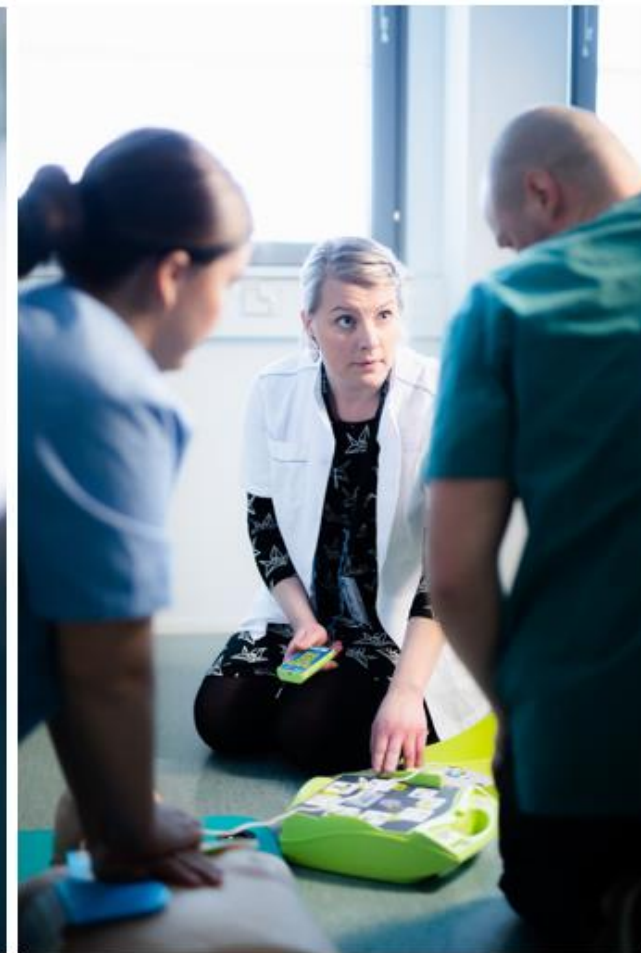


TRAINING MATERIALS FOR EVIDENCE BASED EDUCATION



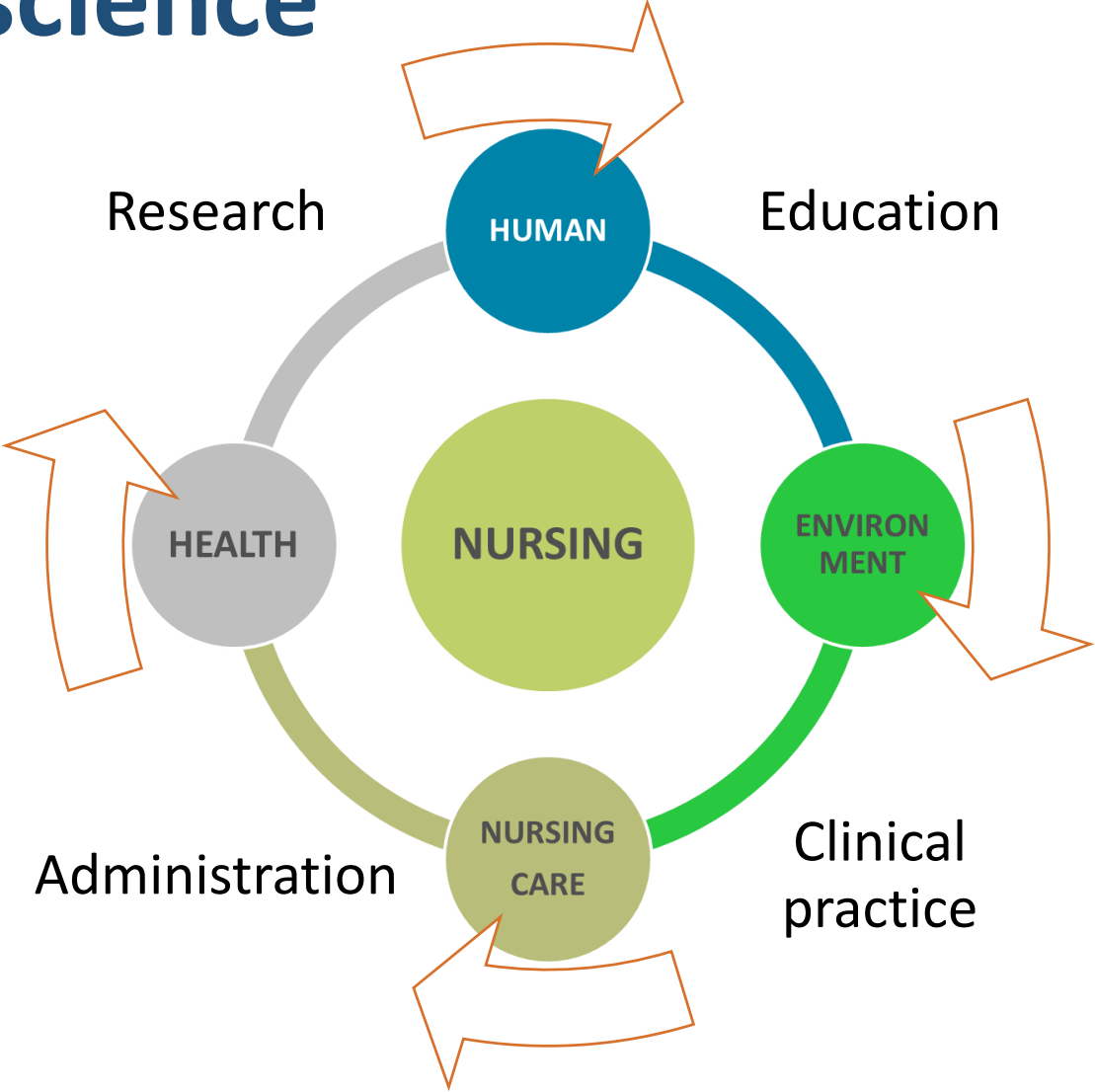
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Nursing science



Evidence based practice (Lauri 2003)

