

Co-funded by the
Erasmus+ Programme
of the European Union



ProInCa

**Promoting the Innovation Capacity of Higher Education in Nursing during
Health Services' Transition**

D.2.2.2

**National educational materials on evidence-based nursing for medical
universities, colleges and health care facilities**

WP 2.2 Efficiency and quality by evidence-based nursing



Zhuldyz Zhetmecova, MSc (Nursing), Mateja Bahun, MSc (Nursing), BSc (educ), Senior
Lecturer

28.11.2021

Table of Contents

Introduction	4
Master class “Efficiency and quality by evidence-based nursing”	5
Piloting national educational materials on bachelor level of nursing	6
Master class “Moving forward to efficiency and quality by evidence-based nursing”	9
Appendices	11
Appendix 1- MASTER CLASS PROGRAM - “Efficiency and quality by evidence-based nursing”	11
Appendix 2 - Typical educational program on subject - basic EBN practice	16
Appendix 3 - Typical educational program on subject - advanced EBN practice	31
Appendix 4 - Typical educational program on subject EBN practice – Master degree	34
Appendix 5 - Questionnaires of Evidence-Based Nursing skills	37
Appendix 6 – Questionnaire for teachers using the evidence-based nursing national educational materials	41
Appendix 7 MASTER CLASS PROGRAM - “Evidence based nursing –recognized best practices implementation”	42

Disclaimer:

This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Summary

Directly related to creation of National educational materials on subject of Evidence based nursing, the were steps taken and events organized: three-day Masterclass with title “Efficiency and quality by evidence-based nursing” that was held at Angela Boškin faculty of Health Care (ABFHC) in Slovenia in 2018, where Kazakhstani and European participants were actively involved in preparing the drafts of educational programs. Those drafts were made as content plans for education on basic, advanced and master degree on the subject of evidence-based nursing. They consisted of plans of lectures, practical classes and independent student projects instructions. After that materials in the form of presentations, and exercises were made (all together 16 materials) they were translated from English to Russian and Kazakh language and pilot tested among students of 4 Kazakhstani Medical Universities and 1 High Medical College. Teachers using materials plso gave feedback on the usefulness of materials. In April 2020 the “Moving forward to efficiency and quality by evidence-based nursing” masterclass was organized, where the main finalized national materials on evidence-based nursing were presented to more than 170 Kazakhstani participants, and presenters were Kazakhstani and European experts in the form of lectures and practical assignments.



1 Introduction

Evidence based practice is a life-long problem-solving approach to the delivery of health care that integrates the best evidence from well-designed studies and integrates it with a patient's preferences and values and a clinician's expertise, which includes internal evidence gathered from patient data (Melnyk, et al., 2014). Knowledge of Evidence-based practice, skills to perform searches for scientific data to evaluate their validity and to transform scientific data into practical solutions are necessary for health workers in their daily activities. (Melnyk, at al., 2018). As the authors (Ely, et al., 2005; Pravikoff, 2005; Titler, 2009; Melnyk, et al., 2012; Heikkila, at al., 2017) establish, the main barriers for implementation of EBP are high time consumption, inadequate EBP knowledge and skills, rigorous teaching process, organizational culture, lack of mentors and resources, resistance of leaders or colleagues, poor English skills, a heavy workload, a lack of internet access or databases access and insufficient time to read research, critically appraise evidence and implement new ideas in the workplace.

In Kazakhstan teaching evidence-based practice skills for nurses is linked with evidence-based medicine development and foundations of evidence-based medicine centers in medical universities. During 2009 - 2015 nursing curricula included evidence-based medicine terms, in time when nurses worldwide practiced evidence-based nursing practice models. In 2015 with the help of significant changes implemented in nursing higher education formed professional competences for applied and academic nursing bachelor level according to the European Federation of Nursing.

In 2017 four medical universities joined project "Promoting the Innovation Capacity of Higher Education in Nursing during Health Services' Transition" co-founded by the Erasmus+ program of European union (ProInCa), what aimed to develop the sustainable innovation capacity of Kazakhstan's Medical Universities for the modernization of nursing. The project is coordinated by JAMK University of Applied Sciences from Finland and supported by the Ministry of Education and Science of the Republic of Kazakhstan. One of the tasks of the project was to build the evidence-based practice skills capacity in nursing students, who will be the changing agents in clinical nursing practice, education and science.

Within ProInCa project's work package 2.2 "Efficiency and quality by evidence-based nursing" planned to learn the best practice of evidence-based nursing implementation in education, practice and research from European universities and prepare national educational materials on evidence-



based nursing to use them in Kazakhstani medical universities and medical colleges. Several activities such as master classes, development and piloting of national educational materials, survey among nursing students and nursing teachers had been done to develop national educational materials on evidence-based nursing.

2 Master class “Efficiency and quality by evidence-based nursing”

In an attempt to accelerate the implementation of evidence-based practice in nursing across Kazakhstan, on 12-16 November 2018 we conducted the master class “Efficiency and quality by evidence-based nursing” in Angela Boškin faculty of Health Care (ABFHC), Slovenia. The aim of the event was to learn from best practices, literature findings, experts and site visits and to use this information for the further design and development of the educational materials for teaching of evidence-based nursing in Kazakhstan. Master class (Appendix 1) included intense classes, presentations, workshops, a site visit to ABFHC and Jesenice General Hospital. The aim of the visit was to present the cooperation between faculty and hospital and best nursing practice sharing.

Teaching the skills of evidence-based practice is a long-lasting process in nursing education, started in undergraduate level and continuing throughout the whole nursing career. Challenging moments in this process could vary depending on country or region, but the basic issue is appropriate learning materials for each level of nursing education and their effectiveness when used.

Participants - 8 nursing educators from 4 medical universities of Kazakhstan and 9 European experts developed drafts of educational plans according to educational levels, lectures, practical classes and independent student projects instructions for students. As the result of this event educational plans were developed for each level of nursing education (Appendices 2-4) and drafts of educational materials according to the educational plan.

After these plans were prepared experts started preparing PowerPoint educational materials for lectures, practical classes and student work. All together there were 16 materials prepared, first in English, and then translated by Kazakhstani experts into Russian and Kazakh language. Those



materials were later piloted (described in next chapter), upgraded and finally made accessible in the Moodle environment on <https://nursekz.com/>.

3 Piloting national educational materials on bachelor level of nursing

In respect that medical society worldwide accepts the evidence-based practice importance, the medical educators worldwide use plenty of methods for teaching the evidence-based practice skills for nursing students such as traditional lectures, e-learning methods, workshops and seminars (Sin & Bliquez, 2017; Horntvedt, et al. 2018). EBP is the integration of the best research evidence with patients' values and clinical circumstances in clinical decision making, thus teaching EBN should be evaluated and guided by evidence of its own effectiveness (Shaneyfelt, et al., 2006). The nursing students in turn need the evidence-based nursing knowledge, skills and attitudes to be integrated in their clinical practice curriculums where appropriate learning materials are used.

Developed materials were piloted in 4 Kazakhstani Medical Universities out of 6 existing universities and 1 High Medical College out of 6 existing. Evidence-based nursing courses with use of newly created educational materials conducted among 69 undergraduate bachelor first year students of nursing of 2018/2019 academic year were conducted. Educational materials were used to teach the students and included basic topics of evidence-based practice such a stages of EBP, statement of PICO(T) based search questions, search in nursing databases as PubMed, CINAHL, Cochrane library etc., principles of implementation of EBN, EBP ethics.

In order to assess the effectiveness of developed learning materials for undergraduate nursing students we conducted a survey among nursing students participating in piloting in time before and after the course. The questionnaire "A knowledge, attitude and behavior to assess undergraduate evidence-based practice teaching and learning" (Johnston, et al., 2003) was used with permission of author. It was adapted to nursing context, translated to Russian and Kazakh languages and used to measure the effectiveness of the used materials. Questionnaire was divided into 4 domains: Knowledge (EBP-K), Attitudes toward evidence-based practice (EBP-A), Personal application and use of evidence-based practice (EBP-P) and Future use of evidence-based practice (EBP-F). The questionnaire consisted of 26 questions using a 5-point Likert scale. The EBP-K



section included 5 items (scores: 5–30), the EBP-A and EBP-P sections 6 items each (scores: 6–36), and there were 9 items regarding EBP-F (scores: 9–54) (Appendix 5).

