

Critical thinking as an indispensable component of the Polish nurses' education process and a necessary condition for the development of nursing

Krytyczne myślenie jako niezbędny składnik procesu edukacji polskich pielęgniarek i konieczny warunek rozwoju pielęgniarstwa

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STRESZCZENIE

KRYTYCZNE MYŚLENIE JAKO NIEZBĘDNY SKŁADNIK PROCESU EDUKACJI POLSKICH PIELĘGNIAREK I KONIECZNY WARUNEK ROZWOJU PIELĘGNIARSTWA

Wprowadzenie. Zmieniająca się rzeczywistość, przenikanie się kultur, postęp w dziedzinie nauki, rozwój techniki, ujawnienie się nieznanych dotąd potrzeb, wyzwania ze strony obywatelskiego systemu opieki zdrowotnej, wymagają od pielęgniarek umiejętności trafnego odczytania istoty zachodzących zjawisk oraz odpowiedniego zareagowania na dokonujące się transformacje. Proces edukacji zatem powinien nie tylko przekazywać najnowszą wiedzę, stymulować do samokształcenia, przygotowywać do prowadzenia działań komparatystycznych i aplikacyjnych, ale również kształcić określone nawyki myślowe zwane krytycznym myśleniem, jako że jest ono przeciwieństwem rutyny, schematyzmu, czy naśladownictwa.

Cel. Uzmysłowanie specyfiki krytycznego myślenia. Podanie kilku koncepcji krytycznego myślenia. Wykazanie konieczności rozwoju krytycznego myślenia w procesie edukacji pielęgniarek. Próba podania odpowiednich kryteriów do oceny umiejętności krytycznego myślenia w pielęgniarstwie.

Metoda. Metoda fenomenologiczna gwarantująca prawdziwość i pewność poznania dzięki naocznemu oglądowi istoty zjawiska oraz precyzji języka jego ekspresji.

Wnioski. Krytyczne myślenie uczy odwagi w przełamywaniu schematów pojęciowych. Umożliwia zdefiniowanie problemów w szybko zmieniającej się rzeczywistości i znalezienie optymalnego sposobu ich rozwiązania. Poszerza repertuar podstawowych umiejętności współczesnej pielęgniarki. Zwiększa zakres samodzielności pielęgniarek i podnosi poziom jej profesjonalizmu. Krytyczne myślenie jako kluczowa kompetencja powinno stać się jednym z głównych celów edukacji na każdym poziomie. Należy organizować dla pielęgniarek kursy z krytycznego myślenia oraz jego aplikowania w praktycznym działaniu.

Słowa kluczowe:

krytyczne myślenie, edukacja, innowacje, proces, autonomia

ABSTRACT

CRITICAL THINKING AS AN INDISPENSABLE COMPONENT OF THE POLISH NURSES' EDUCATION PROCESS AND A NECESSARY CONDITION FOR THE DEVELOPMENT OF NURSING

Introduction. The changing reality, the interpenetration of cultures, progress in the field of science, the development of technology, the emergence of unprecedented needs, challenges from the civic health care system require nurses to accurately interpret the essence of phenomena and respond appropriately to the ongoing transformations. Therefore, the education process should not only convey the latest knowledge, stimulate self-education, prepare for conducting comparative and application activities, but also educate specific thought habits called critical thinking, as it is the opposite of routine, schematism or imitation.

Aim. Understanding the specifics of critical thinking. Providing several concepts of critical thinking. Demonstrating the need to develop critical thinking in the nurses' education process. An attempt to provide appropriate criteria for the assessing of critical thinking skills in nursing.

Method. A phenomenological method that guarantees truthfulness and certainty of cognition through the intuitive knowledge of the essence of the phenomenon and the precision of the language of its expression.

Conclusions. Critical thinking teaches courage in breaking conceptual patterns. It allows you to define problems in a rapidly changing reality and find the optimal way to solve them. It extends the repertoire of the basic skills of a modern nurse. Moreover, it increases the independence of nurses and raises the level of their professionalism. Critical thinking as a key competence should become one of the main goals of education at every level. Mandatory courses of critical thinking and its application in practical activities should be organized for nurses.