1. Scientific research evidence

- Effectiveness of treatment shown by scientific criteria

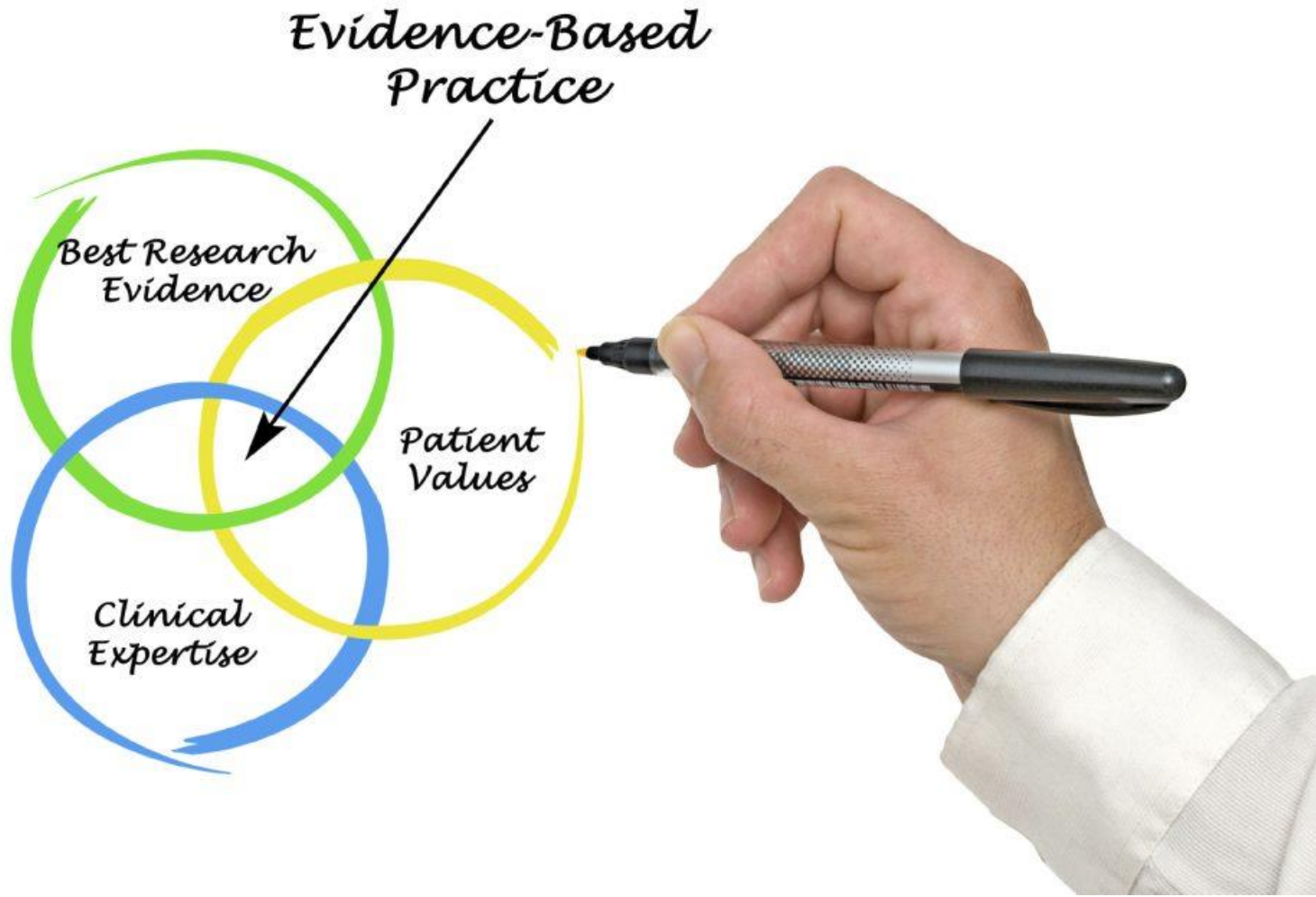
2. Observed and evaluated evidence

- Based on development project implemented and evaluated on the health care organization