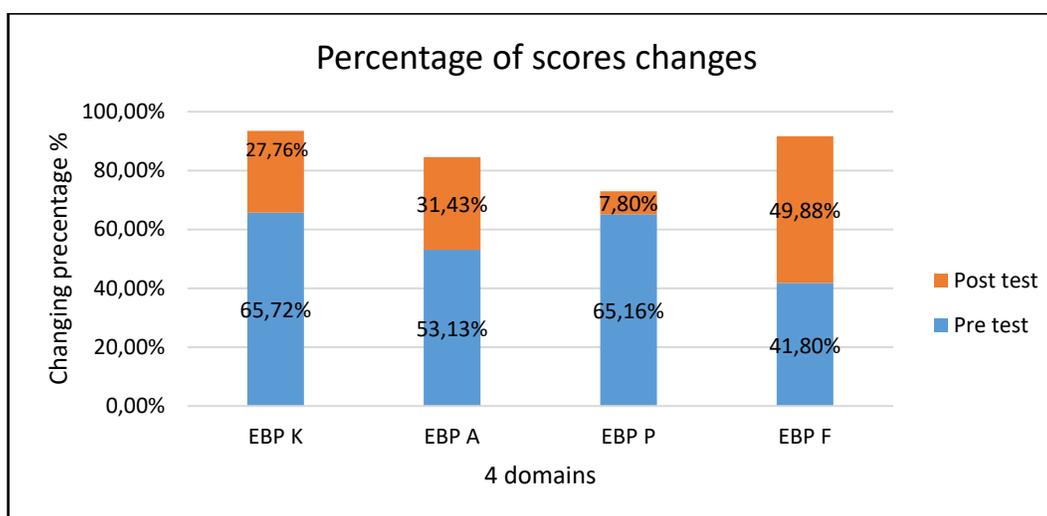
As a result, 67 out of 69 undergraduate first year nursing students answered the 26 itemed questionnaires (response rate = 97,1%), before and after the use of new educational materials. There were 97 % of females and 3% males. 40% of respondents were in groups with Kazakh language education and 60% in groups with education in Russian language. At the first round of survey (before implementing new educational materials) overall mean points according to 4 domains of survey were next: Knowledge (EBP-K) 2.5 out of 5.0, Attitudes toward evidence-based practice (EBP-A) 2.81 out of 5.0, Personal application and use of evidence-based practice (EBP-P) 2.80 out of 5.0, Future use of evidence-based practice (EBP-F) 3.59 out of 5.0 (Table 1). At the second round of survey, after using developed materials results showed significant changes in the next domains: Knowledge 4.6 out of 5.0 (increased to 2,1 points) Attitudes toward evidence-based practice 4.2 out of 5,0 (increased to 1.39 points) and Future use of evidence-based practice 4.6 out of 5.0 (increased 1.01 points). Results of last domain Personal application and use of evidence-based practice in comparison to previous rounds showed minor changes 3.1 (increased to 0.3 point).

Table 1 presents the comparison of scores for the pre- and post-course surveys. Statistical significance for the difference between the pre- and post-course scores was detected for all four terms ($p < 0.0001$). The scores of EBP-K, EBP-P, EBP-F items significantly increased after the using EBN learning materials, which shows the improvement of the knowledge, personal use of EBP and intention to use it in future. The item EBP-A decreased, which shows the improvement of attitudes towards EBP.

Table 1: Comparison of scores between survey before and after using the learning materials

Items	Max No of points	Pre test	Pre test mean	Post test	Post test mean	p
EBP-K	25	16.43	2.5	23.37	4.6	<0.0001
EBP-A	30	25.37	2.8	15.94	4.2	<0.0001
EBP-P	35	19.55	2.8	21.89	3.1	<0.0001
EBP-F	45	32.31	3.59	41.26	4.6	<0.0001

On Figure 1 you may see the percentage of changes in scores, which after using the learning materials are EBP-F +49,88%, EBP-A +31,43% EBP-K +27,76%, EBP-P+7.80%.

**Figure 1: Percentage of scores changes after using the EBN learning materials**

We can summarize that developed materials improved the knowledge in the basic principles, ethics, methods and process of evidence-based nursing and set the willingness to use evidence-based practice tools. But, access and acquisition of evidence, application to patient care and overall use of evidence-based nursing is a great challenge still, due to the absence of participant's clinical experience and deficient level of English language knowledge for reading the scientific evidence. Future studies are needed. Materials should be constantly improved and upgraded and usefulness and student's advancement continuously monitored to observe the progress of graduate students in knowledge, attitude and behavior towards EBN (Kassym, et al., 2020).

Nursing educators had a separate feedback form about the national educational materials in Russian and languages (Appendix 6). As a result, the overall point of the national educational materials assessment is 4.6 out of 5 possible points on scale.

4 Master class “Moving forward to efficiency and quality by evidence-based nursing”

On 21-23 April, 2020 next activity within the work package took place - online master class (Appendix 6) “Moving forward to efficiency and quality by evidence-based nursing” where the main outcomes-finalized national materials on evidence-based nursing were presented. Presenters were Kazakhstani and European experts. For practical part there was Instruction for how to use Moodle and how to access and how to use the materials, then there were 5 practical assignments for the participants (40 minutes each), which were led by Kazakhstani experts and were focused on major topics of EBN.

The aim of the master class was to familiarize participants with the basic principles, ethics, methods and process of evidence-based nursing and seeking, assessing and analyzing critically evidence-based material for nursing, explain the evaluation criteria and benefits of international and national clinical guidelines and best practices examples of nursing practice. During the first day of the master class discussed the methods of teaching in evidence-based nursing and national educational materials in evidence-based nursing, which were placed in the Moodle environment. Other 2 days were dedicated to the international and national clinical nursing guidelines and good practices and research examples from Kazakhstani nurses in clinical practice. At the end of the master class feedback collected from participants showed a 4.77 average on a 5-point scale (5- excellent), indicating that the event was very good and useful for participants.



