Adolescent Physical Fitness Improvement Training System

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Purpose: Because of lack of time to participate in sports, Chinese adolescents' physical health status has declined year by year. To prevent and control pneumonia caused by the novel coronavirus (2019-nCoV), China implements home isolation, and young people conduct scientific and supervised exercises at home to improve their immunity is the research purpose of this project. Methods: The research steps include: First of all, I developed a set of training action sequences suitable for young people to improve their physical fitness at home by consulting sports medicine books. Secondly, under the guidance of the teacher, I developed an Android app with a training guidance function, human movement recognition function, and training data upload function. Finally, 20 adolescents were selected in the school and divided into 2 groups to participate in the experiment. The subjects were tested for cardiorespiratory endurance, body fat, flexibility and balance before and after the experiment. Results: The experimental results show that the recognition accuracy of the human posture recognition model is 95.3%, and the subjects' cardiorespiratory endurance, physical flexibility and balance ability improved by 5.1% on average after using the adolescent physical fitness improvement training system for 2 months. Conclusion: This system has high accuracy in identifying and training actions and can effectively improve the physical fitness level of young people.

Awards Won: