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# Nursing Students Opinion on Knowledge Need for Nursing Practice and Self Assessment of Adopted Competencies at the End of an Undergraduate Study Programme

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## Abstract

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**Aim.** The aims of this research were to obtain students' opinions on the necessary knowledge for performing nursing practice listed in EU directives, student self-assessments on adopted competencies and students' opinions on internships. This research was undertaken to determine whether there are differences in student responses depending on their previous education.

**Methods.** The final study included 61 third-year nursing students. Students voluntarily and anonymously completed a questionnaire that included information such as demographic data, learning areas according to Directive 2005/36/EC and competencies under Directive 2013/55/EU, and questions related to the need and length of internships at the end of the nursing programme.

**Results.** At the end of the study, students considered nursing knowledge to be the most significant knowledge (M=4.74), followed by communication skills (M=4.49), and clinical and basic medical sciences. Students rated research knowledge in nursing as the least significant. Students who had not completed secondary nursing school gave statistically significant higher estimates related to the significance of required knowledge (p=0.035). Students were cautious in their self-assessments of the acquired competencies of nursing practice. They rated their ability to empower individuals, families and groups towards healthy lifestyles and self-care the highest; and their ability to independently initiate

life-preserving immediate measures and to carry out measures in crises and disaster situations the lowest. Most of the respondents (74.6%) stated that an internship was required after graduation, and that it should last up to 6 months. Students who responded that an internship was required had higher estimates related to the necessary knowledge for performing a nursing profession ( $p=0.033$ ).

**Conclusion.** Employment in the health care system is stressful and challenging for a newly graduated nurse. To facilitate the transition from the role of a student to the role of a nurse, the cooperation of the education system and the health care system is necessary.

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## Introduction

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Nurses represent the largest group of healthcare workers in the Republic of Croatia, and their primary activity is nursing care, which is often a complex and high-performing job requiring specific knowledge and skills. Most of the nurses ( $N=30.413$ ) are employed in the health care system and according to the data of the Croatian Health Statistic Yearbook for 2016, they are the largest group of professional employees among healthcare workers and associates (44.4%) (1). Most of the graduate nursing students are employed in the health care system. The health care system seeks out nurses who are competent specialists who can safely provide holistic care to different patient groups.

A large number of students enrol in nursing studies for reasons such as the desire for human contact, the ability to help others, the feeling of doing something useful, and job security (2-7). Another reason for choosing nursing as a profession is previous contact with nurses (5, 8, 9). Many students who are beginning nursing programmes have an idealistic picture of nursing (10, 11, 12).

## Nursing education

Today, nursing education in the Republic of Croatia is conducted on two levels - secondary and tertiary education.

To equalize the quality of nursing education and to ensure the quality of nursing care provided by nurses, nursing education is regulated by a number of regulations. The minimum standards for nursing education at the EU level are set out in Directives 2005/36/EC (13) and 2013/55/EU (14), which define the minimum standards for the content and duration of education, and the directive recommendations are incorporated into national laws.

With the aim of raising the level of knowledge and the scope of competencies acquired, to ensure the provision of better quality nursing care, beginning in 1999, three major reforms of higher nursing education in Croatia have been implemented, as well as a number of minor changes in curricula at individual higher education institutions.

In 1999, the length of nursing programmes was extended from two to three years, and the study programme places greater emphasis on nursing care.

The introduction of the Bologna process has led to changes in the system of nursing education, and since 2005, a newly implemented nursing education curriculum has been consistent with the recommendations of the World Health Organization on nursing and midwifery education (15) and the recommendations of the European Union contained in Directives 77/452/EEC (16), 77/453/EEC (17) and the Munich Declaration (18).

The University of Applied Health Sciences began teaching specialist graduate professional studies in Public Health, Management in Nursing, and from the academic year 2009/10, Psychiatric Nursing and Clinical Nursing has been offered. Since 2010, after completing a three-year undergraduate study, students can continue their studies at two-year university graduate studies at School of Medicine in Osijek or Zagreb, and at Faculty of Health Studies Rijeka, and at nursing graduate studies in Split and Zadar.

Changes in nursing education in Western European countries due to social change, health care reform, and nursing professionalization (19) have impacted the higher education of nurses in Croatia. Davies called the Bologna process the silent revolution in higher nursing education in Europe. Harmonization with the Bologna Declaration has led to significant changes and begun to standardize nursing education across Europe (20).

By including Croatia in the European Union, nursing programmes are further aligned with nursing

education recommendations at the level of individual higher education institutions. At the national level, to harmonize nursing education in the Republic of Croatia in 2014, a bachelor's degree programme was created in 2014, called Core Curriculum. This study programme is in compliance with the provisions of the Directives 2005/36/EC and Directives 2013/55/EU and contains a common part of compulsory courses that carry 158 ECTS of 180 ECTS credits, while elective courses have been proposed by each higher education institution. Beginning in the academic year 2015/16, all nursing undergraduate students in Croatia are taught compulsory courses by a harmonized programme (21).

The European Union directives mention nursing, basic sciences and social sciences as the main areas of learning. In addition to the contents of the programme directive, education is conducted through theoretical and clinical teaching of at least 4600 hours of learning. In this 4600 hours, theoretical training should cover at least one third of the minimum duration of training, and clinical training at least one-half of the minimum duration of training (13).

Clinical training implies learning as a part of a team in direct contact with healthy or sick individuals and/or the community, including how to organize, provide and evaluate the necessary comprehensive nursing care based on the knowledge and skills they have gained. Nursing attendees learn not only how to work as part of a team, but how to lead the team, and how to organize overall nursing care, including health education for individuals and small groups within the health care system or in the community (13).

In Directive 2013/55/EU, emphasis is placed on acquiring competencies, and by completing the studies, the student should adopt the following competencies (14):

- competence to independently diagnose the nursing care required using current theoretical and clinical knowledge and to plan, organize and implement nursing care when treating patients on the basis of the acquired knowledge and skills;
- competence to work together effectively with other actors in the health sector, including participation in the practical training of health personnel on the basis of the acquired knowledge and skills;
- competence to empower individuals, families and groups toward healthy lifestyles and self-care;

- competence to independently initiate life-preserving immediate measures and to carry out measures in crises and disaster situations;
- competence to independently give advice to, instruct and support persons needing care and their attachment figures;
- competence to independently assure the quality of and to evaluate, nursing care;
- competence to comprehensively communicate professionally and to cooperate with members of other professions in the health sector;
- competence to analyse the care quality to improve his own professional practice as a nurse responsible for general care.

Students enrolled after July 1 2013 or after their country joins the European Union who complete the nursing study programme consistent with the recommendations of the directive are no longer required to perform internships. Immediately after the completion of their studies, they receive an Independent Work Permit (license).

Prior to this change, after completing the nursing programme, according to the Law on Health Care (22) and the Ordinance on the Internships of Health Professionals (23), students completed one-year internships that enabled them to acquire knowledge, skills and further preparation for independent work. After their internships, the nurses took the state exam, and after having successfully passed the exam, they were granted a license to work as nurses.

During the programme, through the process of professional socialization, students develop new knowledge and skills, attitudes, behaviours, values and ethical standards that become part of their professional identity. The most important elements for professional socialization are the education (teaching) and the observation of the behaviours of other nurses.

A great deal of professional socialization occurs when students have mentors in clinical practice and when students attend clinical practice. Gray and Smith describe the phases through which students pass through clinical practice (24). Before they begin clinical practice, students experience anxiety; during practice they encounter the reality of the workplace and experience cultural shock. During this phase, students are dealing with reality; they adopt routines and adapt to realistic situations. Then, the phase in

which students begin to feel like nurses, take on more tasks and more responsibilities, develop a holistic approach to the patient, assess, plan, implement and evaluate the nursing care performed. Anxiety occurs again at the end of the study (24). Anxiety at the end of the study is related to transitioning from a student to a nurse and taking full responsibility for the tasks performed. Students may be afraid of the consequences of a mistake, some of the students claim to have theoretical knowledge, but it is difficult to choose the best intervention and apply it (25).

Patricia Benner studied the transition from novice to expert professional and described the process of acquiring nursing skills in the following five stages: novice, advanced beginner, competent practitioner, proficient practitioner, and expert practitioner (26). Research suggests that a newly graduated nurse should be considered an advanced beginner (27), and employers would like to hire a least competent practitioner.

After graduation, the transition from a student to a newly graduated nurse is followed. In literature, this transition is described as a reality shock (28) or a transition shock (29, 30). A transition shock is the result of a change from the well-known role of a student to the lesser-known professional role of a nurse. Newly graduated nurses often describe feelings of anxiety, insecurity, inadequacy and instability. Their primary fears are that they will be declared clinically incompetent, will not provide safe care, will inadvertently injure the patient, or will not be able to cope with their designated roles and responsibilities (29,30).

Transition shock may be potentially dangerous in situations where there is a disparity between the expectations of a newly graduated nurse and the realities of the job, to an extent that the nurse quits nursing (31). To ease transition shock in work organizations, supportive mentoring strategies have been developed for new nurses to increase their readiness to work, reduce the effects of the reality shock and reduce the resignation of the profession (31).

The aims of this research were to obtain students' opinions on the knowledge necessary for performing nursing consistent with EU directives, students' self-assessments on adopted competencies and students' opinion on internships. This research aimed to determine whether there are differences in student responses depending on previous education.

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## Methods

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### Study design

A cross - sectional study was conducted on full time students in their final year of nursing studies.

### Examinees

The study was conducted utilizing full time nursing students at the University of Applied Health Sciences, who attended the third (final) year of study in 2017.

Of the 103 enrolled students in the third year of study, the questionnaire was completed by 61 students (59%). Most students were women 91.8% (N=56). The age ranged from 21 to 40 years, and the average age was  $M=22.89$  ( $SD=2.887$ ). At the time of the survey, none of the respondents were employed as nurses. Most respondents had completed gymnasiums 54.1% (N=33), high school for nurses was completed by 9 respondents (14.8%), and 19 students completed other secondary school.

### Data collection and instrument

Students voluntarily filled out an anonymous questionnaire that included demographic data, learning areas according to Directive 2005/36/EC and competencies under Directive 2013/55/EU, and questions related to the need and duration of internships at the end of the study.

Data were collected during May and June 2017, during the classes of final semester of the programme. The questionnaires were delivered to all the students who attended classes in several different terms.

The students answered the questions by completing the scale with responses ranging from 1 to 5 regarding to what extent they consider the knowledge specified in the directive necessary for performing nursing practice (1 indicates strongly disagree and 5 fully agree) and to what extent they are capable of performing a particular group of competencies (1 represents not capable, 5 represents fully capable). When answering questions about the internship, students chose one of the answers offered.

## Ethical criteria

The ethics committee of University of Applied Health Sciences approved the implementation of this research. Examinees received a verbal explanation of the purpose of the research. They also received a written notice outlining the purpose of the research and were given notice that returning the completed questionnaire meant consent to participate in the research. The students participated in the research voluntarily and anonymously.

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## Results

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Data were entered into an Excel spreadsheet and analysed in SPSS 17.0 software for statistical analysis.

Descriptive statistics of the results on the questions about the necessity of knowledge specified in the directive for performing nursing practice are shown in Table 1. The range of arithmetic mean was from 3.16 to 4.74. The highest value of the arithmetic mean of the respondent's response was recorded for the following item: nursing care (M=4.74); the next highest value was for communication skills (M=4.49).

The lowest value of the arithmetic mean of respondent responses was observed for the following item: research in nursing (M= 3.16); the next highest value was for legal aspects of nursing and health (M=3.67).

When analysing responses regarding self-assessment of the adoption of competencies (Table 2), the highest value of the arithmetic mean of the respondent's response was observed for the following competency: the ability to empower individuals, families and groups towards healthy lifestyles and self-care (M=3.85); the next highest value was for the ability to independently give advice to, instruct and support persons needing care and their attachment figures (M=3.43).

The lowest value of the arithmetic mean of respondents' responses is recorded for the following competency: the ability to independently initiate life-preserving immediate measures and to carry out measures in crises and disaster situations (M=3.07) the next lowest value was for the ability to indepen-

dently assure the quality of and to evaluate nursing care (M=3.23); followed by the ability to comprehensively communicate professionally and to cooperate with members of other professions in the health sector (M=3.23).

Most of the respondents (74.6%) indicated that an internship was required after graduation, while 25.4% claimed that it was not a requirement. A total of 19.1% of respondents indicated that such an internship should last 3 months, 53.2% said 6 months, while 27.7% said that the internship should last 12 months (one year) (Table 3).