References

- Ely, J.W., Osheroff, J.A., Chambliss, M. L., Ebell, M.H. & Rosenbaum, M.E., 2005. Answering physicians' clinical questions: Obstacles and potential solutions. *Journal of American Medical Informatics Association*, 12(2), pp. 217–224.
- Heikkila, J., Hopia, H., Hasselberg, J., Tiittanen, H. & Baighorzina, Z., 2017. A Cross Sectional Study of Nurses' and Nurse Educators' Perceptions of Evidence-Based Practice in Kazakhstan. *Annals of Nursing Research & Practice*, 2(1), p. 1016.
- Johnston, J.M., Leung, G.M., Fielding, R., Tin K.Y.K. & Ho, L.-M., 2003. The development and validation of a knowledge, attitude and behaviour questionnaire to assess undergraduate evidence-based practice teaching and learning. *Medical Education*, 37(11), pp. 992–1000
- Kassym, L., Akhmetova, A, Zhetmekova, Zh., Bahun, M. Effectiveness of evidence-based nursing educational materials for Kazakhstan undergraduate nursing students. 13th International Scientific Conference, 24th September 2020, ZOOM : responsibilities of health policy-makers and managers for the retention and development of nurses and other healthcare professionals - 2020: International year of the nurse and the midwife. Jesenice: Fakulteta za zdravstvo Angele Boškin: Angela Boškin Faculty of Health Care, 2020. Str. 179-184. ISBN 978-961-6888-47-9. https://www.fzab.si/uploads/file/2020_FZAB_%2013_MZK_zbornik_proceedings.pdf. [COBISS.SI-ID 31164419]
- Melnyk, B.M., Fineout-Overholt, E., Gallagher-Ford, L. & Kaplan, L., 2012. The state of evidence-based practice in US nurses: Critical implications for nurse leaders and educators. *Journal of Nursing Administration*, 42(9), pp. 410–417.
- Melnyk, B.M., Gallagher – Ford, L., English Long, L. & Fineout – Overholt, E. 2014. The Establishment of Evidence-Based Practice Competencies for Practicing Registered Nurses and Advanced Practice Nurses in Real-World Clinical Settings: Proficiencies to Improve Healthcare Quality, Reliability, Patient Outcomes, and Costs. *Worldviews on Evidence-based Nursing*, 11(1), pp. 5-15.
- Melnyk, B.M., Gallagher – Ford, L., Zellefrow, C., Tucker, S., Van Dromme, L. & Thomas, B.K., 2018. Outcomes From the First Helene Fuld Health Trust National Institute for Evidence-Based Practice in Nursing and Healthcare Invitational Expert Forum. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/29337427> [Accessed: 18. July 2018].
- Sin, M.-K. & Bliquez, R. 2017. Teaching evidence based practice to undergraduate nursing students. *Journal of Professional Nursing*, 33(6), pp. 447–451.
- Horntvedt, M.-E. T., Nordsteien, A., Fermann, T. & Severinsson, E. 2018. Strategies for teaching evidence-based practice in nursing education: a thematic literature review. *BMC Medical Education*, 18(1). doi:10.1186/s12909-018-1278-z .
- Shaneyfelt, T., Baum, K. D., Bell, D., Feldstein, D., Houston, T. K., Kaatz, S., Whelan, C. & Green, M. 2006. Instruments for evaluating education in evidence-based practice: a systematic review. *JAMA*, 296(9), pp. 1116–1127.



a. Appendices

1. Appendix 1- Master class programm - “Efficiency and quality by evidence-based nursing”

Sunday 11. 11. 2018 - Travelling day Arrival to Ljubljana		
Monday 12. 11. 2018 Ob železnici 30, 1000 Ljubljana		
Time	Subject	Lecturer/Presenter
9.00 – 9.30	Welcome gathering and greetings	Acting Dean - Sanela Pivač
9.30 – 10.15	Introduction and program of the workshop	Mateja Bahun Sedina Kalender Smajlovič
10.15 – 10.45	Presentation of current ProInCa activities	Katja Pesjak, PhD
10.45 – 11.15	Coffee break	
DRAFT PRESENTATION		
11.15 – 12.45	Basics of EBN, models and process (based on SCES content)	Brigita Skela Savič, PhD
12.45 – 13.30	Dilemmas, problems and needs as seen from KZ teachers	open discussion
13.30 – 15.00	Lunch time	
15.00 – 15.45	Best practices in EBP in Kazakhstan	Laura Kassym
15.45 – 16.30	Best practices of EBP from EU – Netherland	Cornelia van Slochteren
16. 30 – 17.15	Best practices of EBP from EU – Finland	experts from Finland

Tuesday 13. 11. 2018		
Ob železnici 30, 1000 Ljubljana		
Time	Subject	Lecturer/Presenter
PRESENTATION		
9.00 – 9.45	Presentation of data of first part of survey for teachers and students in Kazakhstan	Almira Akhmetova
9.45 – 10.15	Presentation of basic findings of GAP analysis	Almira Akhmetova, ABFHC
10.15 – 10.30	Coffee break	
10.30 – 12.30	Factors which are important for implementation of EBP (based on SCES content)	Brigita Skela Savič, PhD
12.30 – 13.30	<p style="text-align: center;">Basics of research I. (based on SCES content):</p> <ul style="list-style-type: none"> · How to create good research question · Innovation and creativity in research · Statistical analysis · Quantitative research · Qualitative research · Mixed methods · Research findings interpretation · Literature review 	Mirna Macur, PhD
13.30 – 14.30	<p style="text-align: center;">Basics of research II. (based on SCES content):</p> <ul style="list-style-type: none"> · Barriers for EBN · Hierarchy of evidence · Critical thinking · Patient centered nursing care · Clinical skills and knowledge · Ethics in research · Management and quality, team work 	Mateja Bahun Sedina Kalender Smajlović
14.30 – 15.45	Lunch time	

GROUP WORK - UPDATING THE DRAFT <i>(Applying presented best practices and existing knowledge to KZ context)</i>		
15.45 – 16.00	Group work kick off	ABFHC
16.00 – 16.20	Group's presentations on the aims of the group work and structure	Group leaders
16.20 – 17.20	Workshop	<p>Group 1: Basics of EBN, models and process Factors which are important for implementation of EBP Basics of research I.:</p> <ul style="list-style-type: none"> · How to create good research question · Innovation and creativity in research · Statistical analysis · Quantitative research · Qualitative research · Mixed methods · Research findings interpretation · Literature review <p>Group 2: Basics of research II.:</p> <ul style="list-style-type: none"> · Barriers for EBN · Hierarchy of evidence · Critical thinking · Patient centered nursing care · Clinical skills and knowledge · Ethics in research · Management and quality, team work
<p>Wednesday 14. 11. 2018 Ob železnici 30, 1000 Ljubljana</p>		
9.00 – 10.00	Workshop	<p>Group 1: Basics of research II.:</p> <ul style="list-style-type: none"> · Barriers for EBN · Hierarchy of evidence · Critical thinking · Patient centered nursing care · Clinical skills and knowledge · Ethics in research · Management and quality, team work



Wednesday 14. 11. 2018 Ob železnici 30, 1000 Ljubljana		
9.00 – 10.00	Workshop	<p>Group 2: Basics of EBN, models and process Factors which are important for implementation of EBP Basics of research I.:</p> <ul style="list-style-type: none"> · How to create good research question · Innovation and creativity in research · Statistical analysis · Quantitative research · Qualitative research · Mixed methods · Research findings interpretation · Literature review
10.00 – 10.30	Coffee break	
10.30 – 11.30	Workshop	<p>Group 1: differences in level of requirements for educational materials used in applied bachelor, academic bachelor and master degree</p> <p>Group 2: learning outcomes, best assessment methods and how the competences are addressed</p>
11.30 – 12.30	Workshop	<p>Group 1: learning outcomes, best assessment methods and how the competences are addressed</p> <p>Group 2: differences in level of requirements for educational materials used in applied bachelor, academic bachelor and master degree</p>
12.30 – 14.00	Lunch time	
14.00 – 15.00	Group work reports	Group leaders
15.00 – 17.30	Common workshop (All groups together updating the draft)	Group leaders

Thursday 15. 11. 2018 Spodnji Plavž 3, 4270 Jesenice (transportation will be arranged)		
9.30 – 10.30	Critical appraisal of the literature and information, publishing in nursing and EBN best practice (based on SCES content)	Alvisa Palese, PhD

10.30 – 12.00	<p>Presentation of ABFHC and visit to Jesenice General Hospital (JGH) with presentation of best practices of EBN, presentation of study process and clinical practice</p> <p>Lecture: Professionalization of nursing and cooperation between clinical environment and educational facilities (based on SCES content)</p>	<p>Visit: Nada Macura Višić</p> <p>Lecture: Mojca Strgar Ravnik</p>
12.00 – 13.00	Lunch time - JGH	
CONCLUSIONS ON UPDATED DRAFTS OF EBN MATERIALS		
13.15 – 15.00	Conclusions on updated drafts of EBN materials - Forming adopted “pilot curriculums” for KZ teachers	
15.00 – 15.30	Coffee break	
15.30 – 17.00	<p>Group work:</p> <p>Recommendations on EBN improvements in KZ for Ministry of Health of Kazakhstan</p>	2 groups

