in the areas where screening is implemented and to introduce it in all areas of our country where there are conditions for its implementation. There is a plan to implement method-based tools and applications to facilitate the triage of abnormal test results for clinicians and when to refer for colposcopy. In the future, further HPV genotyping and molecular tests may help to better triage women with positive HPV tests to reduce unnecessary referrals for colposcopy. Vaccinated populations will also require less frequent cervical screening.

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