For the statistical analysis of the data, the Kruskal Wallis test and Mann-Whitney U-test were applied with significance determined as  $p < 0.05$ . Non-parametric tests have been selected because of the relatively small number of subjects present in certain groups, i.e., the number of subjects is less than twenty, and some of the observed groups of different sizes are present.

When analysing the results of the necessary knowledge for performing nursing practice and the self-assessment of the adoption of competencies with the Mann-Whitney U-test, no statistically significant difference was observed with respect to the gender of the respondent (self-assessment of competency  $p=0.175$ ; required knowledge  $p=0.874$ ).

The Mann-Whitney U-test results of the necessary knowledge and self-assessment of competencies with regard to the completed secondary school (nursing secondary school related to other secondary school) indicate that there is a statistically significant difference in the answers related to the necessary knowledge for performing nursing practice  $p=0.035$ . Higher results are reported by students who have not completed nursing secondary school. Analysis of the results of self-assessment of the adoption of competencies did not show statistically significant differences between the two groups of respondents ( $p=0.844$ ).

By analysing the results of the necessary knowledge, self-evaluated competencies and the opinion of the respondents on the need for internships using the Mann-Whitney U-test, a statistically significant difference was noted for the necessary knowledge for performing nursing practice in view of whether internships are required after completion of study  $p=0.033$ , i.e., students who indicated that internships are required provided higher responses related



Table 1. Student opinions on the knowledge needed for nursing practice

		N	%	M	SD
Basic sciences - anatomy and physiology, pathology, bacteriology, virology and parasitology, biophysics, biochemistry and radiology	Strongly disagree	0	0		
	Disagree	4	6.6		
	Neither agree nor disagree	5	8.2		
	Agree	30	49.2		
	Fully agree	22	36.1		
	Total	61	100.0	4.15	0.83
Social sciences - sociology, psychology, principles of administration, principles of teaching	Strongly disagree	0	0.0		
	Disagree	5	8.2		
	Neither agree nor disagree	12	19.7		
	Agree	30	49.2		
	Fully agree	14	23.0		
	Total	61	100.0	3.87	0.87
Clinical medical sciences (surgery, internal medicine, neurology...)	Strongly disagree	0	0.0		
	Disagree	1	1.6		
	Neither agree nor disagree	4	6.6		
	Agree	28	45.9		
	Fully agree	28	45.9		
	Total	61	100.0	4.36	0.68
Nursing care	Strongly disagree	1	1.6		
	Disagree	1	1.6		
	Neither agree nor disagree	1	1.6		
	Agree	7	11.5		
	Fully agree	51	83.6		
	Total	61	100.0	4.74	0.73
Communication skills	Strongly disagree	0	0.0		
	Disagree	3	4.9		
	Neither agree nor disagree	3	4.9		
	Agree	16	26.2		
	Fully agree	39	63.9		
	Total	61	100.0	4.49	0.81
Research in nursing	Strongly disagree	5	8.2		
	Disagree	11	18.0		
	Neither agree nor disagree	22	36.1		
	Agree	15	24.6		
	Fully agree	8	13.1		
	Total	61	100.0	3.16	1.13
Legal aspects of nursing and health	Strongly disagree	0	0.0		
	Disagree	8	13.1		
	Neither agree nor disagree	14	23.0		
	Agree	29	47.5		
	Fully agree	10	16.4		
	Total	61	100.0	3.67	0.91
Organization and management in nursing care	Strongly disagree	1	1.6		
	Disagree	3	4.9		
	Neither agree nor disagree	16	26.2		
	Agree	24	39.3		
	Fully agree	17	27.9		
	Total	61	100.0	3.87	0.94

