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COMPLEX HISTORY TAKING AND PHYSICAL EXAMINATION IN NURSING PRACTICE

Kompleksowy wywiad i badanie fizykalne w praktyce pielęgniarstwie

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A – Koncepcja i projekt badania, B – Gromadzenie i/lub zestawianie danych, C – Analiza i interpretacja danych, D – Napisanie artykułu, E – Krytyczne recenzowanie artykułu, F – Zatwierdzenie ostatecznej wersji artykułu

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Abstract (in Polish):

Cel pracy

Zidentyfikowanie czynników determinujących wykonywanie przez pielęgniarki kompleksowego wywiadu i badania fizykalnego. Materiał i metody: Badanie przeprowadzono w grupie 828 pielęgniarek (549) i studentów pielęgniarstwa (279). Kryteriami włączenia było: wykonywanie zawodu pielęgniarki lub studiowanie na kierunku pielęgniarstwo, ukończenie szkolenia w zakresie badania fizykalnego oraz dobrowolna zgoda na udział w badaniu. Autorzy badania zastosowali metodę sondażu diagnostycznego z zastosowaniem własnego kwestionariusza. Uzyskane wyniki poddano analizie statystycznej.

Wyniki

W praktyce zawodowej realizację kompleksowego wywiadu i badania fizykalnego pacjenta deklarowało tylko 42.8% pielęgniarek. Badani wskazali na istnienie trudności w realizacji wywiadu i badania fizykalnego w praktyce pielęgniarskiej tj.: małe wsparcie ze strony lekarzy, pielęgniarek, kadry zarządzającej oraz brak czasu/nadmiar obowiązków, brak wiedzy i umiejętności, brak akceptacji ze strony pacjentów, brak odpowiedniego sprzętu/pomieszczeń. Szkolenia pielęgniarek, lekarzy, kadry kierowniczej, zwiększenie obsad pielęgniarek, zmniejszenie obowiązków, możliwość współpracy/konsultacji z lekarzem oraz przystosowany lokal i odpowiednie jego wyposażenie oraz edukacja pacjentów mogą przyczynić się do likwidacji wymienionych wyżej trudności.

Wnioski

Małe wsparcie ze strony lekarzy i pielęgniarek oraz brak czasu spowodowany nadmiarem obowiązków, to główne czynniki niewykonywania przez pielęgniarki kompleksowego badania podmiotowego i przedmiotowego. Szkolenia pielęgniarek, lekarzy, kadry kierowniczej w zakresie nowych kompetencji pielęgniarek, zwiększenie obsad pielęgniarek, przystosowanie pomieszczeń oraz odpowiednie ich wyposażenie to elementy mogące zmotywować pielęgniarki do samodzielnego przeprowadzania wywiadu i badania fizykalnego pacjentów.

Abstract (in English):

Aim

Identification of factors determining nurse's performance of a comprehensive history taking and physical examination. Material and methods The material was collected in a group of 828 nurses and nursing students. Inclusion criteria were: practicing as a nurse or studying in the field of Nursing, passing training in Physical examination and voluntary compliance for participation in the study. The authors used the diagnostic survey method, with the application of their own questionnaire. Obtained results were statistically analysed.

Results

In practice, only 42.8% of nurses declared that a comprehensive interview and physical examination of a patient had been carried out. Respondents pointed out difficulties in the implementation of history taking and physical examination in nursing practice, i.e. low support from doctors, nurses, management and lack of time/excess of responsibilities, lack of knowledge and skills, lack of acceptance by patients, lack of appropriate equipment/rooms. Training of nurses, doctors, management staff, increasing the nursing staff, reducing and their duties, the possibility of cooperation/consultation with a doctor, adaptation of premises along with their appropriate equipment, and patient education may contribute to the liquidation of the above mentioned difficulties.

Conclusions

Little support from doctors, nurses and lack of time due to an excess of responsibilities are a major factors in the failure of nurses comprehensive history taking and physical examination. Training of nurses, doctors, and management staff in the scope of nurse's competence, increasing the number of nurses, adapting the rooms and their appropriate equipment are elements that can motivate nurses to conduct independently history taking and physical examination of patients.

Keywords (in Polish):

praktyka pielęgniarska, pielęgniarka, wywiad, badanie fizykalne.

Keywords (in English):

physical examination, nursing practice, nurse, history taking.

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Kompleksowy wywiad i badanie fizykalne

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Authors (short)

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Introduction

History taking and physical examination of the patient is the basis of medical and nursing diagnosis. Nowadays, nurse when provides care, very often has to make their own decision independently (without doctor's order) if patient needs immediate medical help/care. In nursing practice, the work of a nurse is based on the nursing process, whose first stage is assessment, i.e. diagnosis of the problem. It includes analysis of nursing records, results of diagnostic and laboratory tests, interview and physical examination [1]. Thus, history taking and physical examination are essential for the second phase of the nursing process which is nursing diagnosis [1,2]. According to § 3 of the Regulation of the Minister of Health of February 28, 2017, the nurse is authorized to perform physical examination independently without a medical order only after completing specialist course in this field. Also, graduates who obtained the title of specialist in nursing after 2001, or completed first degree studies in nursing, which started in the 2012/2013 academic year are allowed to conduct physical examination. Furthermore, these rights also apply to a nurse holding a certificate of completion of the Advanced Physical Assessment course [3]. It is also worth adding that from January 2016, nurses and midwives acquire new professional qualifications in the field of prescribing medicines and writing prescriptions. However, these competences must be combined with knowledge and skills in the field of history taking and physical examination [4]. The correct assessment of the patient's condition is the basis for making a decision by the nurse to provide prescriptions or coordinate a specific medication [5]. It seems that history taking and physical examination should be a standard in polish nursing and the nurse who uses stethoscope and otoscope should no longer be a surprise but shows their professionalism, high qualifications and wide knowledge. The physical examination is a foundation of nursing care.

Aim

Assessment of the level of interest among nurses in the comprehensive history taking and physical examination. Identification of factors determining nurse's performance of a comprehensive history taking and physical examination.

Material and methods

The study was conducted in the years 2014-2019 in a group of 828 people. The criteria for participation in the study were: the practice of nursing, studying nursing, passing training in the field of: Interview and physical examination and voluntary consent to participate in the study. The cohort consisted of 549 active nurses (66.3%) and 279 students of at least the second year of the first degree in nursing (33.7%). The research was conducted based on the diagnostic survey method. The research tool was the original questionnaire of 17 questions. The first six questions concerned sociodemographic data such as gender, age, education, work experience in the profession, workplace and specificity of the employing department. The next five questions concerned the level of satisfaction with the course in the field of physical examination, assessment of the training course and usefulness in nursing practice of acquired knowledge and skills with an indication of the learning outcomes of particularly important and unnecessary in the profession of a nurse. The answer to the twelfth question provided information about professional experience in conducting history taking and physical examination or possibility of obtaining it. The next four questions referred to the characteristics of the range of knowledge and skills of history taking and physical examination used in daily practice. They also described difficulties encountered in conducting history taking and physical examination, they showed what could help nurses and what should be changed in the program in such training. The survey ended with a question about any other comments regarding the physical examination by the nurses. The study was approved by the Bioethics Committee of the Medical University of Lodz.

Data analysis

Data were verified for normality of distribution and equality of variances. The one and two way analysis of variance (ANOVA), Kruskal-Wallis test and chi-square test and Pearson product moment correlation coefficients were used to compare the two groups. Confidence intervals (CI) with 95% confidence limits were calculated. Results are presented as mean (standard deviation). The limit of significance was set at $p < 0.05$ for all analyses.

Results

Eight hundred and nine (97.7%) women took part in this study. Men were mainly students. The largest group (53%) of the respondents were people in the age group 36-55 years of age. People with secondary education (73.2%) predominated among the respondents (Table 1). Nurses had an average of 18.8 ± 6.6 years of work in their profession. Professionals were mainly employed in the hospital (68.7% of the cohort) and in the outpatient clinic (16%). They worked mainly in: conservative care (35.9%) and surgical care word (27.1%) (Table 2). Almost all respondents ($n=778$; 94%) showed satisfaction with participation in the course in history taking and physical examination. Nurses reported satisfaction more often than students from participation in the course ($\chi^2=35.0$; $p < 0.001$). Only 3 working nurses (0.4%) were not satisfied with this form of professional development. Forty-seven participants of the training (5.7%) did not have an opinion on this subject. Students predominated in this group (72.3%).

