

Selected Abstracts
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Frontier Research in Public Health and Hygiene

The 2nd International Conference on Public Health and Hygiene (ICPHH 2019)

Nowadays, Public Health and Hygiene attract more and more attention all over the world, especially under the severe climate and environment changes in recent years. Due to the rapid development of society and economy, Public Health and Hygiene is confronted with more challenges. In view of the successful holding of the 1st International Conference on Public Health and Hygiene (ICPHH 2018) in Zhengzhou at last year, naturally, the 2nd ICPHH (ICPHH 2019) also came into being. ICPHH 2019 was held in Kuala Lumpur, Malaysia, during August 9-11, 2019, which was hosted by Asia Society of Applied Mathematics and Engineering (Asia-SAME). It aims to provide a platform for researchers, practitioners, academicians as well as professionals from all over the world to present their research results and development activities in the field of Public Health and Hygiene.

Correspondingly, ICPHH also invited submission of meeting abstracts especially for the conference. During the conference, ICPHH have received a considerable number of abstracts. The rigorous review and initial selection were undertaken electronically, submitted abstracts were selected under the criteria of originality, significance, and clarity for the purpose of the conference. At last, 219 of them were selected to be published for further sharing.

ICPHH committee likes to extend sincere gratitude to *Indian Journal of Pharmaceutical Sciences* (IJPS) for the publishing support in recording the academic exchanges of the conference and presenting the meeting abstracts from ICPHH. Besides, we also would like to extend our sincere thanks to the staff of the journal office for their great efforts in publishing this issue, to the reviewers for their expertise and favour in the reviewing process and all the authors of their submissions.

No matter what the future may hold, public health and hygiene will retain its pivotal role, and we do hope that this supplement could bring more inspiration and enlightenment to the field.

— Abstracts —

TRACK 1: CLINICAL MEDICINE

1

Emotional Effects of Film Audiovisual on Patients with Mild Depression

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To investigate the emotional effects of film audio-visual on patients with mild depression would help to understand how patients with mild depression adapt to the environment, especially how to control their behaviour in emotional situations. The artistic characteristics of film audio-visual language are manifested as the reality of multiple assumptions, which are embodied in the selection and cutting of real life by film and television workers, the processing of materials by technology, and the different communication effects brought about by different transmission routes and the different feelings and understandings of watching movies. Film audiovisuals can make people with mild depression to have a variety of emotions. In recent years, brain imaging techniques have been used to investigate the mechanism of emotional influence behaviour in patients with mild depression during film audiovisuals. Through the analysis of the data on the reactions of patients with mild depression in different scenes, the behaviour of patients with mild depression in different scenes were assessed. This study found that the process of emotional influence behaviour not only involved in the prefrontal inhibition control system and marginal emotional processing system, but also related to the interaction between the two systems, that is, the integration of emotional processing and behavioural inhibition processing. Ventrolateral prefrontal cortex, dorsolateral prefrontal cortex, anterior cingulate gyrus, amygdala, insular and other brain regions play an important role in the integration of emotional processing and behavioural inhibition processing, but the time process of emotional integration into behavioural inhibition processing is not clear. Future studies should focus on the time process of the inhibition of the emotional effects of film audio-visual on patients with mild depression, neural networks, the effects of individual differences and the improvement of research paradigm. With the development of the plot, film audiovisuals can directly affect the mood of patients with mild depression to a certain extent. Patients with mild depression are affective disorders characterized by significant and persistent depression, with reduced behaviour and lack of pleasure as the core characteristics, and film audiovisuals with the development of the plot, mobilize the emotions of patients with mild depression. Thus, it is confirmed that film audiovisuals could have an impact on the mood of patients with mild depression.

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2

The Application of Rigid Internal Fixation in the Repair of Oral and Maxillofacial Trauma

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To review the clinical effect of rigid internal fixation with pure titanium internal fixation splint in wound repair of oral and maxillofacial fractures used in recent years. With the continuous improvement of living

standards, people have higher and higher requirements for medical quality. In modern society, with the occurrence of traffic accidents, fights, life accidents and other trauma, oral and maxillofacial fractures show an upward trend, among which mandibular, maxillary and zygomatic fractures occur more frequently. In the past, intermaxillary bolt ligation and fixation, fracture incision and stainless-steel wire internal fixation were usually used, but there were eating difficulties and unstable ligation. Especially for the patients with comminuted fracture and bone defect, it is unable to establish a normal occlusal relationship because they cannot maintain the length of the jaw. It is a maxillofacial deformity, which affects the beauty and masticatory function. With the development of material science, the advent of pure titanium internal fixation splint, and its application in oral and maxillofacial surgery, solid internal fixation technology has been greatly developed, so that the shortcomings of the above treatment have been solved. Because this technique is simple and practical, easy to grasp, less injury and other advantages, it is gradually welcomed by patients and clinicians. Two hundred and sixteen patients with oral and maxillofacial fractures were treated with electric drill drilling, pure titanium internal fixation splint reduction and fixation, if necessary, intermaxillary traction, cranio-maxillofacial elastic bandage short-term fixation and so on. Two hundred and twelve cases healed in the first stage after operation and 4 cases healed in the second stage after dressing change. Three months later, all the patients had a good alignment of the broken end of the fracture, the occlusal relationship and the degree of opening returned to normal, and there was no maxillofacial symmetry. Pure titanium internal fixation splint is an ideal internal fixation material for the treatment of oral and maxillofacial fractures and RIF is the mainstream direction for the treatment of oral and maxillofacial trauma.