<p>Friday 16. 11. 2018</p> <p>Ob železnici 30, 1000 Ljubljana</p>		
9.00 – 10.30	<p>Continuation of group work:</p> <p>Forming adopted “pilot curriculums” for KZ teachers and Recommendations on EBN improvements in KZ for Ministry of Health of Kazakhstan</p>	2 groups
10.30 – 10.50	Coffee break	
10.50 – 12.00	Group work reports	Group leaders
12.00 – 13.00	Common Workshop – discussion on the group reports	
13.00 – 14.30	Lunch time	
14.30 – 15.30	Common Workshop – discussion on the group reports	
15.30 – 16.00	Closure of the Master Class	ABFHC

* Two additional hours of individual work are planned each day of the masterclass from 17.30 till 19.30

2. Appendix 2 - Typical educational program on subject - basic EBN practice

	Hours 15		Hours 30		Hours 90	
No	Lecture Title	h	Practical (class practice) and methodology (Interactive methods (PBL, RBL,TBL, CBL))	h	Independent work of student, Independent classes with teachers/without (CPC+CPCP) and Methodology	h
1	<p>Introduction and definition of evidence-based practice</p> <ul style="list-style-type: none"> - Similarities and differences between EBM and EBN. - Types of knowledge (empirical, personal, esthetical, ethical - ways of knowing). - Motivation for develop EBN. Main needs for nursing. Importance and benefits (ethics). 	2	<p>Practical classes 1 - Principles of EBP</p> <p>(EBN in the clinical practice of the Kazakhstan (KZ))</p> <p><i>Role-played methods. Debates (Panel-debated), discussion.</i></p> <p><u>Case: 1</u> The aim is to develop skills to compare the different types of nursing studies (scientific or not scientific) and to recognize the importance of EBP.</p> <p>Learning outcomes The participants are able to:</p> <ul style="list-style-type: none"> • To recognize the importance of EBP • To identify scientific knowledge or not scientific • to compare types of nursing studies <p>1a. Case description and role play Participants in a case: Nurse and patient. Environment: Polyclinic, hospital. Situation:</p> <ul style="list-style-type: none"> • Patient with diabetes printed and bring the advertisement (articles/media) to nurse • The materials have information how diabetics should take care of his feet. 	3	<p>Assignment 1 - start</p> <p>To compare experiences of Kazakhstan (KZ) and CIS (made PPT presentation)</p> <p>Example: To prepare the presentation to show what kind of differences have EBN in KZ and another countries</p> <hr/> <p>EBM and EBN practice in the clinical practice of the CIS</p> <p><u>6 hours consult teacher + 24 hours independent work (group, individual)</u></p> <p>The aim of the assignment is to recognize differences of N researches and understand what kind of levels of evidences.</p> <p>Teacher gives to pair of students the English articles (2!) (RCT and different qualitative study) (different types of knowledge) from the Internet and they should answer on the 10 questions which related with the other topic/part (for example 4 guidelines).</p>	30



		<ul style="list-style-type: none"> • Nurse assesses the level of information. • Nurse explains to patient not to all information is reliable and tries to bring arguments/explain. <p>(or any other clinical situation that nurse can interact in - daily problems related to health of individuals or personal experiences from practice.)</p> <p>Discussion between patient (P) and nurse (N): P: - I saw that information from the Internet and friend said about that. N: - There is no guarantee that information from media was the truth and for example from shoes you will have the pressure on your feet. P: -Why? My friend has the shoes and she had a good experience, btw she is a nurse.</p> <p>Observers The rest of the students write down the arguments of patient and the arguments of nurse. Short discussion follows (15 min)</p> <p>1b. Students have to find information about health topics (health promotion, healthy lifestyle, nutrition etc.) from Internet, articles or web-sites (Wikipedia, Google, SPAM sites etc.). Find out what is scientific or not based on science (at least 5 arguments to prove) (45 min)</p> <p>Students divide per pair (several groups) to discuss what is scientific based info and what is not. And they present what they found out. (45 min)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Scientific based info</th> <th style="text-align: center;">Not scientific based info</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">*</td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">*</td> </tr> <tr> <td style="text-align: center;">-</td> <td style="text-align: center;">*</td> </tr> </tbody> </table>	Scientific based info	Not scientific based info	-	*	-	*	-	*	<p>1. Critiquing the research article</p> <ol style="list-style-type: none"> a. Title – Does it accurately describe the article? b. Abstract – Is it representative of the article? c. Introduction – Does it make the purpose of the article clear? d. Statement of the problem – Is the problem properly introduced? e. Purpose of the study – Has the reason for conducting the research been explained? f. Research question(s) – Is/are the research question(s) clearly defined and if not, should they be? g. Theoretical framework – Is the theoretical framework described? If there is not a theoretical framework, should there be? h. Literature review – Is the literature review relevant to the study, comprehensive and includes recent research? Does the literature review support the need for the study? i. Methods – Is the design appropriate for the study? Does the sample fit with the research design and is the size sufficient? Was a data collection instrument needed? How were data collected? Were reliability and validity accounted for? j. Analysis – Is the analytical approach consistent with the study questions and research design? k. Results – Are the results presented clearly in the text, tables and figures? Are the statistics clearly explained?
Scientific based info	Not scientific based info										
-	*										
-	*										
-	*										



		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">-</td> <td style="width: 50%; text-align: center;">*</td> </tr> </table> <p>1c. SWOT analysis with help of teacher - Benefits of EBN in KZ</p> <p>SWOT-analysis with using the “Learning cafe” method In SWOT-analysis the students look for the S,W,O,T using EBN. Think about the clinical training. Short discussion follows.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">Strength (1 group)</td> <td style="width: 50%;">Weaknesses (2 group)</td> </tr> <tr> <td>Opportunities (3 group)</td> <td>Threats (4 group)</td> </tr> </table> <p>Personal learning outcomes for the future. Home work: to give to student same articles new questions (a) Levels of evidence (triangle) and to think how article fit in triangle, (b) and look critically at the references of article</p>	-	*	Strength (1 group)	Weaknesses (2 group)	Opportunities (3 group)	Threats (4 group)	<p>l. Discussion - Are the results explained in relationship to the theoretical framework, research questions, and the significance to nursing? m. Limitations – Are the limitations presented and their implications discussed? n. Conclusion – Are there recommendations for nursing practice, future research and policymakers?</p> <p>ASSIGNMENT: reflection of independent works</p> <p>Add: References Assessment competence based criteria (what do you want to see in the end product) Time for assessment How do you assess each practical class</p>
-	*								
Strength (1 group)	Weaknesses (2 group)								
Opportunities (3 group)	Threats (4 group)								
2	<p>The concept of nursing research</p> <p>Levels of evidence. Nursing studies and researches. Fields of Nursing research. Outcome for patient care. The concept of the design of Nursing researches. Classification of Nursing research.</p>	<p>2 Practical classes 2 (seminar) - Types of nursing studies</p> <p>The aim of seminar is to understand the structure of articles (at least importance for nursing, the aim and topic, relation with nursing, connection between research and practice).</p> <p><i>Example from practice to know their opinion about situation. Nursing perspective.</i> Exercise is based on 2 articles of nursing research that were given to students.</p>	<p>3 Current nursing studies</p> <p>Focus on daily problems related to health of individuals. Personal experiences from practice. To read the problems from newsletter, journals, media. And show the founded articles or screenshots from web-sites etc.</p>						



2a. Discuss articles which they did at home with students
(exercises to read articles of nursing research) (**how was it?**) (15 min)

2b. To present the topic they studied in articles:

- The aim and topic
- importance for Nursing
- relation with Nursing
- Sample (target group)
-

Student show on the presentation (pptx) the structure of article. (15-20 min per presentation 2 people) = 100 min

2c. Reflection of student how was the reading process of article (hard/easy) (Lack of knowledge, language skills etc.) (30 min)

Methodology: write down personal learning outcomes for the future.

Home work: to give to student same articles from 1st day, but new questions (a) Levels of evidence (triangle) and to think how article fit in triangle, (b) and look critically at the references of article.