Table 1. Baseline participant characteristics of subjects (n=828).

	Nurses and nursing students (n=828)	Nurses (n=549)	Nursing students (n=279)	Statistical significance
Women n(%) Men n(%)	809 (97.7) 19 (2.3)	542 (98.7) 7 (1.3)	267 (95.7) 12 (4.3)	Chi2=6.3; p=0.01
Age (age group) Under 25 years old n(%) 26-35 years old n(%) 36-55 years old n(%) Over 55 years old n(%)	277 (33.5) 91 (11.0) 439 (53) 21 (2.5)	2 (0.4) 88 (16) 438 (79.8) 21 (3.8)	275 (98.6) 3 (1.1) 1 (0.3) 0 (0.0)	F=944.6; p<0.001
Education Master's degree n(%) Bachelor's degree n(%) Secondary education n(%)	163 (19.7) 59 (7.1) 606 (73.2)	156 (28.4) 45 (8.2) 348 (63.4)	7 (2.5) 14 (5) 258 (92.5)	Chi2=87.7; p<0.001

Table 2. Baseline participant characteristics of nurses (n=549).

	Nurses (n=549)
Work experience (years)	18.8±6.6
Place of employment: – hospital n (%); – outpatient clinic n (%); – university (n); – private nursing practice n (%); – care institution (nursery, nursing home) n (%).	377 (68.7) 88 (16.0) 40 (7.3) 28 (5.1) 16 (2.9)
Specificity of the job: – conservative care ward (internal medicine, cardiology, pulmonology, diabetes) n (%); – surgical ward (surgery, cardiac surgery, thoracic surgery, orthopedics) n (%); – intensive care unit or hospital emergency unit; – long-term care unit (palliative care, Nursing home, hospice) n (%); – other (e.g. outpatient clinic, private nursing practice, teaching nursing) n (%).	197 (35.9) 149 (27.1) 53 (9.7), 26 (4.7) 124 (22.6)

What is more, all participants assessed the training in history taking and physical examination at 4.6±0.6 on the five-point scale, with students rating the level of training at 4.2±0.6 and nurses – at 4.7±0.5 (F=186.3; p<0.001).

Order respondents, respondents with higher education and respondents with longer experience rated the completed training higher. Nurses running out individual nursing practice, employed in the surgical, conservative and long-term care units, rated this training better than nurses working in the intensive care units. In multivariate analysis, only the specificity of the workplace determined the assessment of the training (Table 3).

Table 3. Factors determining the level of satisfaction of respondents from participating in training in the field of history taking and physical examination.

	Nurses and nursing students (n=828)	Nurses (n=549)	Nursing students (n=279)
Age (age group)	F=64.3; p<0.001	NS	NS
Gender	NS	NS	NS
Education n(%)	F=16.3; p<0.001	NS	NS
Work experience (years)	r=0.4; p<0.001	r=4.4; p=0.04	-
Place of employment	-	NS	-
Specificity of the job	-	F=4.0; p=0.001.	-

NS: not significant.

The majority of training participants (n=753; 90.9%) indicated the usefulness of knowledge and skills provided during training in nursing practice. Also in this case, students constituted a slightly smaller group (n=247; 88.5%) than nurses (n=506; 92.2%). More often, the usefulness of all content was marked by nurses with age and nurses with longer professional experience than by students (Table 4).

Table 4. Factors determining the choice of respondents negative or positive answer usefulness in nursing practice the learned skills and knowledge.

	Nurses and nursing students (n=828)	Nurses (n=549)	Nursing students (n=279)
Age (age group)	Chi2=16.9; p=0.01	NS	NS
Gender	NS	NS	NS
Education n(%)	NS	NS	NS
Work experience (years)	F=3.7; p=0.02	NS	-
Place of employment	-	NS	-
Specificity of the job	-	NS	-

NS: not significant.

All content and skills were very important for 42.3% of the cohort. Respondents indicated first of all: cardiovascular system, respiratory system, breast and abdominal examination and history taking. Nurses more often than students indicated the usefulness of knowledge and skills in the field of intelligence. At the same time, students showed greater interest than nurses in information on cardiovascular system, respiratory system, abdominal and breast examination (Table 5).