3. Evidence based on experience

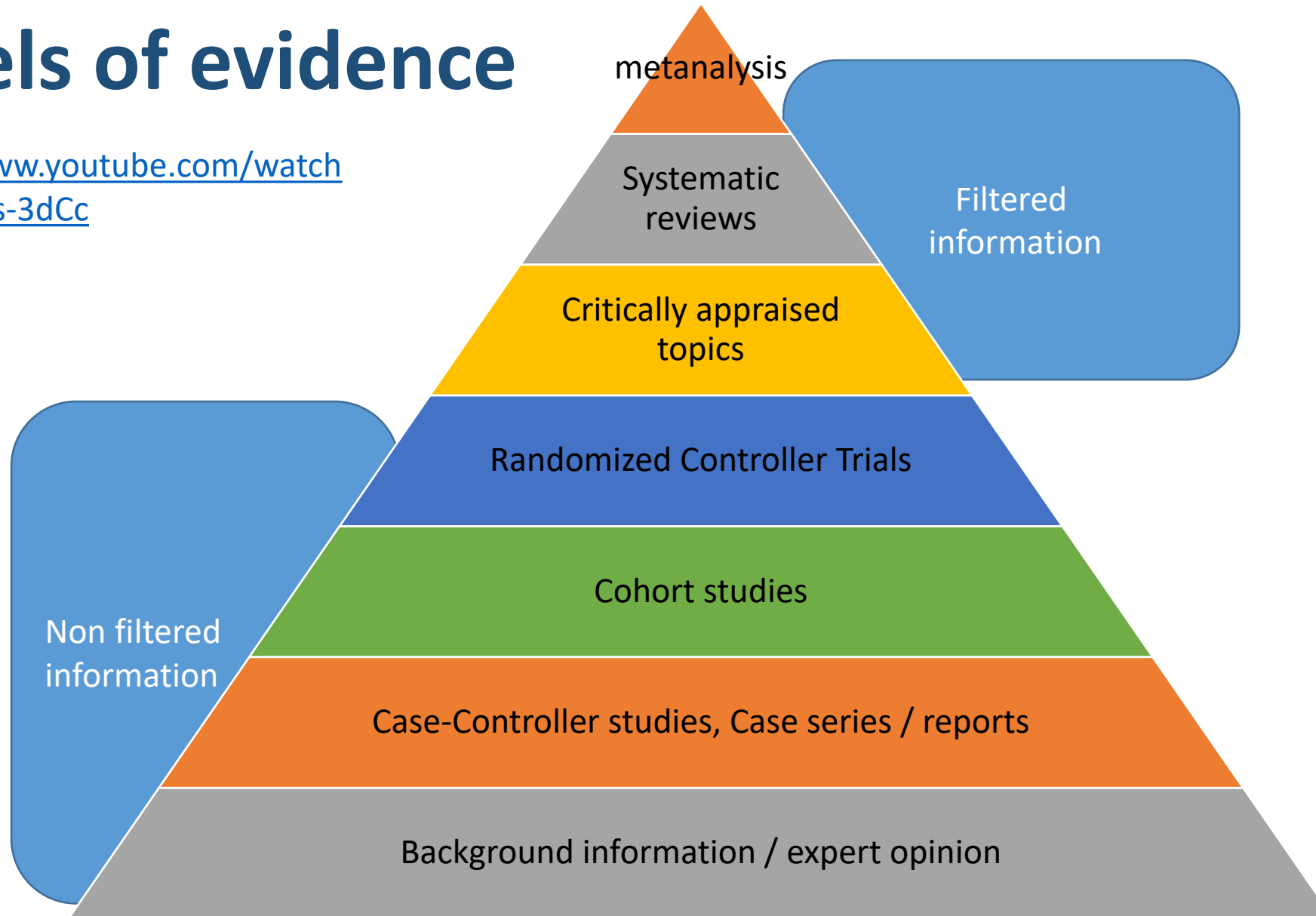
- Good care results found by nurse/physician/patient





Levels of evidence

<https://www.youtube.com/watch?v=tqQ94s-3dCc>



Nursing research in China until 2012

- Chinese papers published in the field of nursing practice have increased over time
- Improvements are needed to ensure that thorough studies with high-quality research methodologies are being performed.
- Future nursing researchers should not only improve the design of their intervention studies but also clearly describe the methodology they used, especially in group randomisation, blinded research designs, and estimations of required sample sizes.

Xing, W., Fu, L., He, M., Hua, Y. & Ying. 2014



Teaching in evidence based methods

- EBN teaching method is an effective learning approach that can make students become good thinkers.
- EBN teaching method is an effective way to promote students' critical thinking, compared with traditional method.
- EBN has been found to influence nursing students' ability of processing problems, such as understanding, recognition of assumptions, deduction, interpretations, and evaluation of arguments.
- EBN has been found that it could affect nursing students' attitude of processing problem, i.e., truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, and maturity.
- EBN could be used as a teaching method world widely in future nursing education, and pay more attention to the cultivating critical thinking.

