particularly important. For this reason, colleges and universities must innovate the teaching mode, incorporate smart sports into the course teaching, so that students can have a strong interest in sports knowledge, help students establish a scientific awareness of lifelong sports, and cultivate students’ ability to cooperate in teams, actively communicate and reasonably release their emotions. Through the combination of smart sports education and teaching in colleges and universities and college students’ mental health courses, it has a positive impact on the mental health of college students.

**Subjects and methods:** 200 college students in a university were selected as the research objects, and the students were randomly divided into two groups. The experimental group was composed of 100 students and was given the teaching mode of Intelligent Physical Education in Colleges and universities; The control group consists of 100 students. The group does not receive special education, but only daily education. Before and after teaching, the mental quality scale was used to divide the listeners’ positive mental quality into 5 dimensions and 10 subscales, with a total score of 5 points. The closer the score is to 5 points, the better the mental quality. Relevant data are calculated and counted by Excel software and SPSS20.0 software.

**Results:** After the intervention, the scores of all dimensions of psychological quality in the experimental group were significantly higher than those before the intervention ($P < 0.01$), as shown in Figure 1.

**Conclusions:** Through the combination of college intelligent physical education and college students’ mental health courses, it can not only bring a positive impact on the development of college students’ mental health, but also help college students better control their emotions, improve their interpersonal and team cooperation ability, establish a correct view of love, and reasonably release pressure. The results showed that after the intervention, the scores of all dimensions of psychological quality in the experimental group were significantly higher than those before the intervention ($P < 0.01$). The results showed that after the intelligent physical education teaching mode was given to college students, their learning interest, learning attitude and learning quality were significantly improved, effectively improved their negative psychological emotions, and played a good role in promoting the development of teaching work in colleges and universities.

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**RELIEF EFFECT OF BIG DATA MEDICAL TREATMENT COMBINED WITH SMART OLD-AGE CARE ON EMPTY-NEST ALZHEIMER’S DISEASE**
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**Background:** Alzheimer’s disease, also known as Alzheimer’s disease, is a neurodegenerative disease that occurs in the elderly. The main manifestations of Alzheimer’s patients are the increasing degree of cognitive impairment, gradual aphasia, impairment of visuospatial ability, and the continuous decline of computing ability and abstract thinking ability. Alzheimer’s patients may also completely lose the ability to complete purposeful and complex activities, and it is difficult to distinguish familiar objects by themselves. The basic discrimination ability in urban areas will lead to great changes in personality and behavior patterns. In the early stage of the disease, the memory and storage ability of Alzheimer’s patients to new knowledge decreased slightly, and their daily thinking, language and executive ability were slightly impaired, but they could basically maintain their independent living ability. However, with the aggravation of the disease, Alzheimer’s patients will have obvious memory impairment and visual space disorder, and begin to have short-term and long-term memory impairment. They can’t recall the way home, feel obvious anxiety and fatigue when dealing with complex things, and show irritability, irritability and other characteristics. However, Alzheimer’s patients in the middle of the course of the disease have been unable to live independently, have the problems of language repetition or aphasia, and have hallucinations, personality changes and other mental and behavioral symptoms. In the late course of the disease, the physical functions and behaviors of Alzheimer’s patients degenerate, and their speech ability is completely lost. They must stay in bed for rest. In addition, Alzheimer’s patients may have many complications in the late course of the disease, and the damaged areas develop from brain tissue to lungs, urinary organs and other parts of the body.

With the advancement of the aging process in China, the old-age care has become the focus of attention from all walks of life. With the improvement of social and economic level, the old-age care model also shows a diversified trend. In the fierce social competition, the increase in the number of migrant workers makes the group of empty nesters continue to expand. The traditional pension model and concept can no longer adapt to the common situation of empty nesters, and cannot meet the daily life and spiritual needs of empty nesters. Under this social background, the smart elderly care model integrating emerging big data technology came into being. Through the combination of big data technology and modern medical care, the new smart elderly care model of community elderly care was introduced to solve the elderly care problem of empty nesters in the community. Relying on the scientific and technological advantages of big data, Internet of things and other technologies, the smart elderly care model of combined big data healthcare provides efficient and guaranteed new modern elderly care services for the elderly. The joint smart elderly care model uses the connectivity technology of big data to provide timely basic medical and elderly care services for the empty nest elderly, build a smart elderly care service platform to organically integrate a variety of elderly care resources, realize the intelligence and convenience of the empty nest elderly life, and improve the elderly care quality of the empty nest elderly.