Table 5. The range of knowledge and skills indicated by respondents as useful in the practice of nursing.

	Nurses and nursing students (n=828)	Nurses (n=549)	Nursing students (n=279)	Statistical significance
All knowledge and skills were useful n (%)	350(42.3)	235(42.8)	115(41.2)	NS
News and skills related to history taking were useful n(%)	442(53.4)	270(49.2)	172(61.7)	Chi ² =11.1; p<0.001
Knowledge and skills regarding the examination of the nervous system and sensory organs were useful n (%)	389(47)	266(48.5)	123(44.1)	NS
Knowledge and skills regarding cardiovascular system examination were usefuln (%)	522(63)	367(66.9)	155(55.6)	Chi ² =9.7; p=0.002
Knowledge and skills regarding respiratory system examination were useful n(%)	492(59.4)	349(63.6)	143(51.3)	Chi ² =11.1; p<0.001
Knowledge and skills regarding neck examination were usefu n(%)	351(42.4)	236(43)	115(41.2)	NS
Knowledge and skills regarding abdomen (digestive, urinary and genital) were useful n(%)	462(55.8)	333(60.7)	129(46.2)	Chi ² =15.0; p<0.001
Knowledge and skills regarding breast examination were useful n(%)	465(56.2)	323(58.8)	142(50.9)	Chi ² =4.4; p=0.04
Knowledge and skills regarding the musculoskeletal system examination were useful n(%)	373(45.1)	255(46.5)	118(42.3)	NS
Knowledge and skills regarding skin examination were useful n(%)	365(44.1)	248 (45.2)	117(41.9)	NS
Knowledge and skills regarding physical examination in life-threatening situations and first aid were useful n(%)	375(45.3)	260 (47.4)	115(41,2)	NS

NS: not significant.

When asked about redundant content in the field of history taking and physical examination, up to 78.9% of the respondents answered that there was no such. Respondents would mainly give up learning to perform eye, ear and nervous system examination. Nurses more often indicated willingness to give up learning respiratory system examination than students. Students showed a greater desire to give up learning abdominal examination than nurses (Table 6).

All nurses in the professional practice conducted nursing history taking and performed physical examination limited to checking vital signs. In professional practice, only 42.8% of nurses and 67.7% of students declared that comprehensive patient history taking and physical examination (apart from vital signs) were carried out. Students, younger people and men more often planned conducting comprehensive physical examination in practice. In the group of nurses, no statistically significant relationship was found between plans to implement comprehensive history taking and physical examination and age, gender, work experience and workplace (Table 7).

Table 6. The range of knowledge and skills indicated by respondents as necessary in the practice of nursing.

	Nurses and nursing students (n=828)	Nurses (n=549)	Nursing students (n=279)	Statistical significance
There was no unnecessary knowledge and skills	653(78.9)	435(79.2)	218(78.1)	NS
All the knowledge and skills were unnecessary n(%)	1(0.1)	1(0.2)	0(0.0)	-
Knowledge and skills relating history taking were unnecessary n(%)	3(0.4)	0(0.0)	3(1.1)	-
Knowledge and skills about nervous system examination were unnecessary n(%)	28(3.4)	21(3.4)	7(2.5)	NS
Knowledge and skills regarding eye examination were unnecessary n(%)	46(5.6)	34 (6.2)	12(4.3)	NS
Knowledge and skills regarding ear examination were unnecessary n(%)	43(5.2)	33 (6.0)	10(3.6)	NS
Knowledge and skills regarding cardiovascular system examination were unnecessary n(%)	27(3.3)	22(4.0)	5(1.8)	NS
Knowledge and skills regarding respiratory system examination were unnecessary n(%)	8(2.2)	2(0.4)	6(2.2)	Chi ² =4.4; p=0.04
Knowledge and skills regarding abdomen (digestive, urinary and genital) were unnecessary n(%)	21(2.5)	21(3.8)	0(0.0)	Chi ² =9.5; p=0.002
Knowledge and skills regarding breast examination were unnecessary n(%)	1(0.1)	0(0.0)	1(0.4)	-
Knowledge and skills regarding the musculoskeletal system examination were unnecessary n(%)	4(0.5)	1(0.2)	3(1.1)	-
Knowledge and skills regarding physical examination in life-threatening situations and first aid were unnecessary n(%)	1(0.1)	1(0.2)	0(0.0)	-

NS: not significant.

