



Investigation of the critical thinking among nursing students

Afsane Sarabandi¹, Bahman Fouladi^{2*}, Parvaneh Sarani Aliabadi¹

¹Department of nursing, Zahedan branch, Islamic Azad University, Zahedan, Iran.

²Department of mycology and parasitology, school of Allied, zabol university of medical science, Zabol, Iran.

*Corresponding Author: Bahman Fouladi, Department of mycology and parasitology, school of Allied, zabol university of medical science, Zabol, Iran.

ABSTRACT

Objective: Learning is an individual task and it won't happen but with great thoughts. Nursing profession made critical thinking as one of its main goals and it's an important point in this profession. Due to the importance of critical thinking among students this study aimed to investigate the critical thinking among nursing students.

Methods: This cross-sectional study was conducted on 44 nursing students in Azad University of Zahedan. Respondents were chosen randomly. Data were collected by the California critical thinking questionnaire. After data collection, they were analyzed using SPSS v.19 through descriptive statistics.

Results: 44 students were included in this study. The mean score of critical thinking was 9.56 ± 3.51 . In the analytical dimension the mean score was 2.72 ± 1.73 , in the evaluation dimension it was 3.75 ± 1.74 , in inferential dimension it was 3.09 ± 1.52 , in inductive reasoning dimension it was 4.65 ± 2.41 and in settlement reasoning dimension it was 3.75 ± 1.18 .

Conclusion: The mean score of critical thinking was not satisfying. Due to this universities are supposed to teach this skill to their students. Because the same nurses would go to clinical environment such as hospitals and clinics and they need critical thinking for providing high quality cares.

Key Words: Critical thinking, students, Zahedan

INTRODUCTION

Improving the mental abilities among students was always a complicated matter in education and it is yet. Nowadays it became a crisis in fact. Expert in education are complaining about student's poor critical thinking abilities more than usual [1, 2]. Training nurses with high knowledge and skill proper with their jobs in healthcare systems is one of the most important aims in nursing education. Critical thinking is one of the skills which is necessary for a nurse or nursing student [3-5]. Nursing profession made critical thinking as one of its main goals and it's an important point in this profession. The national community of US nursery, nursing schools and universities of western countries made compulsory rules about teaching critical thinking skills to nurses and nursing students for making progress in their performance [6]. Critical thinking make nurses able to make proper decisions in critical situations at clinic. With this skill, they can predict their patient's needs and do the best for them [7]. There are many definitions about critical thinking. This shows different attitudes toward this concept or may be a misunderstanding about that. Most of these definitions emphasize factors such as: testing the solutions, mindful decision making, Logical reasoning, being aware of accepting or ignoring a judgment, the art of thinking and decision making ability [8- 10]. Comparing critical thinking with the usual thinking is a good way of defining this ability. In usual thinking the individual uses abilities such as guessing, preferring and judgment but in critical thinking concepts such as estimation, categorizing, understanding the basics, giving opinion with reason, and problem solving are considered [11]. Critical thinking has 2 dimensions including critical thinking skill and trending to critical thinking.

The skills emphasize the cognitive solutions. And the trend considers the problem-solving abilities. Critical thinking abilities are a part of cognitive abilities. If someone has a good critical thinking he will show these abilities in facing the problems in his day life. With having no trends to critical thinking usually you can't use this ability. Due to this it is important to be trended to critical thinking [12-14]. Bunning believes that decision making means making judgments about patient's care and managing the tasks which are needed to be done for him [15]. Actually, decision making in clinical environments and critical thinking abilities are very close to each other [10]. Learning is an individual task and it won't happen but with great thoughts. For example, teachers are just guides for their students and students themselves make the final learning [7]. Due to this in United States one of the national aims of education was improvement of critical thinking up to 2000. [16. 17]. Killing the independency and thinking power, anxiety and medical errors are negative effects of lack of critical thinking [18]. Nurses who don't have critical thinking abilities are usually problems for the system [19]. Due to this it seems necessary for nursing students to learn how to have critical thinking [20]. Due to the importance of critical thinking among students this study aimed to investigate the critical thinking among nursing students.

