

#7EE07 (2830)

Developing a model for teaching and assessing critical thinking skills in medicine: a qualitative study

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Background: Despite the vested interest developed among medical colleges in improving critical thinking, evidences indicate that assessment of medical students' ability to think critically is a constant challenge. Aim of the current study was to provide a model for teaching and assessing critical thinking as a major outcome of medical education.

Summary of Work: A descriptive qualitative study using semi-structured interviews has been conducted. A purposive sampling has been drawn. 17 individual interviews were conducted with three groups of participants: faculty members, students and graduates. Qualitative data was analysed by content analysis approach. Data collection and analysis were concurrent.

Summary of Results: A total of 1049 primary-code obtained from analysis of interviews were summarized into 272 codes which were classified into 61 subcategories, 13 categories and four themes, including "critical thinking requirements: preconditions and approaches", "critical thinking initiators: internal and external stimulus", critical thinking process: application of theory in practice", and critical thinking outcomes: accomplishments".

Discussion: We proposed a model for teaching and assessing critical thinking in medicine. While several studies have investigated different aspects of critical thinking, this study contributes further insights to the debate on critical thinking in medicine as a context-bound concept by exploring cognitive processes and its structures.

Conclusion: Critical thinking skills in medical professions include the elements and structures whose description of their relationships based on a proposed model can be a basis for conducting educational programs and formulating an effective tool in order to assess these skills among medical students.

Take-home Message: The medical teacher should be taken a subject-specific components of critical thinking into account in their teaching and testing.

#7EE08 (1018)

Effects of blended learning on the clinical reasoning process of Japanese nurses trained in Specified Medical Acts

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Background: In 2015, Japanese nurses began training in Specified Medical Acts (SMAs) such as artery insertion and debridement. Nurses learned the clinical reasoning process that doctors use to assess whether or not they can implement SMAs due to patient safety. However, nurses often have difficulties with the reasoning process.

Summary of Work: This study applied blended learning to clinical reasoning instruction for nurses and investigated the outcomes. Eighty-three nurses participated. The courses were designed using e-learning and required inference, active involvement, simulation in that they played the doctor's role, and clinical practice. The logs including medical reports, questionnaires, and interviews were analyzed.

Summary of Results: In the medical reports, participants were able to describe the clinical reasoning process including the doctor's viewpoint. Additionally, they acknowledged their role as nurses and the difference between their competencies and the doctors'. They also realized it was easier to have discussions with doctors.

Discussion: The blended learning process helped develop the ability of clinical reasoning because participants gradually incorporated it into their reasoning process. Additionally, the process fostered mutual understanding and collaboration among professionals since participants were able to communicate with professionals. Thus, the process extended the competencies of nurses.

Conclusion: This blended learning model is effective for nursing instruction on the clinical reasoning process. Moreover, it helps develop professionalism and mutual understanding. As nurses expand their competencies in SMAs, they can also benefit by gaining an understanding of other medical practitioners.

Take-home Message: Blended learning that includes active involvement was effective in learning clinical reasoning. In addition, blended learning includes an understanding of the mutual differences between the thinking processes of doctors and nurses, helps develop the competencies of nurses, and stimulates collaboration between professionals.

#4FF03 (2968)

Introducing the TUMS competencies to fresh medical students using movie clips

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Background: Tehran University of Medical Sciences (TUMS) along with reforming the undergraduate medical curriculum formulated the expected competencies of medical graduates in eight areas. This article describes the use of "movie clips" as a tool to facilitate medical students' awareness with the core competencies of TUMS.

Summary of Work: Movie clips were selected aligned with considered competencies. The duration of each clips varied from 15 to 20 minutes. After the show of clips, performances related to physician and addressed in the movie were discussed. The moderator summarized the golden points and compared them with core competencies of TUMS.

Summary of Results: This was a descriptive study was carried out in 2015-2017. 442 medical students of TUMS participated in this study. Forty-eight percent of participants were female. In general, 89.6% of students were strongly agree/ agree that they can gain new insights into expected competencies through watching movie and discussing about points.

Discussion: At Tehran University of Medical Sciences, the Introduction to TUMS Core Competencies program provided an innovative solution to the problem of orientation of fresh medical students to core competencies early in their training. This program promoted fresh medical students' understanding of what it means to be a competent physician.

Conclusion: Students believed that participation in orientation program had helped them to learn more about core competencies of TUMS medical curriculum and the importance of doctoring skills in their study. Our experience demonstrated that the use of movie clips can be helpful to familiarize students with considered competencies in medical school.

Take-home Message: Using movie clips can be helpful to familiarize students with core competencies of medical education at the early years of medical curriculum.

#4FF04 (2921)

A step towards competency based medical education: Evaluating a novel integrated Pediatrics residency curriculum

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Background: Competency-based medical education (CBME) is recognized by the Royal College of Physicians and Surgeons of Canada as optimal in preparing residents for practice. McMaster Pediatric residency program has implemented an integrated curriculum to facilitate CBME. Few programs have to integrated CBME into curriculum, and literature on the area is underdeveloped.

Summary of Work: A mixed-methods approach was used to evaluate the curriculum change. An exit survey was implemented to assess residents' preparedness to practice. Measures of resident performance were compared to determine whether the new curriculum had any impact on scores. Focus groups were conducted to identify perceived benefits and obstacles of CBME.

Summary of Results: The exit survey results suggest that residents feel procedural skills and specific subspecialty areas (Pediatric Dentistry, Gynecology and Psychiatry) are inadequately covered. There was no statistical difference in survey scores after the implementation of CBME. There were no differences in exam scores between the CBME group and the previous curriculum.

Discussion: Our exit survey has clearly identified areas that residents perceive as inadequately covered in the current curriculum. We will continue to analyze the responses to determine the impact that CBME has on these deficits. There were no changes in objective measures of resident performance after implementation of CBME.

Conclusion: Residents perceive deficits in their training. The implementation of CBME has not made a statistically significant difference in these deficits. Further data collection is needed to fully understand the effect of CBME on preparedness to practice. Allowing residents to have more flexibility through IP blocks does not decrease test scores.

Take-home Message: Our study uses both qualitative and quantitative data to understand the impact of CBME on the resident training experience. Consistent deficits (over two years) have been identified through an exit survey. Analysis of qualitative data obtained from focus is ongoing, to evaluate the perceived challenges and benefits of CBME.