Table 7. Factors determining the respondents' plans of implementing new competences into professional practice (n = 828).

	I implement or plan to implement new competences for professional practice n = 424 (51.2%)	I do not implement or plan to implement new competences for professional practice n = 291 (35.1%)	I have no opinion n=113 (13.7%)	Statistical significance
Group of respondents: – nurses, – nursing students	235 (42.8) 189 (67.7)	261 (47.5) 30 (10.8)	53 (9.7) 60 (21.5)	Chi ² =112.7; p>0.001
Age (age group) Under 25 years old n(%) 26-35 years old n(%) 36-55 years old n(%) Over 55 years old n(%)	187 (67.5) 39 (42.9) 188 (42.8) 10 (47.6)	29 (10.5) 45 (49.4) 208 (47.4) 9 (42.9)	61 (22.0) 7 (7.7) 43 (9.8) 2 (9.5)	Chi ² =115.7; p<0.001
Gender: Women n(%) Men n(%)	410 (50.7) 14 (73.7)	287 (35.5) 4 (21.0)	112 (13.8) 1 (5.3)	NS (Chi ² =4.0; p=0.1)
Education Master's degree n(%) Bachelor's degree n(%) Secondary education n(%)	71 (43.6) 34 (57.6) 319 (52.6)	78 (47.8) 18 (30.5) 195 (32.2)	14 (8.6) 7 (11.9) 92 (15.2)	Chi ² =16.2; p=0.003
Work experience (years)	10.0±10.1	17.0±8.7	9.3±11.4	F=49.6; p<0.001

NS: not significant.

The nurses pointed out difficulties in conducting history taking and physical examination in nursing practice. These included: low support from doctors (n=165; 30.1%), nurses (n=155; 28.2%) and lack of time/excess of responsibilities (n=161; 29.3%).

After excluding students from the analysis (due to the inability to independently practice the profession), a statistically significant relationship was found between the analysed factors hindering nurses from performing comprehensive examination and age, education, work experience, place and specificity of work. Younger nurses (up to 35 years old) or teaching nurses often indicated concerns about the reaction of cooperating doctors. Nurses with secondary education were less afraid of their colleagues' reaction than individuals with higher education. Nurses with shorter experience more often indicated lack of room and their equipment than nurses with longer experience.

Lack of time was mostly reported by nurses working in hospitals. Nurses teaching the profession more often than any other respondents pointed to encountered patient resistance (Table 8).

Table 8. Determining factors indicated by nurses difficulties in implementing new competences in professional practice in conducting history taking and physical examination (n = 549).