Key words: critical thinking, education, innovation, process, autonomy

INTRODUCTION

Nursing included in the phenomenological perspective appears to be a dynamic phenomenon immersed in the world with which it is connected by inseparable bonds. The world, like nursing, is not a permanent reality either. Nothing ever lasts in an unchanging form. Ideas are being transformed, metaparadigms are being exhausted, absolute value systems are corrupting, knowledge is evolving, technology is changing, and the mentality of people is transforming. Everything exists in unique time and place reference systems. The dizzying pace of universal liquidity requires acumen in reading the essence of internal fluctuation structures and the agility of indicating its key threads. This cannot be a matter of routine or imitation, but a carefully thought-out act commensurate with expectations. The variability is acutely experienced in nursing practice, which even demands personalization of solutions correlated with the dynamics of difficult to predict circumstances [1]. „As a nurse uses critical thinking in his daily work, he/she would solve the problems faster and easier, and would make more appropriate decisions for the patients”[2].

The skillful inscribing of native nursing into the landscape of change is a great challenge for it. For nursing to meet this challenge, it should also educate certain mental habits and stimulate the development of critical thinking in the education process. After all, nothing can replace it in detecting logical-linguistic errors, distinguishing facts from assumptions, exposing methods of manipulating statistical data, and recognizing eristic ploys. It teaches us to question the validity of the assumptions made. It dares to doubt the results of cognitive achievements. This short list of the benefits of critical thinking makes us realize that this is the only way to discover the truth and the best way to create the intellectual autonomy of culture. The classics of philosophy knew this, and their attitude to this matter was summarized by Saint Augustine in the epistemological aphorism “*Dubito ergo sum*”. –“*I doubt, therefore I am*” [3].

Anglo-Saxon nursing realized the importance of critical thinking in the early nineties of the last century. Since then, it has regularly published monographs and devoted considerable attention to it in almost every major journal [4]. Meanwhile, our education is still dominated by the idea of innovation that is already coming out of fashion. Under its influence, a stronger emphasis in the education of nurses was put on stimulating creativity, not on developing critical thinking. This opinion is not arbitrary, but based on strong premises. It is confirmed primarily by the inadequate preparation of the teaching staff for the implementation of critical thinking at all levels of

nurses' education. There is no compulsory subject on the topic in the curriculum. Until now, methods of getting used to critical thinking have not been developed. So far, no separate catalogue of methods constituting the foundations of critical thinking has been developed. The view that „tooling” in the form of case study, evidence based practice, problem solving and clinical decision making is the same as critical thinking, is still dominant. Meanwhile, studies of recent years have shown fundamental differences between these types of thinking. The strategies listed above are the resultant of critical thinking and its effect [5]. Naturally, the semantic boundary between diametrically different thinking genres can sometimes be fluid, and in thinking not considered critical by definition there are some elements that form it. In this case, there is mutual dependence. There are also no tools to check it. The new education standards have permanently deleted philosophy, which is the field most predisposed to forming critical thinking.

The issue of critical thinking is rarely seen in industry journals and at scientific and training conferences. Polish nursing has not published a single book about the subject matter discussed here, which would be equivalent to the academic textbook *Critical Thinking Skills* by Stella Cottrell [6]. Meanwhile, this compendium equips the reader with a kind of instrumentation to test their reading comprehension skills, to define the point of view of the author of the text being read, to decipher the hidden sense of the text content, to analyze the structure of the text, to estimate the clarity of the argument and to determine the type of arguments and correctness of reasoning [7].

AIM

To understand the specifics of critical thinking, to provide several concepts of critical thinking, to demonstrate the need to develop critical thinking in the nurses' education process. An attempt to provide criteria for assessing critical thinking skills in nursing.

METHOD

A phenomenological method that guarantees truthfulness and certainty of cognition thanks to the eye-sight of the essence of the phenomenon and the precision of the language of its expression.

Main body

Many concepts of critical thinking have been appearing in modern science. Nevertheless, none of them aspires to be a universal and universally approved inter-

pretation [8]. Some ideas about the nature of critical thinking can be given by several of its approaches, which have been adapted by Western-European and North Atlantic nursing education. At the meta-reflection level, it refers to the formula of Michael Scrove and Richard Paul [9], among others. Their definition was approved in 1985 by the National Council for Excellence in Critical Thinking. It shows that critical thinking is an intellectually disciplined process of correct conceptualization, analysis, ordering, logical linking and the use of collected or generated information through experience, observation, reflection, communication, which serve as a signpost for practical action and building one's own views. In the model form, critical thinking is characterized by transparency, precision, logical consistency, relevance and impartiality [8].