MATERIAL AND METHOD

This cross-sectional study was conducted on 44 nursing students in Azad University of Zahedan. Respondents were chosen randomly. Data were collected by the California critical thinking questionnaire. This questionnaire included 34 multiples chose questions. It had 5 dimensions including: analytical dimension, evaluation dimension, interferential dimension, inductive reasoning dimension and settlement reasoning dimension. The total score was 34 and between 0-6 in each dimension. For example, in analytical dimension the score was 9, in the evaluation dimension it was 14, in interferential dimension it was 11, in inductive reasoning dimension it was 16 and in settlement reasoning dimension it was 14. According to this there was a total score for critical thinking and 5 scores for its skills. The validity and reliability of this questionnaire was proved and the Cronbach's Alpha was 0.9. After data collection, they were analyzed using SPSS v.19 through descriptive statistics.

RESULTS

44 students were included in this study. The mean score of critical thinking was 9.56 ± 3.51 . In the analytical dimension the mean score was 2.72 ± 1.73 , in the evaluation dimension it was 3.75 ± 1.74 , in inferential dimension it was 3.09 ± 1.52 , in inductive reasoning dimension it was 4.65 ± 2.41 and in settlement reasoning dimension it was 3.75 ± 1.18 [Table 1].

Table-1: information about critical thinking and its dimensions

	Minimum	Maximum	Mean	Std. Deviation
score of critical thinking	4.00	18.00	9.56	3.51
analytical dimension	.00	6.00	2.72	1.73
evaluation dimension	.00	7.00	3.75	1.74
inferential dimension	.00	7.00	3.09	1.52
reasoning inductive reasoning dimension	1.00	11.00	4.65	2.41
settlement reasoning dimension	1.00	6.00	3.75	1.18

DISCUSSION

The results of this study had shown that the mean score of students was poor. A survey a Canada had shown that 92.8% of nursing students had a satisfying rate of trend to critical thinking [12]. Surveys done in Australia showed a positive trend to critical thinking [22]. The surveys conducted in Iran had shown that 93% of senior nursing students 94% of juniors and 98.3% of clinical nurses had a poor critical thinking. No differences between senior and junior students were find in this study [23]. Probably these results are because of lack of a program to teach the students the skills of critical thinking in nursing education. It seems that educational programs must change for better and proper learning. But also, may be this difference between Iranian students and foreign students is due to cultural differences. Because researches in China also showed a poor critical thinking among students [22]. Improvement of critical thinking is possible with: creativity, talking abilities, decision making and improvement of cognitive powers. The critical thinking abilities are related to factors such as: communication with the group members, giving opinion in different fields, solving the problems completely and providing the results of researches in critical situations [24]. In such environments, educational centers and lecturers do not need to provide all the information they have but students would be more front than them. It is very important that students involve themselves in thinking and analysis. They should analyze the information and use them in their job. Having enough self-esteem is necessary for improvement of critical thinking. Also, it is needed for proper decision making and facing the crisis in the ward.

Professors should make a positive attitude among students about their field of study in the early first years. They should give enough capability to students to use their abilities in clinical environment. This would lead to high confidence and self-esteem among nursing students. With these abilities students would have better decisions making abilities and critical thinking [23]. There are many strategies for improving student's critical thinking abilities. The main strategy is to coordinate the educational program and teaching process. When there are a lot of lessons and less classes so there would be no time for teaching these

abilities. It seems necessary to omit some unnecessary lessons from educational program and add some lessons for teaching critical thinking abilities to students [7].

CONCLUSION

Critical thinking is needed for everyone who is working in clinical environments. The mean score of critical thinking was not satisfying. Due to this universities are supposed to teach this skill to their students. Because the same nurses would go to clinical environment such as hospitals and clinics and they need critical thinking for providing high quality cares.

ACKNOWLEDGEMENT

The current study is a result obtained by a research plan in BA degree in nursing and obstetrics department in the Azad University of Zahedan. We are hereby thankful to all of the participants in the study and also the officials and authorities of Zahedan medical sciences Azad University and sincere helps greatly assisted us in data collection stages.