<p>3 Five stages of EBN</p> <p>Critical appraisal of evidence/articles. Levels of evidence (critical thinking). How to read the articles.</p>	<p>2 Practical classes 3a - Five stages of evidence -based nursing</p> <p>Aim is to recognize differences in levels of evidence.</p> <p>b. Discussion about homework (15 min)</p> <p>b. The exercise to compare articles with different ways (questionnaire, interviews) to collect data related to types of design (levels of evidence triangle). (20 min)</p> <p>a. The exercise to compare the different ways (questionnaire, interviews) of data collection in the articles and disadvantage/advantage for research outcomes (85 min)</p>	<p>3 Good research question</p> <p>To create research question due to 5 stages of EBN</p> <p>Critical appraisal</p> <p>Give the articles to each student to read and understand different kinds of research</p>
	<p>Practical classes 3b - Critical thinking and reflectional behaviour in EBN</p> <p>The aim of this exercise is to analyse clinical situation by the Model of knowing.</p> <p>3.b.1. Four fundamental patterns (personal, empirical, ethical and aesthetic) of knowing (Carper, 1978)</p> <p>Bring a small personal example from clinical situation (5 min per person)</p> <p>Group work on each situation put experiences into model (90 min)</p> <p>Make a poster on flipchart and to present it (60 min)</p> <p>Home work: Take the same articles and define what kind of knowledge + explain why they think so.</p> <p>Carper (1978) Fundamental patterns of knowing Knowing refers to the way of perceiving and understanding self and the world Knowledge refers to knowing that is expressed in a form that can be shared and communicated to others. Carper has 4 fundamental patterns of knowing:</p>	<p>3</p>



	<p><u>Ethical knowing</u>: the component of moral knowledge in nursing Guides and directs how nurses conduct their practice. Requires experiential knowledge of social values, ethical reasoning. Focus is on: Matters of obligation, what ought to be done, right , wrong and responsibility, ethical codes of nursing, confronting and resolving conflicting values, norms, interests or principles. Sources of Ethical knowing: Nursing’s ethical codes and professional standards, understanding of different philosophical positions, consequentialism, duty, social justice</p> <p><u>Personal knowing</u>: the component of self-knowledge and confidence Concerned with becoming self-aware, self-awareness that grows over time through interactions with others. Used when nurses engage in the therapeutic use of self in practice, insight and experience of personal knowing, personal reflection. Informed by the response of others. Openness to experiences. Personal Knowing is the basis of the therapeutic use of self in the nurse patient relationship. Perceiving self feelings, and prejudices within the situation.</p> <p><u>Aesthetic knowing</u>: the art of nursing Expressed through: Actions, bearing, conduct, attitudes, narrative and interaction. Knowing what to do without conscious deliberation. Involves: Deep appreciation of the meaning of a situation, moves beyond the surface of a situation, often shared without conscious exchange of words. Brings together all the elements of a nursing care situation to create a meaningful whole. Perceiving the nature of a clinical situation and interpreting this information. To respond with skilled action. It uses the nurses’ intuition and empathy. Is based on the skill of the nurse in a given situation.</p> <p><u>Empirical knowledge</u>: has been a synonymous with science for many years as its purpose was to describe, explain and predict natural and social phenomena. In these traditional views of science, reality can be validated by different observers, and knowledge can be only obtained through the senses. Nursing broadened the legitimate ways of inquiry which apart from hypothesis testing, now includes inductive and deductive reasoning and phenomenology description Knowledge expression of empirics includes facts, organised descriptions, conceptual models and theories which explain and predict relationships.</p> <p>3.b.2.Reflection case</p> <p>case</p> <p>The aim of this exercise is to analyse clinical situation by reflecting with one of the models that are used</p>	
--	--	--



4	Ethics in EBN Ethics in evidence-based nursing and evidence-based nursing practice. The role and the rights of patients in research.	1 Practical classes 4 - The role and the rights of patients in research. The aim is to understand right of patients in EBN. a. Explain why they think so (15 min) b. Discuss own experience participation in the research (as sample, researchers, survey from product supermarkets etc.). Anonymous surveys and so on. Ethical guidelines for HEI, committee of university. (40 min) c. To check their article how was written and done there (student create the checklist and combine all opinions) (90 min) d. is a standard procedure to collect the feedback after every practical classes (30 min). <ul style="list-style-type: none"> • What you liked? _____ • Any suggestions for to improve lessons? _____ • Do you have any barriers/difficulties during doing the exercises (language skills, not enough knowledge or skills) _____ 	3 Responsibility of nurse as a researcher To show presentation due to their research question	
	7		15	30

5	Introduction of nursing databases (list of databases - description of each sources and access) Why to divide into 4 sources 1. Nursing databases. (CINAHL, Joanna Briggs Institute, Cochrane, PubMed Health)	3 Nursing clinical questions for searching in EBN sources Examples of areas of clinical questions: Patient/client education (Breastfeeding, self-management, asthma, diabetes, heart diseases et c) Palliative care (family support)	2 Work with EBN sources Assignment 2 - start 1. Each group should work with 1 type of sources, try to find the evidence/answer to the given question; 2. In order to achieve the aim of this assignment students discuss the topic, sources and	40
---	--	---	---	----

<p>2. Websites or nursing excellence centre (e.g. Professional Associations of nurses, ICN, ProInCa, WHO, guidelines- NICE, NIH-National Institute of Nursing research etc.)</p> <p>3. Nursing science journals: Journal of Clinical Nursing , Evidence-based Nursing (BMJ), in e-library</p> <p>4. Internet resources (Google Scholar, Research Gate, World Cat)</p> <p>Searching strategy:</p> <ul style="list-style-type: none"> Keywords, Filters <p>Online translation Examples of each step National and international databases/ sources Subscribing to the database</p>		<p>Home care Adherence to treatment e-health, m-health</p> <p>-What are the nursing tools which can help nurses to identify the symptoms of depression on elderly people who are living in nursing homes?</p> <p>-What are the best education methods/ strategies to improve diabetes patient's adherence to the diet?</p> <p>-What are the evidence-based nursing methods of emotional support to the families of dying patient?</p> <p>-What is the evidence based procedures of hand hygiene in hospital environment to prevent hospital-acquired infections?</p> <p>-How to feed patients after stroke that are having the problems with swallowing?</p> <p>-How to prevent a pressure ulcer of the patient with the spinal trauma?</p> <p>-Patient safety (how to prevent falling incidents of patients who are living with memory disorders, -How to ensure the patient safety during the drug distribution in clinical settings?</p> <p>Group work:</p> <ol style="list-style-type: none"> 1. Divide the group to 4 smaller groups according to 	<p>evidence that they have found and how this all should be reported and presented;</p> <p>3. Choosing the presenter and how it be presented, try to use creative approach to achieve learning outcomes</p> <p>Students prepare presentation of their work Assignment 2 - finish</p>
--	--	--	---



			<p>the 4 types of sources (see the column 1)-before the lesson teacher google nursing sources (nursing excellence centres etc and give students list of them);</p> <ol style="list-style-type: none"> 2. The teacher explains the aim and formation of the task of the group work; 3. Teacher gives groups question from the samples from column 2 (the same question for each group); 4. Teacher randomly select the type of sources for assignment; <p>If students have some questions teacher will answer.</p>		
			<p>Searching in evidence-based nursing sources</p> <p>Group work, presentation of results of searching, reflective discussion:</p> <ol style="list-style-type: none"> 1. Each group presents their results; 2. Students must give feedback each other about content and presentation; 3. The whole class discuss about advantages and disadvantages, reliability of each kind of sources, reflection about the 	6	

			usability of results of the group work in their future work. Teacher should facilitate and summarize the discussion and give feedback		
	Total	3	Total	8	Total
6	Nursing clinical guidelines - definitions (standards, protocols, SOP) - the importance of the guidelines	2	Introducing nursing clinical guidelines and the project work <u>Group work</u> -national nursing clinical guidelines -international clinical guidelines -searching clinical guidelines	2	Nursing clinical guideline project Assignment 3 - start - Forming small groups - Choosing one national clinical guideline -Read nursing clinical guideline and SOP -Analysing the main content and the structure (what is the difference between guideline and SOP)
7	Creation of the nursing clinical guidelines -new / adaptation -stages -evaluation/quality (AGREE II)	1	Evaluating nursing clinical guidelines <u>Group discussion and small group activities</u>	2	-Preparing the interview (10 questions) -Interview with nurse(s) at the clinics/classroom
					20
					40