**Subjects and methods:** The study took 384 empty nesters with different degrees of Alzheimer’s disease as the research objects. The research objects were divided into intelligent elderly care group, nursing home group and traditional elderly care group. The objects of the smart elderly care group adopt the smart community elderly care mode under the joint application of big data medical and other technologies. The elderly in the nursing home group live in the elderly care institutions, while the traditional elderly care group maintains the previous family elderly care mode. The experiment lasted for one year, and the physical and psychological conditions of the subjects were statistically compared every month. By comparing the Alzheimer’s symptoms and mental health status of Alzheimer’s empty nesters under different pension modes,

| Table 1. Changes of psychological and somatic symptoms in the three groups of elderly people after the experiment |
|-------------------------------------------------|---------------------|---------------------|---------------------|
| Symptom                                         | Smart elderly care group (n=129) | Nursing home group (n=127) | Traditional elderly care group (n=128) |
| Emotional disorders                             | 53                   | 85                   | 110                   |
| Behavioral disorders                            | 12                   | 21                   | 29                    |
| Abnormal diet and sleep                         | 24                   | 32                   | 41                    |

**Results:** The changes of psychological and physical symptoms of the elderly in the three groups after the experiment are shown in Table 1. After a one-year experiment, the elderly in the nursing home group and
the traditional elderly care group have significantly more emotional disorders, behavioral disorders and abnormal diet and sleep than those in the intelligent elderly care group.

**Conclusions:** For the empty nesters with Alzheimer’s disease, the joint intelligent elderly care model can provide timely medical security services for the elderly with Alzheimer’s disease, alleviate the symptoms of the empty nesters with Alzheimer’s disease through modern medical technology, help the elderly with Alzheimer’s disease delay the course of disease, and fully mobilize various medical resources through cross regional collaborative medical services to help the empty nesters with Alzheimer’s disease improve their elderly care happiness index.

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**ANALYSIS OF THE PENETRATION AND INTEGRATION OF IDEOLOGICAL AND POLITICAL EDUCATION AND VOCAL MUSIC TEACHING ON ALLEVIATING THE PSYCHOLOGICAL ANXIETY OF COLLEGE STUDENTS**

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**Background:** Psychological anxiety is an emotional disorder mainly composed of anxiety. The generation mechanism of this emotion is to preset the worst outcome in advance because of the possible danger, loss and threat to the future. Different individuals show different levels of psychological anxiety. The reason is that this kind of anxiety will be affected by internal factors such as individual cognitive structure and psychological endurance, as well as external objective factors. At present, the law of College Students’ physical and mental development is not yet fully mature, and their value evaluation and self-identity are more vulnerable to the impact of non-objective evaluation by others. At the same time, academic pressure, employment pressure, emotional pressure and so on will make students’ psychological pressure and burden heavier, and in the absence of professional psychological emotional counseling help, it is easy to produce psychological anxiety and negative emotions. More serious psychological anxiety will directly affect the formation of individual value judgment standards and values. In serious cases, it will also make individuals suffer from depression and make self mutilation and suicide. In the current college education, the main contents of psychological counseling include the opening of professional psychological counseling rooms, ideological and political education courses and mental health lectures. However, it is difficult for students to have a clear understanding of their own emotional changes, so they will resist the treatment of psychological anxiety and be shy of treatment. In the current vocal music education, teachers mostly follow the traditional way in setting the course content, formulating the course objectives and teaching methods, and seldom carry out the course innovation. Moreover, teachers are difficult to grasp the students’ mental health and emotional changes in the teaching process, so they cannot effectively play the guiding role and active intervention role of music in individual psychology and emotion. Therefore, on this basis, the study strengthens the infiltration and integration of Ideological and political education and vocal music teaching, in order to explore the impact mechanism of the new education model on students’ psychological anxiety. Integrating Ideological and political education into vocal music teaching can imperceptibly guide students’ psychological emotions in the learning of educational courses, promote the formation of their correct values, have a more objective, sober and comprehensive evaluation of themselves and external environment, and further realize the healthy formation of their psychological status.

**Subjects and methods:** The research take the ideological and political program of the curriculum as the research object, and the students of different grades in a university as the experimental object. Before the experiment, the initial information about the mental health status and anxiety level of the subjects was collected with the help of Hamilton scale and self rating anxiety scale. Then the vocal music teachers conducted an 8-week teaching experiment, fully applied the ideological and political education content to the vocal music teaching process in the implementation of the program, made innovations in the design of teaching objectives, teaching means and teaching programs, and designed a vocal music teaching program that met the students’ psychological needs and psychological characteristics. Subsequently, students are invited to participate in the experiments of different vocal music teaching programs, explore the changes of their anxiety psychology in the experiment process, and use statistical analysis tools to achieve the statistical collation of the experimental data, so as to draw experimental conclusions.

**Results:** Adding ideological and political content to the vocal music teaching course can effectively play the leading role of the ideological and political course in students’ values and internal emotions, achieve the innovative development of the teaching content and teaching design, and fully consider the students’