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Application evaluation of AI-assisted teaching in basic nursing education

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Abstract: Purpose: *To evaluate the effect of AI-assisted teaching technology in basic nursing education, a total of 103 junior college students from two classes of Grade 2020 in Kaifeng University Medical Science Center were selected as the teaching object, and Class A was the observation group, adopting AI-assisted immersion teaching mode. Class B is the control group, which adopts the traditional teaching mode. After the teaching, the students of the two classes are given theoretical tests and questionnaires to compare the test scores and teaching satisfaction.* ***Results:*** *The average theoretical score of class A was 87.5+2.8, which was higher than that of class B (81.6+3.3), the difference was statistically significant (P < 0.05). The satisfaction rate of students in class A to the teaching form reached 97.5%, which was higher than that of class B, which was statistically significant (P < 0.05).* ***Conclusion:*** *AI teaching can significantly improve students' achievement and enthusiasm in basic nursing education, and it can significantly improve students' learning effect compared with traditional teaching mode.*

Keywords: *artificial intelligence; Medical education; ophthalmology*

1. Introduction

Artificial Intelligence is a new technical science which studies exploitationbe used forimitate, it also extends and expands people's intelligence theory, method, technology and application system. At present, the technology has attracted extensive attention in the international scope, especially in the medical field. Reports on the application of artificial intelligence in various medical disciplines have been common [1-3]. In 2019, the second session of the 13th National People's Congress included the legislative items closely related to artificial intelligence in the legislative plan. The state also clearly put forward the significance of AI to the future education development in the New Generation Artificial Intelligence Development Plan. All these indicate that we have entered the AI era, and the corresponding medical education must keep up with the development of the times and apply this important technology to practice in order to meet the growing requirements of medical education. Based on the actual situation in our school, the AI diagnosis and treatment system of Kaifeng Eye Hospital is used to explore the learning methods and effects of some college students. The results are as follows.

2. General data and methods

Select nursing students in our school in 2020, and randomly select two classes as the research object, taking ophthalmology department as the research object. The chapter is the teaching content, with 52 students in Class A as the observation group and 51 students in Class B as the control group. Class A adopts the AI-assisted immersion teaching mode, with mobile phones or computers as the teaching carrier, so that students can fully interact with the AI system. Students can take eye photos by themselves with camera equipment and upload them to AI, and AI will present detailed diagnosis and treatment reports. Teachers can combine the diagnosis and treatment report to analyze the correct or wrong reasons and strengthen the main points of clinical knowledge. Class B adopts the traditional teaching mode, carries out theoretical knowledge education and learning according to the teaching content combined with slides, introduces different case pictures or other image materials to enrich the teaching content, then strengthens important knowledge points by questioning and testing, and finally summarizes. After all the lectures are finished, the theoretical test will be conducted and the test scores and satisfaction will be recorded. SPSS 21.0 software was used for statistical analysis, the measurement data was expressed by S, the difference between the two classes was compared by T test, the

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satisfaction was compared by Chi-square test, and the difference was considered to be statistically significant with P value less than 0.05. $\bar{x}$ ±

3. Result

The average theoretical score of class A is 87.5+2.8, which is higher than that of class B, which is 81.6+3.3, with statistical difference significance (P < 0.05). The satisfaction rate of students in class A to the teaching form reached 97.5%, which was much higher than that of class B, which was statistically significant (P < 0.05).

4. Discuss

At present, China's high-quality medical resources are mainly concentrated in large and medium-sized cities [4], and patients flock to large hospitals to seek famous doctors, which doubles the pressure on both doctors and patients. On the other hand, it is difficult for grass-roots doctors and young doctors to get effective clinical exercises, which seriously restricts the improvement of clinical skills. At present, the ophthalmology education mode still adopts traditional teaching methods, and students lack practical opportunities. The application of AI in medical field provides a new opportunity for enriching medical teaching means and improving teaching quality [5-6]. It is the only organ in the whole body that can be seen directly, and its internal anatomical structure can be clearly expressed by direct photography. It is precisely because of this advantage that the development of ophthalmic AI is far ahead of other departments. The study and education of ophthalmology should also keep pace with the times, so that students can understand and master this cutting-edge technology as soon as possible.

In the study, the theoretical and practical achievements of Class A are significantly higher than those of Class B, and their satisfaction with the teaching form is also higher than that of the students of Class B. The difference is statistically significant. This shows that the application of AI teaching class can greatly stimulate students' interest in learning and improve their initiative in learning. The personalized human-computer interaction displayed by AI is also an important reason to attract students to learn actively. Compared with the traditional learning mode of clinical theoretical knowledge, AI can organically combine theoretical learning with clinical practice. AI-assisted teaching has great room for development. I believe that in the near future, AI-assisted medical education will usher in a new era.

5. Conclusion

To sum up, the new AI-assisted immersion teaching model can significantly improve students' learning enthusiasm in basic nursing education. Compared with the traditional teaching model, it can significantly improve students' clinical thinking ability and learning effect. The application of AI teaching will play an important role in promoting the development of medical education.

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