	-implementation		-differences between different documents guiding nurses/health care professionals clinical practice -tools to evaluate guidelines (AGREE II)		
8	Nursing clinical guidelines in the Republic of Kazakhstan -Methodological recommendations how to develop nursing clinical guidelines (manuals) -Process -Structure	2	<u>Group discussion and small group activities</u> Gathering nurses experiences of the implementation of the nursing clinical guidelines -evaluation of the interview questions -planning the interview together	1	Preparing the report and the presentation (video/poster/presentation)
			<u>Presentation of the project work</u> Conclusions and analyses of the nursing clinical guideline project	2	Project “Nursing clinical guideline project” Implementation of EBN principles in practice 1. General information: The project is performed in small groups (2-3 students) The total amount of hours - 20

					<p>1. Materials: 4 clinical nursing guidelines - “Asthma”, “Heart failure”, “Hypertension”, “Diabetes”. One per group. 4 SOPs “Asthma”, “Heart failure”, “Hypertension”, “Diabetes” One per group. Informed consent form for the interview.</p> <p>1. Step by step instruction:</p> <ol style="list-style-type: none"> 1. Form groups (P1) 2. Choose one national clinical nursing guideline (P1) 3. Read nursing clinical guideine and SOP (I1) 4. Analyse the main content and the structure. Find the difference between guideline and SOP (I1) 5. Discuss the result of your analysis and present as an essay/a table/mindmap (P2) 6. Prepare 10 questions for the interview with the nurse(s) in scope of the chosen guideline (I2) 7. Discuss prepared questions in small groups and teacher (make some changes if they are needed) (P3) 	
--	--	--	--	--	---	--



				<p>8. Interview the nurse(s) about utilizing by the national clinical nursing guideline in practice (I3)</p> <p>9. Prepare presentation with the result of interview (video/poster/ power point presentation) (I3)</p> <p>10. Present results of your project (P4)</p> <p>11. Give feedback on participation in project (P4)</p> <p>Project assessment criteria</p> <table border="1"> <thead> <tr> <th>Nº</th> <th>Compounds of the project</th> <th>Yes</th> <th>No</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Essay</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Introduction</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Showing differences</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Analyzing work</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Conclusions</td> <td></td> <td></td> </tr> <tr> <td>2.</td> <td>Interview</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Relevance of the questions</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Consistency</td> <td></td> <td></td> </tr> <tr> <td></td> <td>Ethic</td> <td></td> <td></td> </tr> </tbody> </table>	Nº	Compounds of the project	Yes	No	1.	Essay				Introduction				Showing differences				Analyzing work				Conclusions			2.	Interview				Relevance of the questions				Consistency				Ethic			
Nº	Compounds of the project	Yes	No																																										
1.	Essay																																												
	Introduction																																												
	Showing differences																																												
	Analyzing work																																												
	Conclusions																																												
2.	Interview																																												
	Relevance of the questions																																												
	Consistency																																												
	Ethic																																												

				3	Presentation of the results			
					Creativity			
					Conclusions			
					Teamwork			
					Total	0-10		
Assignment 3 - finish								
		5		7				20

Abbreviations used:

EBP - evidence-based practice; EBN - evidence-based nursing; EBM - evidence-based medicine; PBL – problem based learning; RBL – Research based learning; TBL - Team based learning; CBL – Case based learning

Assignment shows the independent work of student

1. Assignment 1 (EBN) – to recognize different types of knowledge (give article and get their opinion)
2. Assignment 2 (database) – to show how search data with help of databases (CINAHL)
3. Assignment 3 (guidelines)– project (4 guidelines: diabetes, heart failure, asthma, hypertension)

Assignment (3 weeks) – portfolio with all 3 assignments

Minimum criteria to pass (pass/fail) - active participation in group work; -preparing the presentation and the report; - creative approach to presentation; - actively formulating questions related to topics of other groups.

Final assessment of subject

Evaluation by the letter system	Number equivalent	%	Balls	Evaluation by the traditional system
A	3,84-4,0	95-100	10	Excellence
A-	3,51-3,83	90-94	9	
B+	3,17-3,50	85-89	8	Good
B	2,84-3,16	80-84	7	
B-	2,51-2,83	75-79	6	
C+	2,17-2,50	70-74	5	Satisfying
C	1,84-2,16	65-69	4	
C-	1,51-1,83	60-64	3	
D+	1,17-1,50	55-59	2	
D	1,0-1,16	50-54	1	
F	0-0,99	0-49	0	Unsatisfying



1. Appendix 3 - Typical educational program on subject - advanced EBN practice

	Hours 15		Hours 30		Hours 90	
No	Lecture Title	h	Practical (class practice) and methodology	h	Independent classes with teachers/without (CPC+CPCP) and methodology	h
	<p>Levels of evidence</p> <p>1.(models, differences and similarities, advantages and disadvantages of types, relative strength and limitation of types of evidence, Sitematic review and Meta analysis (short description)</p> <p>2. Formulating nursing question by using PICO(T) format</p> <p>3. stages of planning and execution of research in nursing</p>	4	<p>1. Advanced search for scientific articles (2h)</p> <ul style="list-style-type: none"> The teacher choose 3-4 types of nursing scientific articles different methodology of 1 Nursing question (for example palliative care) <p>1. Critical evaluation of Nursing articles (2h)</p> <p>Teacher gives the assignments to the students:</p> <ul style="list-style-type: none"> Search for evidence, evaluate the level of evidence of the articles with using checklists; Discuss the strength of evidence; discuss the barriers and facilitators to implement evidence into nursing practice. <p>3. Formulating clinical question (2h)</p> <p>(example of question: Do teenagers with Type 1 diabetes who receive phone tweet reminders maintain lower blood sugars than those who do not? Does hand washing among healthcare workers reduce hospital acquired infection?)</p> <p>Teacher ask the students about their problems clinical setting and facilitate to formulate this problem into PICO question.</p>	6	<p>1 Advanced search</p> <p>Compare findings from scientific articles to evidence hierarchy (piramide)</p> <p>Small group work (8h)</p> <p>2 Evaluating and recognized type of design</p> <p>3 Formulating question</p> <p>Searching for evidence Searching the answer to PICO question and group discussion how they can apply the results of searching into their practice to solve the clinical problem.</p>	30

	Assess synthesized evidence (reviews, guidelines) -Tools -Critical appraisal tools (JBI) -Guideline evaluation (AGREE II), video and educational material online (Agree Trust)	2	Practicing appraising synthesized information Agree evaluation of Nursing clinical guideline (international/ Kazakhstan) Class room discussion about the outcomes of the AGREE evaluation and quality guidelines	4 Project in real clinical environment -Prior the course information on units willing to develop EBN gathered by the students/teachers -Units (wards/clinics) chosen -Finding an area to be developed -(Clinical question, PICO, searching...) -Find examples of EBN international practices/research information -Information assessed with teacher and nurses	20
	Nursing clinical guidelines -Development process	1	Process of creating the clinical guideline Read the one of four guidelines that exist in KZ and try step by step to prepare new clinical guideline by stages in document Methodological recommendation how to develop nursing clinical guidelines.	6 -introduce /apply research findings in certain area -Have a workshop in unit/how to make the chance happen -Conclusions	
	Implementation and evaluation EBN -Implementation methods - Examples from international nursing practice -Facilitating change -EBN mentoring -evaluation processes and outcomes using EBN information	3	Discussion about Implementation and evaluation EBN Translated articles with examples from international nursing practice In reading circles discuss about evaluation on evidence and possibilities to implementation in clinical practice in KZ	6	
	Enhancing the quality of the nursing care by using EBN information -structures supporting EBN -In Kazakhstan (CNE...) -International examples -patient-centered care, patient safety, effectiveness, efficiency	2			
	Evidence levels graduation recommendations Relative strengths and limitations of types of evidence	3	1. Advanced search The teacher gives the assignments to the students: Search for evidence, evaluate the level of evidence of the articles with using checklists; discuss the strength of	8 One part of the essay should be about how the topic of their thesis can be used in nursing practice	40