Nursing education also uses the approach proposed by John Dewey and his followers [10]. According to Dewey, critical thinking consists in considering the possible impact of what is currently happening on what will happen, though it has not happened yet. When it is said that thinking accompanies situations in which the current course of events has not yet come to an end, it means that human thought participates in what is doubtful and problematic. Man can be sure only of what is settled and completed. Reflection becomes a sign of uncertainty of expectation and mindfulness. The task of thinking is „work” to obtain a specific result based on what is already given. Thinking, therefore, is not the same as the usual sequence of representations, observations or images following each other. Thinking is a continuity that arranges in an order in which each of the representations entails the next and vice versa. Each representation is also based on those that precede it. The next links of reflective thinking result from one another and are mutually supportive. They do not create chaos but are harmoniously connected with each other. *“Each stage is a step from one thing to another (...) it is the „term” of thinking. (...) Each such term leaves something that is used in the next period. The stream or flow of thoughts becomes their string, chain, thread”* [11].

According to Dewey, critical thinking translates directly into the whole of human existence, which takes on an event-like form. Dewey thus highlights the feature of the world's volatility and suggests how to capture situations in terms of facts of human significance. The processuality of critical thinking and its prospective character based on overcoming tensions has a decisive influence on the shaping of the human world of meanings.

The definition of critical thinking, coined by an international body of scholars cooperating within the “Delphi Project”, turned out to be particularly valuable in nursing education. This interpretation was recognized by the American Philosophical Society as the model one in 1990. Literally, the formula states that critical thinking manifests itself in an intentional, self-aware judgment that involves analysis, inference, evaluation as well as explanation and proof of methodological, conceptual or situational considerations on the basis of which this reckoning has been based [12].

The pattern of a thinking man:

The same group of thinkers gave the outline of a project of a critically thinking man. The pattern contains the following components:

- unsatisfied curiosity
- gathering knowledge
- honesty in relation to personal prejudices
- prudence in making judgements
- a habit of reflection
- striving to clarify the studied matter
- regularity in ordering information about an issue
- diligence in searching for relevant information and their selection
- wisdom in the selection of criteria
- focus and inquisitiveness
- perseverance in striving for the best results [12].

Undoubtedly, the juxtaposed components determine the semantic scope of the canon. However, after much thought, it is problematic to treat it as comprehensive. Its incompleteness gave rise to an attempt to create a semantically-larger paradigm of a critically thinking man. The new version includes two dimensions: cognitive and affective. Both combine with each other inextricably, like the reverse and the obverse of one coin. According to this view, a person who is critical in thinking must have not only a brilliant mind, but also a certain affective attitude. In the cognitive sphere, the ability of critical thinking is reflected by:

- reliable interpretation of the problem
- estimation of the nature of the idea
- verification of the rationale of arguments in the justification of issues
- deriving accurate conclusions
- clear explanation and defense of reasoning which has dictated the choice of a particular decision
- assessment of information in terms of credibility and the degree of their theoretical and practical usefulness.

The affective attitude is reflected in such features as:

- openness of mind
- tolerance for different opinions and respect for the right to express one's own beliefs
- enthusiasm in the pursuit of knowledge
- the courage of doubt
- care in ordering information at all levels of solving the problem
- confidence in oneself and at the same time awareness of the limitations of one's own abilities [13].

It is easy to see that this version of a critically-thinking man is far from complete. Avoiding the ambition of further developing this subject, it will be more sensible to close it with a general statement. Assuming that critical thinking is not only a resultant of the mind and affects, but also man's lifestyle in the world, it will necessarily boil down to capturing the world in a certain way, speaking about it in a certain way and acting in a certain way. Referring the findings above to a critically thinking nurse, it could be repeated after Betsy Frank that critically thinking

nurse has been distinguished from traditionally thinking nurse. A traditionally thinking nurse preserves status quo while critically minded nurse goes beyond the step-by-step processes outlined in the nursing process and traditional problem solving. A critically thinking nurse challenges and questions the norm and considers the context of decision making potential unintended consequences. Unlike a traditional thinking nurse, a critically thinking nurse is creative in her/his thinking and anticipates the consequences of her/his nursing [14].

Strategies supporting the development of critical thinking:

In the ongoing debate, views are also being exchanged on how to develop critical thinking. Many conclusions which have been drawn in it can be easily transferred to the education of nursing. The first step is to educate in asking the right questions [15]. Such as:

- What is the question being asked?
- Is this the right question?
- Is there another question that must be answered first?
- What information is needed?
- Given the information, what conclusions are justified?
- Are there alternative viewpoints? [14].