	Lack of support from doctors n=165 (30.1%)	Lack of time / too many duties n=161 (29.3%)	Lack of support from nurses n=155 (28.2%)	Lack of knowledge and skills n=63 (11.5%)	Lack of patient approval n=34 (6.2%)	Lack of room and/or equipment n=30 (4.5%)	Lack of support for the management staff n=12 (2.2%)
Age (age group)							
Under 25 years old n(%)	Chi ² =8.4; p=0.04 1 (50.0)	NS 0 (0.0)	NS 1 (50.0)	NS 1 (50.0)	NS 0 (0.0)	NS 0 (0.0)	NS 0 (0.0)
26-35 years old n(%)	37 (42.1)	26 (29.6)	24 (27.3)	12 (13.6)	9 (10.2)	9 (10.2)	4 (4.6)
36-55 years old n(%)	123 (28.1)	130 (29.7)	126 (28.8)	48 (11)	25 (5.7)	20 (4.6)	8 (1.8)
Over 55 years old n(%)	4 (19.1)	5 (23.8)	4 (19.1)	2 (9.5)	0 (0.0)	1 (4.8)	0 (0.0)
Gender:							
Women n(%)	NS 162 (29.9)	NS 158 (29.2)	NS 155 (28.6)	NS 63 (11.6)	NS 34 (6.3)	NS 28 (5.2)	NS 12 (2.2)
Men n(%)	3 (42.9)	3 (42.9)	0 (0.0)	0 (0.0)	0 (0.0)	2 (28.6)	0 (0.0)
Education			Chi ² =9.5; p=0.009				
Master's degree n(%)	NS 55 (35.3)	NS 43 (27.6)	NS 50 (32.1)	NS 17 (10.9)	NS 11 (7.1)	NS 13 (8.3)	NS 5 (3.2)
Bachelor's degree n(%)	12 (26.7)	15 (33.3)	20 (44.4)	4 (8.9)	5 (11.1)	1 (2.2)	2 (4.4)
Secondary education n(%)	98 (28.2)	103 (29.6)	85 (24.4)	42 (12.1)	18 (5.2)	16 (4.6)	5 (1.4)
Work experience (years)							
Yes	NS 18.1±7.0	NS 18.5±6.5	NS 19.1±7.2	NS 17.6±5.5	NS 17.6±7.0	F=3.9; p=0.048 16.5±5.7	NS 18.7±7.0
No	19.1±6.4	19.0±6.6	18.7±6.3	19.0±6.7	18.9±6.6	19.0±6.6	18.8±6.6
Place of employment:	Chi ² =25.2; p<0.001	Chi ² =15.8; p=0.003	NS				
- hospital n (%)	115 (30.5)	126 (33.4)	104 (27.6)	38 (10.1)	24 (6.4)	18 (4.8)	9 (2.4)
- outpatient clinic n (%)	15 (17.1)	21 (23.4)	28 (31.8)	11 (12.5)	3 (3.4)	6 (6.8)	1 (1.1)
- university (n)	24 (60.0)	3 (7.5)	15 (37.5)	6 (15)	6 (15.0)	4 (10.0)	1 (2.5)
- private nursing practice n (%);	6 (21.4)	9 (32.1)	3 (10.7)	6 (21.4)	1 (3.6)	1 (3.8)	0 (0.0)
- care institution (nursery, nursing home) n (%).	5 (31.3)	2 (12.5)	5 (31.3)	2 (12.5)	0 (0.0)	1 (6.3)	1 (6.3)
Specificity of the job:	Chi ² =19.4; p=0.002				Chi ² =11.7; p=0.04		
- conservative care word (internal medicine, cardiology, pulmonology, diabetes) n (%)	48 (24.4)	62 (31.5)	57 (28.9)	16 (8.1)	11 (5.6)	14 (7.1)	5 (2.5)
- surgical ward (surgery, cardiac surgery, thoracic surgery, orthopedics) n (%);	45 (30.2)	46 (30.9)	44 (29.5)	17 (11.4)	12 (8.1)	5 (3.4)	2 (1.3)
- intensive care unit or hospital emergency unit;	19 (35.9)	20 (37.7)	11 (20.8)	5 (9.4)	2 (3.8)	4 (7.6)	1 (1.9)
- long-term care unit (palliative care, Nursing home, hospice) n (%);	6 (23.1)	8 (30.8)	8 (30.8)	4 (15.4)	0 (0.0)	0 (0.0)	1 (3.9)
- teaching nursing;	21 (60.0)	3 (8.6)	14 (40.0)	6 (17.1)	6 (17.1)	4 (11.4)	1 (2.9)
- other (e.g. outpatient clinic, private nursing practice) n (%).	26 (29.2)	22 (24.7)	21 (23.6)	15 (16.9)	3 (3.4)	3 (3.4)	2 (2.3)

NS: not significant.

At the same time, 71.3% (n=590) of the cohort reported what could contribute to the elimination of the mentioned difficulties. Those were: courses and other forms of professional development of nurses, doctors and management staff (n=446; 53.9%), increasing the nursing staff, reducing and their duties (n=149; 18%), the possibility of cooperation/consultation with a doctor (n=41; 5%), adaptation of premises along with their appropriate equipment (n=20; 2.4%), and patient education (n=20; 2.4%).

According 41.5% (n=344) of respondents, history taking and physical examination training programme should be changed. The proposed changes were: increasing the number of training hours (n=160; 19.3% of the cohort) and increasing the hours of practice, including manikin exercises (n=157; 19%).