REFERENCE

1. Ourang, T., The Study of Defense Mechanisms Pattern Regarding Creative Thinking Level. *Advances in Cognitive Science*, **2010**. 12(3): p. 49-58.
2. Mohammadi, A., et al., Log book a method of evaluating education and feedback strategy in nursing. *Education Strategies in Medical Sciences*. *Education Strategies in Medical Sciences*, **2010**. 3(1): p.15-16.
3. Rubenfeld, MG., *Critical Thinking in Nursing an Interactive Approach*, **1999**.
4. Jones, JH., Evaluation of critical thinking skills in an associate degree nursing program. *Teaching and Learning in Nursing*. Elsevier; **2007**. 2(4): p.109-115.
5. Staib, S., Teaching and measuring critical thinking. *Journal of nursing education*, Slack Incorporated, **2003**. 42(11): p. 498-508.
6. Esmaeeli, M., Effects of emotional intelligence factors training on enhancing mental health. *Iranian Journal of Psychiatry and Clinical Psychology*, *Iranian Journal of Psychiatry, and Clinical Psychology*; **2007**. 13(2): p. 158-165.
7. Khalili, H., Critical thinking skills of nursing students in Semnan University of Medical Sciences. *Iranian Journal of Medical Education*, *Iranian Journal of Medical Education*, **2004**. 4(2): p. 23-31.
8. Johnson, EB., *Contextual teaching and learning: What it is and why it's here to stay* Corwin Press; **2002**.
9. Broadbear, JT., An approach to teaching for critical thinking in health education. *The Journal of School Health*. Blackwell Publishing Ltd, **2000**. 70(8): p. 322.
10. Abedini, S., The effect of decision making training on critical thinking in nursing students. *Development Strategies in Medical Education*, *Development Strategies in Medical Education*, **2014**. 1(2): p.19-27.
11. Gharib, M., Critical thinking skills and critical thinking dispositions in freshmen and senior students of health care management. *Iranian journal of medical education*. *Iranian Journal of Medical Education*; **2009**. 9(2): p.125-135.
12. Profetto-McGrath, J., The relationship of critical thinking skills and critical thinking dispositions of baccalaureate nursing students. *Journal of advanced nursing*, Wiley Online Library, **2003**. 43(6): p. 569-577.
13. Facione, PA., *Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction, Research Findings, and Recommendations*. ERIC, **1990**.
14. Facione, PA., *Critical thinking: What it is and why it counts*, **1998**. 9: p. 2004.

15. Banning, M., A review of clinical decision making: models and current research. *Journal of clinical nursing*, Wiley Online Library, **2008**. 17(2): p. 187-195.
16. Facione, PA., Manual, the California Critical Thinking Skills Test, Form A and Form B. Millbrae. CA: California Academic Press, **1992**.
17. Adams, MH., Critical thinking as an educational outcome: An evaluation of current tools of measurement. *Nurse Educator*. LWW, **1996**. 21(3): p.23-32.
18. Hasanpour, M., Critical thinking in nursing education. *Iran Journal of Nursing*. *Iran Journal of Nursing*; **2005**. 18(41): p. 7-16.
19. Duchscher, JEB., Critical thinking: Perceptions of newly graduated female baccalaureate nurses. *Journal of Nursing Education*, Slack Incorporated, **2003**. 42(1): p.14-27.
20. Distler, JW., Critical thinking and clinical competence: results of the implementation of student-centered teaching strategies in an advanced practice nurse curriculum, *Nurse education in practice*. Elsevier, **2007**. 7(1): p.53-59.
21. Kiany, M., Comparison of Critical Thinking Skills and Dispositions between the Nursing Students and Clinical Nurses of Selected Educational Hospitals of Zanjan University of Medical Sciences. *ZUMS Journal*. *ZUMS Journal*, **2012**. 20(78): p. 113-122.
22. Tiwari, A., Critical thinking disposition of Hong Kong Chinese and Australian nursing students. *Journal of Advanced Nursing*, Wiley Online Library, **2003**. 44(3): p.298-307.
23. Islami Akbar, R., Critical thinking ability in nursing students, *Iran journal of nursing*, **2004**. 17(39): p. 15-29.
24. Vaghar Seyyedini, A., The Effect of Guided Reciprocal Peer Questioning (GRPQ) on Nursing Students' Critical Thinking and Metacognition Skills. *Iranian Journal of Medical Education*. *Iranian Journal of Medical Education*, **2009**. 8(2): p.333-340.