Chuyun Cuia, Yufeng Lia, Dongrong Gengb, Hui Zhanga, Changde Jinc, 2018



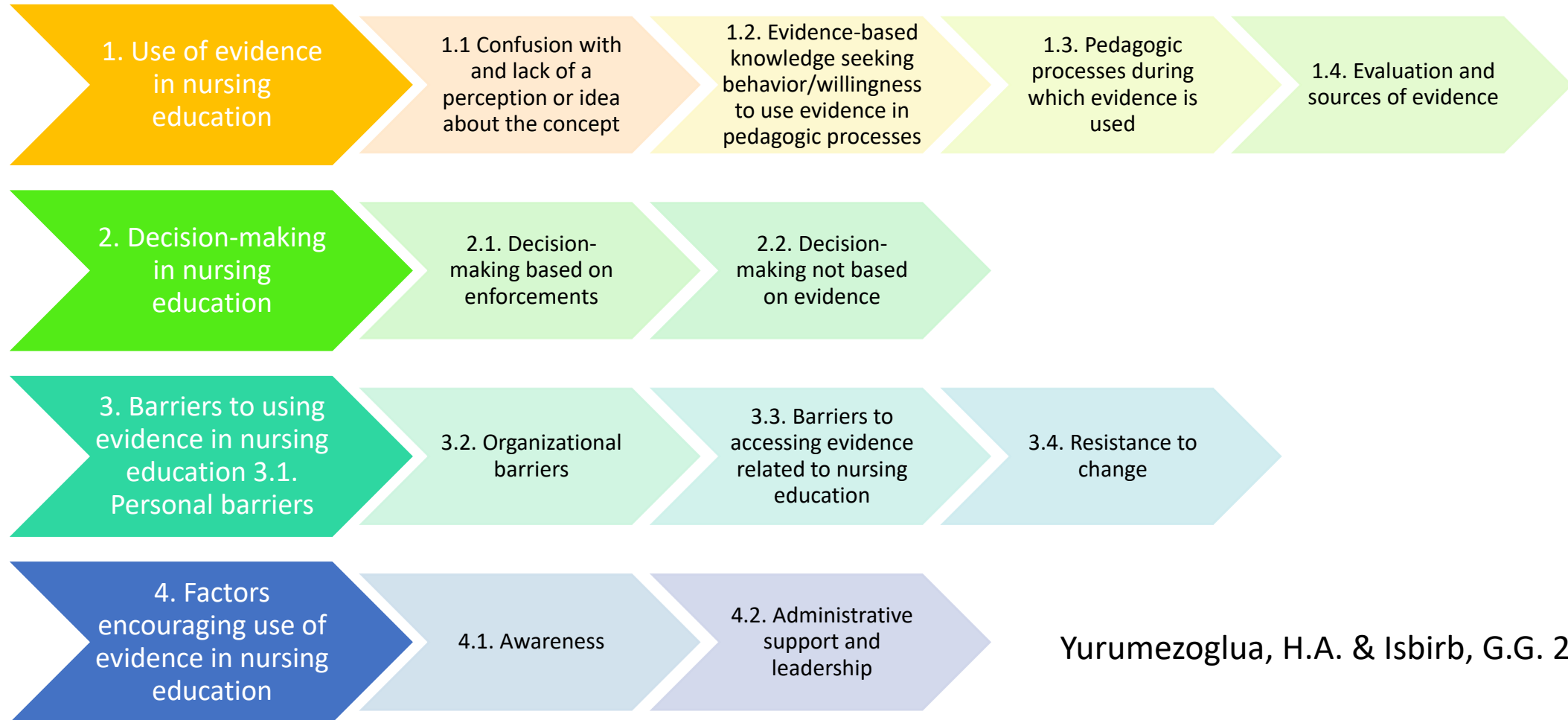
Evidence based education

- Nurse educators should make their decisions about designing curricula and selection of learning and teaching strategies and evaluation methods by utilizing research-based evidence
- To achieve effective learning, nurse educators should adopt teaching strategies based on evidence. Therefore, evidence-based nursing education involves:
 - evidence,
 - nurse educators' professional decisions,
 - students' values and
 - resources
- Educators focus on transfer of knowledge and skills about their own fields and use evidence concerning what to teach, but they **do not seek evidence regarding how to teach**
- One of the most important barriers to using evidence in education is lack of sufficient, strong and reliable evidence.
 - Due to lack of sufficient evidence, educators continue to use traditional methods;
 - Curriculum based on a medical model is still being used.