Discussion

History taking and physical examination by a nurse is a requirement of modern nursing. Nursing care begins with a diagnosis of the patient's biopsychosocial condition. Physical examination as an element of training nurses was first introduced in the United States in the sixties of the last century. Currently, nurses around the world are taught comprehensive physical examination of patients [6-11]. Nurses should physically examine patients in both hospital and primary care. The use of nurse's competence in conducting a comprehensive history taking and physical examination in nursing practice guarantees proper, early diagnostics and at the same time a better quality of provided medical services [12,13]. Early selection of patients requiring specific nursing or medical interventions and their implementation results in a reduction in the occurrence of adverse events, increased patient satisfaction and increased satisfaction of the entire medical team from their work, as well as a reduction of treatment costs [12,14,15]. This is very alarming since nurses are primarily responsible for patient's care, yet cannot competently perform basic assessment tasks. Currently, Polish nurses (like nurses in other countries) are increasingly gain competences in conducting independent history taking and physical examination, but unfortunately they are not confident enough to use it in professional practice [2,16-18]. A nurse with a stethoscope, who auscultation chest or abdomen, can be found in ambulances (emergency medical system), in intensive care units and in long-term care units or in hospices. Unfortunately, many nurses still have great resistance to history taking and physical examination in accordance with their competences [2,16-18]. In the group of Polish nurses, only 42.8% declared performing physical examination in practice. Unfortunately, the available research results confirm the occasional use by nurses of competences in conducting a comprehensive history and physical examination. According to Birks, nurses used only 34% of physical assessment skills routinely [7]. The Shi showed that nurses routinely did not use as much as 84.6% of physical assessment skills in their practice [19]. The problem of not using physical examination skills by nurses in practice is large and common [10,20]. The present study shows that nurses would gladly use the acquired knowledge and skills if they could devote more time to one patient and have appropriate working conditions. At this point, it should be noted that the most common cause of adverse events is too much workload, poor organization of work, lack of motivation to perform duties properly, chronic fatigue, lack or improper procedures, as well as a lack of training in this field [21-23]. Therefore, reducing the number of nurses' duties through appropriate staffing in the ward enables proper history taking and physical examination, and at the same time guarantees optimal care for patients, especially those who require long-term care.

At present, the research, similarly to previous results presented in the literature, shows that nurses are very much afraid of performing the history taking and physical examination due to the lack of acceptance of these activities by patients, doctors and nurses [2,7,20]. Of course, the doctor is responsible for the entire treatment process. At the same time, it cannot be denied that the history taking and physical

examination of the patient performed by the nurse are aimed at early diagnosis of the patient's health problems and implementation of proper nursing procedures. The nurse's scope of duties does not fall under the competence of a doctor. Through history taking and physical examination, they make a nursing, rather than a medical, diagnosis [6]. The effect of this diagnosis may be: calling a doctor or motivating patient to make such a visit. It seems that the only by cooperation of nurses and doctors in history taking and physical examination research, is a guarantee of the effectiveness of the implemented therapy and patient safety [15,25]. The nurse is therefore a member of the team of medical workers participating in the process of diagnosis and therapy of the patient [26]. Failure to identify the challenges and problems faced by students and nurses during physical assessment, both while studying and at work, prevents them from providing high-level care for their patients. Therefore, one should constantly strive to analyze the barriers to history taking and physical examination skills acquired during undergraduate studies and professional practice, and to improve physical examination programs both at the pre-dust and postgraduate level of nursing education. It seems that universal education of all medical staff in the area of new competences of nurses may help nurses overcome barriers hindering the use of their knowledge, skills and authorizations [7,9,10,19].

Conclusions

1. Nurses and nursing students are satisfied with the training in history taking and physical examination and they see the possibility of practical use of gained competences.
2. Despite their competences of self-assembly history taking and physical examination only every third nurse uses professional practice knowledge and skills in this field.
3. The workplace and its nature forces the need for nurses to perform a comprehensive history taking and physical examination of patients.
4. Little support from doctors, nurses and lack of time due to an excess of responsibilities are a major factors in the failure of nurses comprehensive history taking and physical examination.
5. Persons with the competence to conduct independent history taking and physical examination are not only afraid of the lack of acceptance of these procedures by nurses, doctors, but also patients.
6. Training of nurses, doctors, and management staff in the scope of nurse's competence, increasing the number of nurses, adapting the rooms and their appropriate equipment are elements that can help nurses to conduct history taking and physical examination of patients on their own.

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Conflict of interest

The authors declare no conflict of interests.

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