**Table 2. Self-assessment of the adoption of competencies**

		<b>N</b>	<b>%</b>	<b>M</b>	<b>SD</b>
Competence to independently diagnose the nursing care required using current theoretical and clinical knowledge and to plan, organize and implement nursing care when treating patients on the basis of the acquired knowledge and skills	Not capable	0	0.0	3.35	0.73
	Capable to a lesser extent	8	13.3		
	Partially capable	24	40.0		
	Capable	27	45.0		
	Fully capable	1	1.7		
	Total	60	100.0		
Competence to work together effectively with other actors in the health sector, including participation in the practical training of health personnel on the basis of the acquired knowledge and skills	Not capable	3	5.0	3.42	1.08
	Capable to a lesser extent	11	18.3		
	Partially capable	11	18.3		
	Capable	28	46.7		
	Fully capable	7	11.7		
	Total	60	100.0		
Competence to empower individuals, families and groups towards healthy lifestyles and self-care	Not capable	0	0.0	3.85	0.73
	Capable to a lesser extent	2	3.3		
	Partially capable	15	25.0		
	Capable	33	55.0		
	Fully capable	10	16.7		
	Total	60	100.0		
Competence to independently initiate life-preserving immediate measures and to carry out measures in crises and disaster situations	Not capable	4	6.6	3.07	0.95
	Capable to a lesser extent	10	16.7		
	Partially capable	27	45.0		
	Capable	16	26.7		
	Fully capable	3	5.0		
	Total	60	100.0		
Competence to independently give advice to, instruct and support persons needing care and their attachment figures	Not capable	1	1.7	3.43	0.91
	Capable to a lesser extent	7	11.7		
	Partially capable	24	40.0		
	Capable	21	35.0		
	Fully capable	7	11.6		
	Total	60	100.0		
Competence to independently assure the quality of and to evaluate, nursing care	Not capable	1	1.7	3.23	0.79
	Capable to a lesser extent	8	13.3		
	Partially capable	29	48.4		
	Capable	20	33.3		
	Fully capable	2	3.3		
	Total	60	100.0		
Competence to comprehensively communicate professionally and to cooperate with members of other professions in the health sector	Not capable	4	6.7	3.23	1.06
	Capable to a lesser extent	10	16.7		
	Partially capable	20	33.3		
	Capable	20	33.3		
	Fully capable	6	10.0		
	Total	60	100.0		
Competence to analyse the care quality and improve his own professional practice as a nurse responsible for general care	Not capable	2	3.3	3.28	0.85
	Capable to a lesser extent	6	10.0		
	Partially capable	28	46.7		
	Capable	21	35.0		
	Fully capable	3	5.0		
	Total	60	100.0		

Table 3. Answers of nursing students to questions about the need and duration of internship

		N	%
Do you think that internship is required after graduation?	Yes	44	74.6
	No	15	25.4
	Total	59	100.0
If needed, how much time should it take?	3 months	9	19.1
	6 months	25	53.2
	12 months (a year)	13	27.7
	Total	47	100.0

to the necessary knowledge for performing a nursing profession. There was no statistically significant difference in the responses related to self-assessment of the adoption of competencies and the need for internships ( $p=0.138$ ).

There were no statistically significant differences in respondents' responses regarding the length of internships  $p=0.547$  (Kruskall Wallis test).

## Discussion

One of the aims of the research was to identify students' opinions on the knowledge necessary for nursing practice consistent with the EU directives. The highest arithmetic mean was observed for the knowledge directly related to the nursing practice - knowledge of nursing care ( $M=4.74$ ), clinical medical science ( $M=4.36$ ) and basic sciences ( $M=4.15$ ). The second highest means were for communication skills ( $M=4.49$ ), where 90.1% of the respondent's stated that they agreed and fully agreed that knowledge of communication skills is necessary for performing nursing practice. Calman states that patients consider interpersonal skills of nurses extremely important (32).

Although students consider research important for nursing practice (33), research knowledge is estimated to be the least necessary ( $M=3.16$ ). The reasons for this may be that at this level of education (bachelor's degree), students prioritize knowledge of nursing care, and research is considered as to knowledge to be acquired and applied after graduate studies. At the same time, the number of research papers in nursing

in day-to-day clinical practice is still small, and the students did not have much opportunity to see research conducted in a clinical setting; therefore, research is not perceived as a significant role for nurses.

Students coming from a gymnasium or other secondary schools gave significantly higher estimates of the necessary knowledge compared to students who had previously completed secondary nursing school.

Students in our research were cautious about self-assessment of the adoption of the competencies mentioned in the directive. In most situations, students stated that they are partially capable or capable, while very few respondents stated that they were fully capable (up to 11.7% of respondents on specific issues).