Yurumezoglua & Isbirb 2020



Barriers to utilizing evidence in nursing education

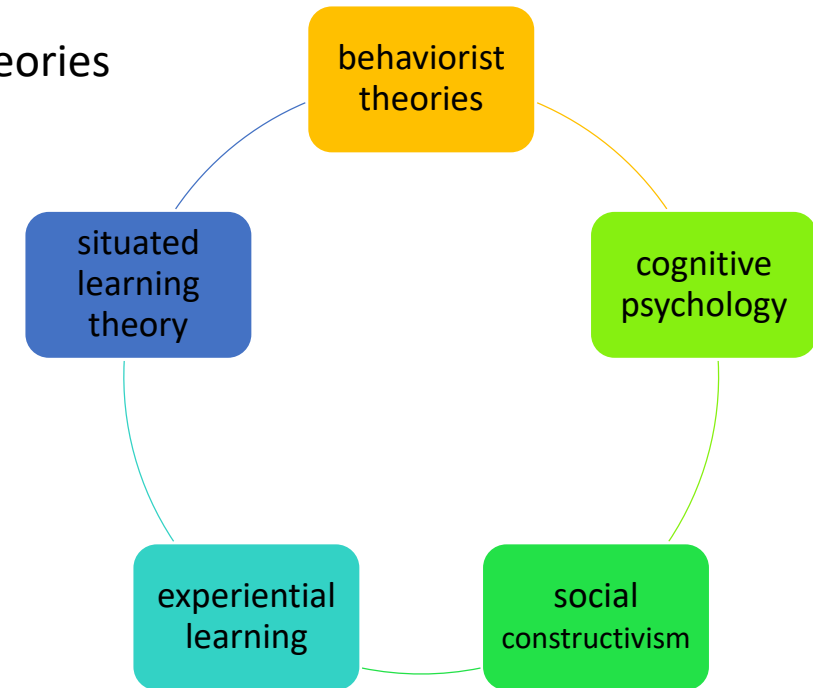


Yuromezoglua, H.A. & Isbirb, G.G. 2020.



Education theory in teaching EBP

- Tailoring learning experiences for undergraduate nurses is operationalized within cognitive, affective and psychomotor knowledge domains.
- A multitude of approaches is needed to enhance the development of knowledge, attitudes and skills that are required for students to become safe and competent practitioners as well as critical thinkers who are reflective, socially aware and responsive
- Approaches should be underpinned by the most influential theories of learning, such as:
 - behaviourist theories,
 - cognitive psychology,
 - social constructivism,
 - experiential learning, and
 - situated learning theory



Beccariaa, Keka & Huijserb 2018



An exploration of Traditional Chinese Medicine practitioners' perceptions of Evidence Based Medicine

Five themes and related sub-themes.	
Main themes discussed	Sub-themes
1. Understanding of EBM by TCM practitioners	EBM as a research approach in western medicine
	Similarity of TCM & EBM diagnosis process
	Development of TCM as example of EBM
2. Applying EBM in Combination of Western	Combination of Western Medicine and TCM
	The process of diagnosis
	Conducting research
3. The concept of evidence in TCM	Traditions as evidence
	Clinical experience as evidence
4. Updating TCM knowledge	Formal and informal education
	Healing experience
	Classic books and professional journals
5. Disease challenges knowledge	

William Spence, Na Li



Barriers to utilize EBN in China

Barriers related to clinical nurses

- Barriers to implementing evidence based nursing are that nurses are not ready to conduct scientific research (Wu et. all.) or that
- they seldom have the skills to integrate scientific methods to their clinical practice Wu et. all).
- Overall nurses have negative impression of their abilities to conduct research (Wu et. all).
- Nurses feel they do not have skills to find or how to choose research results (Huang et. all).
- They also think that there is too much research available (Huang et- all) and
- do not know how to summarize the evidence found in research (Yue, Fan & Peng).