Convert selected topics from classical logic. Practice some elements of rhetoric. Grind the efficiency of capturing the relationship between language and reality [16]. Practice writing concise and clear texts. Put one's point of view in a clear verbalization. Discuss issues from a subjective and objective perspective. Train the recognition of procedures that have been used to falsify or confirm the assumptions of a given point of view [17]. Show the history of nursing progress and mistakes made at various stages of its development. Explain the reasons and purpose of creating new models of nursing and the criteria for selecting superior ideas in them. Introduce a stimulating form of conducting classes. Match the structure of examination tasks and tactics of testing knowledge.

This set of strategies for activating critical thinking corresponds well with their index prepared by J. Profetto-McGrath. They include:

- variety of writing strategies such as scholarly papers, reflective journals and critiques
- verbal strategies such as structured controversies and debates
- role modelling and questioning clinical rounds and simulations
- computer-assisted instruction
- concept maps
- problem-based learning [5].

For the sake of accuracy, it must be said that activating critical thinking by the methods pro-posed by J. Profetto-McGrath has long been practiced in tutorials such as pedagogy, psychology, medical didactics, scientific research or health promotion as well as several other subjects implemented at the first and second degree studies. The variety of tactics and the frequency of their use, however, does not mean, as Zenobia Chain has rightly pointed

out, a closed and perfect collection. On the contrary, it is necessary to constantly verify strategies and look for new ones that will take into account, e.g. the cultural context of students [18]. The list of techniques that stimulate critical thinking in the education process of nursing students has been extended by Sandie Nadelson and Luis Nadelson. They have noted the teachers' ability to arouse curiosity and interest of students in the issue of critical thinking. They have placed this ability of the teaching staff at one of the highest levels in the ladder of effective methods. Their research shows a direct cause-and-effect relationship between arousing curiosity and developing critical thinking and quality of care [19].

Tools that check the critical thinking capability

A significant achievement in the discourse that explores the issue of critical thinking is collecting a set of various tools for its evaluation. They give a guarantee of estimation of proficiency in it. The collection of English-language tests authored by Robert H. Ennis and Geoffrey Scott attracts attention amongst the rich mosaic of offers. This list includes research instruments tailored to the level of advancement in learning critical thinking of learners and the needs of their teachers [20]. The nature of the disseminated tools is approximated by the examples below. One of them is the Critical Thinking Assessment test. On its basis, one can issue a judgment on competence in four areas: critical thinking, problem solving, communication and evaluation of the information provided. The test is an essay.

The next exemplification is the Cornell Critical Thinking Test. It is a 52-item multiple-choice test addressed to anyone who is implementing the arcana of critical thinking art. This test takes into account such elements as: induction, deduction, the ability to assess the accuracy of sources, the ease of recognizing certain assumptions based on which the definitions have been formulated, the ability to identify ambiguities, predictive efficiency in research planning [21]. The Critical Thinking Interview is also worth mentioning. The essence of this test is, in turn, to carry out an interview on any chosen topic by the person assessed. The conversation must proceed according to the adopted rules and fulfill important conditions. The interviewer is to demonstrate, among others, knowledge of the subject, the ability to recognize the assumptions of the position of his co-talker, the adequate choices of the method for his own reasoning and its proper use [22].

DISCUSSION

The above-mentioned elements of the critical thinking architecture illustrate how complicated the problem is and oblige to maintain intellectual discipline in the long-term perspective. A seed of critical thinking will bring nursing education the anticipated harvest if and only if it obtains more rights in planning the philosophy of education. Advocates of preserving the present status quo are likely to counter this postulate and argue against it, claiming that during the implementation of a certain group of major subjects, the creation of the foundations of critical

thinking is taken into account. They even specify tools for its checking placed in the part of syllabuses regarding the criteria for the assessment of knowledge. As part of the polemics they indicate the fact of familiarising nursing students and nurses after graduation with a scenario of solving problems or getting used to creative thinking.

However, it must be said that in fact in some subjects there are indeed some elements that stimulate critical thinking, but there are few of them. However, the mentioned instruments included in the modules are mainly used for validation of the whole knowledge, not critical thinking as such. According to specialists, there is also a fundamental difference between critical thinking and problem solving, creative thinking or the decision-making process [4]. The conviction that critical thinking in nursing education is in a good shape is making the deficit worse, and in the future may bring nursing away from the ideal of care.