	<p><u>1. CINAHL+MeSH terms+Advanced search</u></p> <p><u>2. Critical appraisal tools</u> (from Joanna Briggs institute, CASP checklists)</p> <p><u>3. Implementation models</u> (briefly): the IOWA model, ACE STAR model, John Hopkins University model, the Stetler model, the Ottawa model, PARIHS model etc</p>	<p>evidence; discuss the barriers and facilitators to implement evidence into nursing practice.</p> <p>2. Critical appraisal tools (from Joanna Briggs institute, CASP checklists)</p> <p>3. Practical lessons (incl. working in the library)</p> <p>The questions should be related to their thesis topics, all searches should be about their topic thesis</p>	<p><u>Writing essay</u></p>
--	---	--	-----------------------------



2. Appendix 4 - Typical educational program on subject EBN practice – Master degree

	Hours 45		Hours 45		Hours 45	
No	Lecture Title	h	Practical (class practice) and methodology	h	Independent classes with teachers/without (CPC+CPCP) and methodology	h
	History of the development and influence of EBN	3	/	0	/	
	Hierarchy of Levels of evidence (models, differences and similarities, advantages and disadvantages of types, relative strength and limitation of types of evidence, Systematic review and Meta analysis (short description))	5	Advanced search for scientific articles <ul style="list-style-type: none"> The teacher choose 3-4 types of different nursing scientific articles methodology of 1 Nursing question (for example intensive care) 1. Critical evaluation of Nursing articles Teacher gives the assignments to the students: <ul style="list-style-type: none"> Search for evidence, evaluate the level of evidence of the articles with using checklists; Discuss the strength of evidence; discuss the barriers and facilitators to implement evidence into nursing practice. 	8	1 Advanced search Compare findings from scientific articles to evidence hierarchy (piramide) Individual work 2 Evaluating and recognized type of design	8
	Formulating of nursing problem by using PICO(T) model	5	Formulating clinical question (example of question: Does hand disinfection among healthcare workers reduce hospital acquired infection?) Does 0,9% NaCl use in indwelling urinary catheter balloon makes cristals?)	4	3 Formulating question Searching for evidence Searching the answer to PICO question and individual presentation on how they can apply the results of searching into their practice to solve the clinical problem.	7

			Teacher ask the students about their problems clinical setting and facilitate to formulate this problem into PICO question.			
	Steps of applying scientific evidence Applying in nursing practice and a critical evaluating of the results of the nursing intervention stages of planning and execution of research in nursing	5	With the help of teacher the students will write about how would they apply examples from previous literature reviews in new practice and present that in ppt. presentation to class	4	Project in real clinical environment -Prior the course information on units willing to develop EBN gathered by the students/teachers -Units (wards/clinics) chosen -Finding an area to be developed - (Clinical question, PICO, searching...) -Find examples of EBN international practices/research information -Information assessed with teacher and nurses -introduce /apply research findings in certain area -Have a workshop in unit/how to make the chance happen -Conclusions	10
	Assess synthesized evidence Reading and analysis of scientific publications and reports (reviews, guidelines) -Tools -Critical appraisal tools (JBI) -Guideline evaluation (AGREE II), video and educational material online (Agree Trust)	5	Practicing appraising synthesized information Agree evaluation of Nursing clinical guideline (international/ Kazakhstan) Class room discussion about the outcomes of the AGREE evaluation and quality guidelines	5	Perform the survey based on all the knowledge received on lectures and write the presentation on impact of beliefs, attitudes, knowledge, and behaviors of nurses in EBP	20
	Nursing guidelines and evidence based procedures -Development process	4	Process of creating the clinical guideline Read the one of four guidelines that exist in KZ and try step by step to prepare new clinical guideline by stages in document Methodological recommendation how to develop nursing clinical guidelines.	6		



	Implementation and evaluation of EBN -Implementation methods - Examples from international nursing practice -Facilitating change -EBN mentoring -evaluation processes and outcomes using EBN information	5	Discussion about Implementation and evaluation EBN Translated articles with examples from international nursing practice In reading circles discuss about evaluation on evidence and possibilities to implementation in clinical practice in KZ	5	
	Enhancing the quality of the nursing care by using EBN information -structures supporting EBN -In Kazakhstan (CNE...) -International examples -patient-centered care, patient safety, effectiveness, efficiency	4			
	Evidence levels graduation recommendations Relative strengths and limitations of types of evidence <u>1. CINAHL+MeSH</u> <u>2. Critical appraisal tools</u> <u>3. Implementation models</u> the IOWA model, ACE STAR model, John Hopkins University model, the Stetler model, the Ottawa model, PARIHS model etc	4	1. Advanced search The teacher gives the assignments to the students: Search for evidence, evaluate the level of evidence of the articles with using checklists; discuss the strength of evidence; discuss the barriers and facilitators to implement evidence into nursing practice. 2. Critical appraisal tools (from Joanna Briggs institute, CASP checklists) 3. Practical lessons (incl. working in the library) The questions should be related to their thesis topics, all searches should be about their topic thesis	8	
	Obstacles and barriers to the development and implementation of EBN practice	5	Searching for strategies for overcoming barriers in implementing evidence-based practice	5	

3. Appendix 5 - Questionnaires of Evidence-Based Nursing skills

Evidence-based practice – knowledge (EBP-K)

Content: asking clinical questions, acquiring evidence, appraising evidence, applying evidence to a clinical situation, and assessing care effectiveness in terms of patient outcomes

Question format: statements rated on a 6 point Likert scale (1 - strongly disagree, 6 - strongly agree) in tekst above there is 5 point scale mantioned here everywhere ther is 6 point mentioned what is right?

1. Evidence-based nursing requires the use of critical appraisal skills to ensure the quality of all the research papers retrieved
2. Effective searching skills/easy access to bibliographic databases and evidence sources are essential to practicing evidence-based nursing
3. Critically appraised evidence should be appropriately applied to the patient using clinical judgment and experience
4. The evidence-based medicine process requires the appropriate identification and formulation of clinical questions
5. Practicing evidence-based nursing increases the certainty that the proposed care is effective

Attitudes toward evidence-based practice (EBP-A)

Content: perceived need for information, willingness to practice EBP, perceived role of EBP in clinical practice, attitude about EBP's threat to clinical practice

Question format: statements rated on a 6 point Likert scale (1 - strongly disagree, 6 - strongly agree)



1. If evidence-based medicine is valid, then anyone can see patients and do what doctors do
2. There is no reason for me personally to adopt evidence based nursing because it is just a fad (or fashion) that will pass with time
3. Evidence-based nursing is cook-book medicine that disregards clinical experience
4. Nurses, in general, should not practice evidence-based nursing because nursing is about people and patients, not statistics
5. Evidence-based nursing ignores the art of profession.
6. Previous work experience is more important than research findings in choosing the best care available for a patient.

Personal application and use of evidence-based practice (EBP-P)

Content: access and acquisition of evidence, application to patient care, influence of positive role models on EBP adoption, barriers to adopting EBP, contribution of EBP to clinical reasoning and learning, current proportion of clinical activity based on EBP principles, frequency of actual use of EBP, perceived need for EBP each day or week and for each patient encounter, overall use of EBP in the past year. **Question format:** (1 - never, 5 - every day; 1- not at all, 6 - completely)

1. How frequently do you access nursing evidence from a textbook?
2. How frequently do you access nursing evidence in general?
3. How frequently do you access nursing evidence on the Internet (excluding Medline and Cochrane Reviews)?
4. How frequently do you access nursing evidence from original research papers?
5. How frequently do you access nursing evidence from the Cochrane database?



