

**METHODOLOGICAL FOUNDATIONS FOR DEVELOPING CRITICAL THINKING
OF MEDICAL UNIVERSITY STUDENTS THROUGH A PSYCHOLOGICAL
APPROACH.**

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Annotation: This article analyzes the methodological foundations for developing critical thinking skills among medical university students through a psychological approach. The psychological and pedagogical essence of critical thinking, key factors contributing to its development, and effective teaching methods are explored. The article is based on the theoretical views of modern scholars in pedagogy and psychology.

Keywords: critical thinking, psychological approach, medical education, methodology, students.

INTRODUCTION.

Critical thinking is the ability of a person to form their own thoughts independently, rationally, and analytically, to evaluate information, approach problems deeply, and make reasonable decisions. This type of thinking is not merely about criticizing, but about analyzing based on evidence and logic.

Critical thinking is currently recognized as a key cognitive competency required in all areas, particularly in medical education. Students studying at medical universities must not only acquire theoretical knowledge but also possess independent thinking skills, the ability to analyze problematic situations, and make prompt, well-reasoned decisions. Therefore, developing their critical thinking through modern psychological and pedagogical methods is essential. Research indicates that critical thinking does not develop spontaneously; rather, it requires structured methodologies and approaches. In particular, the psychological approach — which involves understanding the student as a personality, considering their psychological development stages, and individualizing the learning process — offers deeper opportunities to foster critical thinking (Vygotsky, 1978; Halpern, 2014).

This article aims to develop and substantiate an effective methodology based on a psychological approach for fostering critical thinking among medical students.

METHODS.

This study employed theoretical, empirical, and practical methods in combination. Theoretical analysis was based on psychological-pedagogical literature. Furthermore, international research

and contemporary scholars' approaches to critical thinking (Facione, Halpern, Brookfield, Paul & Elder) were analyzed. In the empirical stage, interviews, observations, and diagnostic surveys were conducted among 2nd and 3rd-year medical university students. The "Critical Thinking Level" test and the "Readiness for Reflective Learning" test (Kember & Leung) were used in the study. In the practical stage, training sessions aimed at developing critical thinking, problem-based learning activities, and group thinking methods (debate, SWOT, concept maps) were piloted. The results were evaluated through statistical and qualitative analysis.

RESULTS.

The preliminary diagnostics conducted among 92 second - year and third -year medical students revealed that 63% of participants demonstrated an initial level of critical thinking skills, 27% were at an intermediate level, and only 10% exhibited a high level of critical thinking. According to the reflective thinking test, students showed limited preparedness for analyzing their learning and developing personal growth strategies. Following the implementation of training sessions focused on critical thinking, problem-based tasks, and group activities, students showed positive improvement in forming critical questions, expressing evidence-based opinions, and accepting alternative perspectives. For instance, the number of students with a high level of critical thinking in the experimental group increased from 10% to 36%.

Experimental Group	63%	99%	+36%
Control Group	27%	28%	+1%

These results demonstrate that the use of psychological-pedagogical methods effectively enhances critical thinking skills among students. The experimental group's progress confirms the value of structured training in fostering analytical and reflective capabilities essential for future medical professionals.

DISCUSSION.

The results of the study indicate that psychological approach-based methodologies play a significant role in developing critical thinking in medical students. Considering students' psychological characteristics, viewing them as active participants, and activating their emotional and reflective capacities contribute to effective critical thinking development. As Facione emphasized, critical thinking is a purposeful, reasoned, and self-regulatory way of thinking. Halpern states that professionals in the medical field must possess the ability to analyze quickly and thoroughly, which is closely related not only to teaching strategies but also to the student's psychological readiness.

Moreover, the application of debates, SWOT analysis, concept maps, and reflective writing in the classroom demonstrated gradual improvement in students' critical thinking skills.

CONCLUSION.

The findings of the study confirm that an integrated psycho-pedagogical approach is effective in developing critical thinking among medical students. Through targeted training sessions, problem-based learning, and reflective activities, students enhanced their skills in analyzing ideas, identifying alternative solutions, and making evidence-based decisions. This experience indicates that incorporating psychological elements into medical education significantly contributes to the development of students' critical thinking abilities.

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This study aimed to develop critical thinking skills among medical institute students. The experimental methodology involved several stages:

1. Participants: A total of 92 medical students participated in the study. They were randomly divided into experimental and control groups.
2. Initial Assessment: The students' initial levels of critical thinking were assessed using diagnostic tests and reflective writing tasks. These tools helped determine their baseline ability to analyze problems and make evidence-based decisions.
3. Training and Practical Activities (Experimental Group): The experimental group participated in specially designed psychological and pedagogical training sessions focused on developing critical thinking. These included:

Problem-based tasks: Students were asked to analyze complex medical scenarios requiring reasoned judgment.

Group work: Collaborative activities encouraged students to share, compare, and defend their viewpoints.

Reflective writing: Students reflected on the training sessions, helping them internalize critical thinking practices.

4. Control Group: The control group continued with their regular coursework without any

targeted intervention for critical thinking development.

5. Final Assessment: After the intervention, all participants were re-evaluated using similar tools. The critical thinking levels of the experimental group showed significant improvement compared to the control group.

The following table summarizes the outcomes:

Group Initial Level After Experiment Change.

Experimental Group 63% 99% +36%

Control Group 27% 28% +1%

Certainly! Here's the English translation:

Critical thinking is the ability of a person to form their own thoughts independently, rationally, and analytically, to evaluate information, approach problems deeply, and make reasonable decisions. This type of thinking is not merely about criticizing, but about analyzing based on evidence and logic

The Importance of Critical Thinking in Education:

1. Develops independent thinking – Students learn not just to memorize what the teacher provides, but to analyze, ask questions, and express opinions.
2. Teaches problem-solving – Students approach real-life problems with scientific and logical reasoning.
3. Increases learning motivation – Through critical thinking, students become more active and their interest in learning grows.
4. Enhances information analysis skills – Helps students critically evaluate data from the internet and other sources.

The Importance of Critical Thinking in Medicine:

1. Accurate diagnosis and decision-making – Doctors thoroughly study the patient's condition and make evidence-based decisions.
2. Develops scientific reasoning – In modern medicine, critical thinking is essential for understanding, analyzing, and evaluating innovations.
3. Prevents errors – Doctors question their own decisions to detect and prevent possible mistakes.
4. Conscious approach to ethical issues – Helps in understanding medical ethics and choosing the morally right path in complex situations.

If you'd like, I can also suggest lessons or methodological recommendations based on critical thinking.