Similar results were obtained by Feng and Tsai (34) and Clark and Holmes (35), in which studies at the time of graduation and first employment of newly graduated nurses indicated that the new nurses did not feel ready for independent work. The students indicated that they had more specific knowledge from areas that they had studied more during the programme and thus possessed knowledge of certain areas in so-called "islands of knowledge," but that this knowledge is often difficult to integrate into nursing care (35). Students possess knowledge about technical skills, such as maintaining hygiene or drug administration, but they are scared of the scope of practice that is expected of them.

In our research, the highest assessment of the adoption of competencies was the ability to empower individuals, families and groups towards healthy lifestyle and self-care ( $M=3.85$ ), which can be related to the educational content that is being studied during the third year of study and is related to health promotion. Further, it can be assumed that, along with the afore-



mentioned competency, the theoretical knowledge required for this competency is related to the practical knowledge required for care, and therefore, studies give higher estimates. The ability to independently diagnose the nursing care required using current theoretical and clinical knowledge and to plan, organize and implement nursing care when treating patients on the basis of the acquired knowledge and skills ( $M=3.35$ ) is ranked fourth, which can be related to the complexity of competence involved in setting up a nursing diagnosis, as well as planning, organizing and conducting nursing care. The lowest estimates were the competency to independently initiate life-preserving immediate measures and to carry out measures in crises and disaster situations ( $M=3.07$ ), which shows that students are cautious and have serious doubts in evaluating competencies that emphasize self-reliance (without supervision of mentors or teachers) and the expected outcome (life-saving).

Meretoja and associates conducted research using the Nurse Competence Scale - self-assessment scale for competency on nurses employed in the hospital setting in Finland. The average result of nurses on a scale of 1-100 is 63.7, with the highest score being related to managing situations and activities, such as recognizing situations where patients are endangered, and responding appropriately to these situations, while lower estimates were given for competencies associated with quality assurance (36).

These results differ from ours, not significantly in average grades, but in areas where nurses feel more comfortable with competencies related to work experience and dealing with similar situations.

At the beginning of their work experience, there is a strong influence of self-esteem, but students often express doubt in their ability to adopt new knowledge and skills (37) and fear negative evaluation (38). As newly graduated nurses gain new knowledge and skills, their professional identities begin to develop, which contributes to an increase in self-esteem (38).

Most respondents in our research (74.6%) believed that an internship is required and should last up to 6 months. Students who give higher estimates of the necessary knowledge for performing nursing practice were significantly more likely to indicate that an internship was needed. At the end of their programme, students have anxiety related to the role they need to take, and the expectations of employers about the knowledge and skills they should have, so there are

strong opinions on the need for knowledge and internship. The students are familiar with the organization of the internship since it was compulsory until recently. Formal support systems for newly graduated nurses and mentoring systems are just starting to develop. From the last clinical practice to the beginning of work as a nurse, sometimes several months and even more than a year have passed, especially in situations where graduate study is undertaken.

Research suggests that when beginning work as a newly graduated nurse, the guidance and acceptance of experienced nurses in workplaces is an extremely important support. Qualities significant for the newly graduated nurse are preparation, responsibility, knowledge and self-confidence (39). In the research by Kovner and her associates, 87% of the respondents indicated that they worked with an assigned preceptor or mentor, 80% of respondents had education about organizational policies and procedures, and 68% of respondents went through additional theoretical and practical training (40).

Knowledge on the progress and professional development of newly graduated nurses is important for nurse managers. Health institutions should consider providing mentors for new graduated nurses. Mentoring is beneficial for work organization and for the newly graduated nurse, because mentoring contributes to the development of their self-confidence, communication skills, socialization in the work environment, and increased opportunities for progress and reduces stress (41). Newly graduated nurses look for jobs in work environments that focus on quality in nursing care and provide support at the beginning of work and allow them to adapt to the scope and complexity of practice (37). A systematic and organized workplace support programme for newly graduated nurses supports the development of the new nurse as a professional, accelerates the development of the new nurse's competence and self-confidence and increases retention in the institution (42). During employment, nurses want to continue to acquire knowledge and work under the supervision of a mentor to adopt as many specific interventions as possible on a particular site (37).