Barriers related to clinical nurses cont.

- Many of the nurses are not familiar with EBN (Yue, Fan & Peng), they do not have adequate education to be able to understand research results or read research literature.
- Overall nurses tend not to read literature much, it is not tradition. This leads to the role of clinical teachers in clinical practice, the students expect them to be able to teach according to EBN. (Wang et. all)
- Clinical nurses and teachers have difficulties in applying EBN in bedside (Hung et. all).
- Nurses do not have enough time to read research (Huang, et all)
- Lack of language skills is a barrier, especially competence in English language. The language barrier concerns both teachers and students. The scientific language used in articles is too difficult to many of the nurses. (Huang et all.)



Barriers related to education

- Chinese nurses have low skills in rigorous evaluation of evidence and often have no skills to implement systematic literature searching. Reading the results can be challenging since they are not familiar with statistics or with research methodologies.
- Many nurses have difficulties to access different databases to find research. (Yue, Fan & Peng.)
- Organizational culture affects to utilization of EBN (Huang et all)
- In some of the hospitals in China the leaders do not require the use of EBN (Yue, Fan & Peng) The type of hospital matters in EBN utilization in nursing. Teaching hospitals were more likely to utilize EBN (Huang, F.F., Zhang, N. et all.)
- It seems that the willingness to study EBN further after graduation also depend on the requirements of the organization and working unit (Zhang et. all).
- Attitude of the nurses with higher education level was more positive, their interest towards research was greater (Huang, F.F., Zhang, N. et all).
- Those studying for master level education have better opportunities to access evidence based materials (huang et all). They were taught how to search evidence, appraise evidence (Hsiao-Ying Hung a,b, Yu-Fang Huang c, Jing-Jane Tsai d,e, Ying-Ju Chang)



Barriers related to education cont.

- Barriers to teaching EBN to nursing students include for instance that teachers do not evaluate students learning outcomes (Hung et. all).
- Teaching methods to teach EBN are not always, suitable (Wang et. all). Often times the methods to teach were lecturing, discussion, oral presentation and simulation.
- Many EBN contents are taught inside other courses, are not compulsory or are very small.
- Most of the teacher use standardized teaching materials like textbooks in their teaching instead of EBN materials (Hung et. all).
- Many of the EBN courses are offered only to senior students (Hung et. all).



- There is a lack of qualified nurse teachers in China or their educational level is not high enough (Hung et. all, Wang et. all).
- Many of the existing nurse teachers do not have education to teach EBN (Hung et. all).
- Teachers teaching EBN might not have engaged in nursing research at all (Wang et. all).
- They lack skills in research utilization and do not have experience to teach research (Wang et. all).
- Problem can also be that the teacher teaching EBN is not nurse teacher but a statistician. (Hung et. All)
- Students who had self-directed learning and workshops were satisfied with their learning. They felt that self-directed learning and workshops increased the knowledge, attitudes and behavior towards EBN. They reported improvements in analytical and problem solving abilities, were able to work independently, understood evidence based concepts and importance of scientific research ability (Zhang et. all.)



Evidence based program

- EBP program with blended learning methods has significant improvements in EBP self-efficacy, knowledge, and evidence utilization
- Blended learning approaches to teaching and learning EBP are necessary for undergraduate nursing students
- The blended learning approach comprises both traditional face-to-face and e-learning methods
helps nursing students learn to integrate theory, research, and practice.
- In traditional teacher-centered education, nursing students were expected to solve difficult clinical problems before they have acquired the ability to integrate theory and practice
- Teaching team should be assigned to teach EBP
 - Nurse teacher
 - school librarian
 - clinical expert
 - statistician
- There should be parallel courses with EBP courses, including nursing research, nursing informatics, nursing statistics, and clinical nursing practicums.
- This all allows students to integrate knowledge and skills learned from each nursing core courses,

Oh & Yang 2019



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