6. How frequently do you access nursing evidence from secondary sources such as the Journal of Evidence-Based Nursing or CATs (Critically Appraised Topics)?

Future use of evidence-based practice (EBP-F)

Content: perceived future importance of EBP to medical practice, willingness to practice EBP in the future, usefulness of EBP in the future, potential barriers to the adoption of EBP currently and in the future.

Question format: statements rated on a 6 point Likert scale (1 - very unwilling, 6 - very willing; 1 - completely useless, 6 - very useful; 1 - not at all, 6 - completely)

1. Compared to 1 year ago, how useful do you believe evidence-based nursing will be in your future practice as a doctor?
2. Compared to 1 year ago, how willing are you to practice evidence-based nursing as a doctor in the future?
3. You personally appreciate the advantages of practicing evidence-based nursing
4. Evidence-based medicine should be an integral part of the undergraduate nursing curriculum
5. Compared to 1 year ago, how much do you support lifelong learning using evidence-based nursing techniques?
6. Compared to 1 year ago, how much do you support the principles of evidence-based nursing?
7. How much do you consider the practice of evidence based nursing a routine part of your learning?
8. How much has the practice of evidence-based nursing changed the way you learn?
9. How easy or difficult has it been for you to practice evidence-based nursing as a medical student in the last month?





4. Appendix 6 – Questionnaire for teachers using the evidence-based nursing national educational materials

Question format: Evaluate the statements rated on a 6 point Likert scale (1 - strongly disagree, 6 - strongly agree)

No	Statements
1.	Learning materials could be used in target groups
2.	Learning materials supports the evidence-based nursing education
3.	Learning materials supports and activates critical thinking and helps to generate new ideas
4.	Learning materials help to learn necessary topics
5.	Learning materials are challenging the student to learn
6.	Learning materials are understandable
7.	Learning materials are actual and necessary
8.	Learning materials are concrete and specialty aimed
9.	Learning materials are corresponding with the practice
10.	Learning materials are interactive and maintaining the feedback from the students
11.	Learning materials maintaining the feedback in order to assess your own competences
12.	Learning materials are easy to use
13.	Instructions for the learning materials are clear
14.	Learning materials are visually esthetic and understandable



5. Appendix 7 Master class programm - “Evidence based nursing –recognized best practices implementation”

DAY 1 – Tuesday 21. 04. 2020 National learning materials on EBN Nazarbayev University School of Medicine, Nur-Sultan, Kazakhstan Zoom online platform		
Time	Subject	Lecturer/Presenter
11.30 – 11.45	Welcome gathering and greetings	Almira Akhmetova, assistant professor, SMU Katja Pesjak, assistant professor, ABFHC
11.45 – 12.00	Presenting the workshop program <u>Instruction in Moodle</u>	Zhuldyz Zhetmekova, MNS, SMU
12.00 - 12.25	Use and benefits of EBN	Katja Pesjak, assistant professor, ABFHC
12.25 – 12.30	TECHNICAL BREAK FOR LECTURERS	
12.30 - 12.45	Introduction to evidence-based nursing	Zhuldyz Zhetmekova, MNS, SMU Laura Kassym, PhD, SMU All participants
12.45 - 13.25	Lecture: Evidence based nursing practice	Laura Kassym, PhD, SMU
13.25 - 14.00	<u>Assignment</u> Evidence based nursing practice	Laura Kassym, PhD, SMU All participants
14.00 - 15.00	Lunch break	
15.00 - 15.40	Stages of evidence-based nursing practice	Gulmira Derbissalina, assistant professor, AMU
15.40 - 16.20	<u>Assignment</u> Stages of evidence-based nursing practice	Gulmira Derbissalina, assistant professor, AMU All participants
16.20 – 16.25	TECHNICAL BREAK FOR LECTURERS	
16.35 - 17.15	How to state nursing problem	Lyazzat Zhamaliyeva, assistant professor, WKMU
17.15 -17.50	<u>Assignment</u> Nursing problem statement PICOT	Lyazzat Zhamaliyeva, assistant professor, WKMU

		All participants
17.50– 18.00	Closing of gathering for the day 1 – instructions for day 2	Laura Kassym PhD, SMU All participants

DAY 2 – Wednesday 22. 04. 2020		
BEST PRACTICES / GOOD EXAMPLES OF EBN IMPLEMENTATION Nazarbayev University School of Medicine, Nur-Sultan, Kazakhstan. Zoom online platform		
11.30- 12.10	Lecture: Access synthesized evidence	Inesh Meyrmanova, MNS, MUK
12.00-12.40	<u>Assignment</u> Access synthesized evidence	Inesh Meyrmanova, MNS, MUK All participants
12.40 –12.50	TECHNICAL BREAK FOR LECTURERS	
12.50 -13.30	Nursing clinical guidelines	Ayagoz Umbetzhanova AMU
13.30 -14.10	<u>Assignment</u> Nursing clinical guidelines	Ayagoz Umbetzhanova AMU
14.10 -15.20	Lunch Break	
15.20-16.00	Clinical practice guidelines for nursing and healthcare in Finland: Supporting families after a sudden death a family member	Hanna Hopia, JAMK Johanna Heikkilä JAMK
16.00– 16.40	Nursing rituals: Unnecessary and harmful nursing procedures; how hospitals change everyday nursing practice Beter Laten Report and research of the National Nursing Board of the Netherlands https://www.venvn.nl/beterlaten	Cornelia van Slochteren, HANZE
16.40-16.50	TECHNICAL BREAK FOR LECTURERS	
16.50 –17.30	"Best practices enhancing patient safety in nursing clinical practice"	Eveliina Kivinen LAB Susanna Tella LAB
17.30 –17.50	Guidelines for diabetes management European best practice	Mateja Bahun, ABFHC
17.50 –18.00	Closing of gathering for the day 2 – instructions for day 3	Mateja Bahun, ABFHC

DAY 3 – Thursday 23. 04. 2020 BEST PRACTICES / GOOD EXAMPLES OF EBN IMPLEMENTATION in Kazakhstan Nazarbayev University School of Medicine, Nur-Sultan, Kazakhstan. Zoom online platform		
Time	Subject	Lecturer/Presenter
11.30 –12.10	Nursing clinical guidelines in Kazakhstan	Nauruzbayeva Ainagul deputy director of SME "Aktobe Higher Medical College named after the Hero of the Soviet Union Manshuk Mametova
12.10-12.50	Nursing clinical guidelines in Kazakhstan pain management	Bigeldinova Irina, nurse of the neurological department of Aktobe MSCH
12.50– 13.00	TECHNICAL BREAK FOR LECTURERS	
13.00 –13.30	Nursing clinical guidelines in Kazakhstan: stroke rehabilitation	Kispayeva Togzhan, professor, MUK
13.30-14.00	Nursing clinical guidelines in Kazakhstan: Management of Asthma	Laura Kassym, PhD, SMU Raushan Kassymova, KazNMU by Asphendarov
14.00 –15.00	Lunch break	
15.00– 15.40	Implementation of nursing research results	Nancy L. Stitt, PhD, NUSOM
15.40-16.00	Recommendations for KZ universities in EBN implementation	Mateja Bahun, ABFHC Zhuldyz Zhetmekova, SSMU
16.00 -16.40	Strengthening the role and importance of nursing professionals by introducing a new post of extended practice nurse with the transfer of some duties of doctors to nurses	Shakenova Dinara, Head of the nursing development department UMC
16.40 –16.50	TECHNICAL BREAK FOR LECTURERS	
16.50 –17.30	Improving the quality of nursing care for a rehabilitation patient	Moldagaliyeva Gulnar, Head nurse of clinical rehabilitation department UMC
17.30 –18.30	Feedback of masterclass	All participants