### Limitations of research

The main limitation of this research is related to the fact that the research was conducted using nursing students from only one higher education institution

and that in this generation of students, a greater number of respondents had previously completed gymnasium or some other secondary school, which was not a secondary school for nurses. Traditionally, most of the students enrolling in nursing studies have a pre-finished secondary school for nurses. Additionally, in the self-assessment of the adoption of competencies, the list of competencies was taken from the EU Directive, and several competencies were grouped into one competency, which could have impacted the outcome of the self-assessment. The study was conducted in one measurement at the end of the nursing programme, and it was not possible to determine the changes during the education and the impact of anxiety related to the completion of studies and expected employment to self-assessment. Future studies should be carried out using several nursing institutions, in two or three measurement points, and the obtained results should be compared.

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## Conclusions

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At the end of the studies, students considered knowledge in the field of nursing care, communication skills, clinical and basic medical sciences are the most important. They are cautious about the self-assessment and the adoption of competencies of nursing practice, and most respondents believe that internships are required and should last up to six months.

Employment in the health care system is a stressful and challenging change for a newly graduated nurse. Graduates have different expectations when they face the reality of the workplace. The employer wants to employ a competent employee capable of providing holistic and safe care to patients, and the inclusion of a newly qualified nurse in the work system is a challenge for the employer.

To facilitate the transition from the role of a student to the role of a nurse, the cooperation of the education system and the health care system is necessary. The goal should be to reduce the gap between current health care practices and education systems. The educational system should strive to ensure the adoption of prescribed nursing competencies, and the health care system should ensure the introduction and support of newly graduated nurses when recruiting.

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## MIŠLJENJA STUDENATA O POTREBNIM ZNANJIMA ZA OBAVLJANJE SESTRINSKE PRAKSE I SAMOPROCJENA USVOJENOSTI KOMPETENCIJA NA KRAJU STUDIJA SESTRINSTVA

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### Sažetak

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**Ciljevi** istraživanja bili su utvrditi mišljenja studenata o potrebnim znanjima za obavljanje sestrinske prakse navedenima u direktivama EU-a, samoprocjenu studenata o usvojenim kompetencijama te mišljenja o pripravničkom stažu. Cilj istraživanja bio je i utvrditi postoje li razlike u odgovorima studenata ovisno o prethodno završenom obrazovanju.

**Metode:** U istraživanju je sudjelovao 61 student treće godine redovnog studija sestrinstva. Studenti su dobrovoljno i anonimno ispunili upitnik koji je konstruiran za potrebe istraživanja, a obuhvaćao je demografske podatke, područja učenja prema Direktivi 2005/36/EC i kompetencije prema Direktivi 2013/55/EU te pitanja povezana s potrebom i trajanjem pripravničkog staža po završetku studija.

**Rezultati:** Pri završetku studija studenti smatraju najvažnijima znanja iz područja zdravstvene njege ( $M=4,74$ ), komunikacijskih vještina ( $M=4,49$ ) te kliničkih i temeljnih medicinskih znanosti. Najnižom procjenjuju potrebu za znanjima iz osnova istraživačkog rada. Više rezultate povezane s važnošću potrebnih znanja navode studenti koji nisu završili srednju medicinsku školu ( $p=0,035$ ). Studenti su oprezni prilikom samoprocjene usvojenosti kompetencija sestrinske prakse. Najvišom procjenjuju sposobnost usmjerenja pojedinaca, obitelji i skupina prema zdravom načinu života i skrbi o sebi, a najnižom sposobnost samostalnog pokretanja trenutačnih mjera za spašavanje života te provođenja mjera u kriznim i opasnim

situacijama. Većina ispitanika (74,6 %) navodi da je pripravnički staž potreban nakon završetka studija te da bi trebao trajati do šest mjeseci. Studenti koji smatraju da je pripravnički staž potreban navode više vrijednosti u odgovorima povezanim s potrebnim znanjima za obavljanje sestrinske profesije ( $p=0,033$ ).

**Zaključak:** Zapošljavanje novodiplomiranih medicinskih sestara u sustavu zdravstva i početak rada predstavlja stres i izazov za novodiplomiranu sestru. Kako bi se olakšala tranzicija iz uloge studenta u ulogu medicinske sestre nužna je suradnja obrazovnog i zdravstvenog sustava.

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**Ključne riječi:** studij sestrinstva, medicinske sestre, kompetencije, znanja

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