CONCLUSIONS

Critical thinking teaches courage in breaking conceptual patterns. It allows one to define problems in a rapidly changing reality and find the optimal way to solve them. It extends the repertoire of the basic skills of a modern nurse increases the independence of nurses and raises the level of their professionalism. Critical thinking as a key competence should become one of the main objectives of education at every level. Nursing courses for critical thinking and its application in practical activities should be organized for nurses.

REFERENCES/PIŚMIENNICTWO

1. Miller M, Malcolm N. Critical Thinking in the Nursing Curriculum. *Nursing and Health Care*. 1990; 11(12): 67-70.
2. Salehi Sh, Bahrumi M, Hosseini SA. Critical Thinking and Clinical Decision Making. *Iranian Journal of Nursing and Midwifery Research*. 2007; 12(13): 13-16.
3. Augustyn Św. *O Trójcy Świętej*. Kraków: Znak; 1996; XV. 12.
4. Simpson E, Courtney M. Critical Thinking in Nursing Education: A Literature Review. *International Journal of Nursing Practice*. 2002; 8: 88-98.
5. Profetto-McGrath J. Critical Thinking and Evidence-Based Practice. *Journal of Professional Nursing*. 2005; 21(6), 364-366.
6. Cottrell S. *Critical Thinking Skills. Developing Effective Analysis and Argument*. New York: New York Plagrove MacMillan; 2005.
7. Kalbarczyk T. Nauka krytycznego myślenia. *Analiza i Egzystencja*. 2014; 25: 7-18.
8. Górnjak-Kocikowska K. Krytyczne myślenie a krytyczne słuchanie. *Przyczynek do dydaktyki filozofii. Analiza i Egzystencja*. 2014; 25: 19-30.
9. Schank M. Wanted: Nurses with Critical Thinking Skills. *Journal of Continuing Education*. 1990; 21(2): 86-89.
10. Noveletsky H. *Reflective Practice: Empowering Nursing Knowledge. A History of Nursing Ideas*. [w:] Andrist LC, Nicholas PK, Wolf KA. red. Boston: Jones&Bartlett Publishers; 2006, s. 409-410.
11. Dewey J. *Jak myślimy*. Warszawa: Państwowe Wydawnictwo Naukowe; 1988, s. 26.
12. Facione PA. Executive Summary – Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. Millbrae: The California Academic Press; 1990.
13. Facione NC, Facione PA, Sanchez CA. Critical Thinking Disposition as a Measure of Competent Clinical Judgment: The Development of the California Critical Thinking Disposition Inventory. *The Journal of Nursing Education*. 1994; 33(8): 345-350.
14. Frank B. Critical thinking and decision-making skills. [w] Huber DL, red. *Leadership and Nursing Care Management*. Maryland: Suders Elsevier; 2010, s. 95.
15. Jenkins SD. Cross-Cultural Perspectives on Critical Thinking. *The Journal of Nursing Education*. 2011; 50(5): 239-240.
16. Postman N. *W stronę XVIII stulecia*. Warszawa: Państwowy Instytut Wydawniczy; 2001, s. 176.
17. Myrick F, Yonge O. Enhancing Critical Thinking in the Preceptorship Experience in Nursing Educational. *Journal of Advanced Nursing*. 2004; 45(4): 371-380
18. Chain ZCY. Systematic Review of Critical Thinking in Nursing Education. *Nurse Education Today*. 2013; 33: 236-240
19. Nadelson S, Nadelson L. Connecting critical thinking, caring, and curiosity in nurse education: Exploring the beliefs and practices of nurse educators. *Journal of Nursing Education and Practice*. 2019; 9(8): 1-10
20. Ennis RH, Scott G. An Annotated List of English Language Critical Thinking Tests. University of Illinois UC, <https://www.criticalthinking.net/testing.html>.
21. Ennis RH, Gardiner WL, Guzzetta J, Morrow R. Critical Thinking Test Series. The Cornell Class-Reasoning Test, <https://www.criticalthinking.net/testing.html>.
22. Friedrich W, Sikora J. red. *Wsparcie krytycznego myślenia jako cel edukacji specjalistycznej z zakresu psychologii*. [w:] *Prace Naukowe Akademii im. Jana Długosza w Częstochowie*. 2016; XXV: 175-185.

Manuscript received/Praca zgłoszona do czasopisma:
02.07.2019

Manuscript accepted/Praca zaakceptowana do druku:
06.09.2019

Translation/Tłumaczenie: Marta Wójcik-Czerwińska