3 The Effect of Piano Playing on Mental Health Intervention in Patients with Anxiety Disorder

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Piano playing intervention is a scientific combination of music, medicine and psychology and the effect of the combination of piano playing intervention is a scientific combination of music, medicine and psychology. Anxiety disorder, also known as anxiety neurosis, is characterized by emotional disorders of anxiety, tension and fear, accompanied by autonomic nervous system symptoms and motor disturbance. Anxiety has long been found to be a prominent symptom of many mental disorders. Anxiety and depression often occur together, anxiety symptoms can be seen in many diseases, but in anxiety disorders it is the most serious and prominent symptoms. The aim of the study was to explore the effect of piano playing intervention on mental health treatment of patients with anxiety disorder. Piano playing therapy is not only a kind of psychotherapy, but also a part of industrial and recreational therapy, and industrial and recreational therapy is an important auxiliary therapy in psychiatry. In order to understand the effect of piano playing intervention on improving the mental health of patients with anxiety disorder, 80 inpatients with anxiety were randomly divided into the observation group (n=40) and control group (n=40). The patients in the control group were treated and nursed according to routine treatment. The patients in the observation group were given piano playing intervention on the basis of the control group. The scores of anxiety and depression were compared between the two groups before and after intervention. The results were, the scores of anxiety and depression in the observation group were significantly lower than those in the control group ($p<0.05$). And with the passage of time, the scores of the 2 groups decreased gradually. There was significant difference in the incidence of anxiety between the 2 groups at the 4th w of piano playing intervention ($p<0.05$). The incidence of anxiety in the observation group was significantly lower than that in the control group. Piano playing intervention can significantly reduce anxiety, depression and other negative emotions in patients with anxiety disorder, and effectively improve their own symptoms.

Emergency Treatment of Common Sports Trauma in Physical Education

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Through the method of literature and interview, this investigation introduced some common injury accidents and temporary treatment methods in physical education, so that the physical education teachers in the process of teaching, when there are injuries can understand some simple methods to reduce the injury to students to a minimum, in order to promote the healthy development of physical education. Sports disease refers to the disorder of human physiological function or pathological changes caused by the corresponding stress factors in sports. In the process of physical education, some students with good or bad physical quality, some with basic common sense of physical exercise, and some with are encountered. Therefore, in the process of physical education some students who do not adapt their body to the activity would lead to emergence of sports diseases; this kind of situation is inevitable, and most of such students are females. The common sports diseases are, muscle spasm, abdominal pain, hypoglycemia, heatstroke, syncope and so on all of which are exercise-induced. This paper analyses the common sports trauma and introduces the treatment steps in detail from the appearance and treatment methods. In the process of school physical education, it is necessary and necessary for physical education teachers to understand and understand some common injury accidents and the methods to deal with them. In this way, it is possible to deal with the accidental injuries in time, reduce the harm of the injury accident to the students to the minimum, but also provide guarantee for the normal order of physical education. Therefore, in the process of physical education, one should always carry out the simulation of safety and prevention first and seriously analyse the causes of injury accidents. And targeted to do a good job of relevant preventive measures, although cannot completely put an end to the occurrence of injury accidents, but will certainly greatly reduce the possibility of injury accidents, so that the normal and orderly development of physical education.

5 Analysis and Countermeasures of the Influence of Traumatic Arthrosis on Basketball Training of College Students

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In various sports, joint injury often occurs. Traumatic arthritis is a common phenomenon in basketball training. The pathogenesis and frequency of traumatic arthritis depends on the characteristics of sports program. Therefore, the recovery method of standing pile knee injury is proposed. This study can be divided into two parts. Part one is of the experimental method, that is, 10 students with knee joint injury were selected from the basketball major of physical education major in a university and the training was carried out for a period of 3 mo according to the traditional post work and time requirements. Through the floating remains test before and after the training, the improvement of knee joint fluid was observed. The index of knee joint pain change before and after training was determined by pain evaluation. The knee joint function evaluation table Lysholm and Irrgang table were used as the basis for evaluating the knee joint function change of athletes before and after training. The second part analysed the effectiveness of the combination of station pile and basketball training from the characteristics and functions of station pile by using the method of literature and logic analysis. By comparing several kinds of data before and after post training, one can judge that post training has obvious promoting effect on knee joint pain and improving knee joint function. Through the induction and summary of the theory part, the station pile is in this paper. The work is an excellent traditional martial arts skill, which can strengthen the body and cultivate the mind. For basketball players, it is more effective to improve the counter-force, and to increase the skill training of the sports-level station in accordance with the traditional method and the long-term persistence.

6 Effect of Convalescent Toy Image Design on Memory Recovery in Patients with Alzheimer's Disease

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Under the background of the aging trend of the global population and 6 million Alzheimer's patients in China, these patients need special care and the toy image design for them is still in the blank stage in China. In this paper, a toy image appearance design method for special patients is proposed, which is helpful to their rehabilitation and treatment. Based on the analysis of cognitive ability and physical function in 4 periods of Alzheimer's disease, the physical function characteristics, distinguishing the difference between cognitive ability and body function deterioration in patients with Alzheimer's disease in different periods were evaluated. It is found that there is some dysfunction in memory and action ability in the early stage patients with Alzheimer's disease. Finally, the patients with Alzheimer's disease can be used as the target group of rehabilitation toy design. Toys can be used to slowly produce cognitive ability and physical function to alleviate and recover, thus verifying the effectiveness of this method. The design method proposed in this paper, which is formed by using cognitive rehabilitation training for reference, has a positive effect on the physical rehabilitation of patients with Alzheimer's disease, which can effectively slow down the development of Alzheimer's disease and help the elderly patients recover effectively. Based on the design principles of ease of use and safety, this paper combines the design of rehabilitation toys with Alzheimer's elderly patients. Create toy products that really meet their daily use needs and can recover from their cognitive ability and physical function, so as to provide an effective way for Alzheimer's patients to recover their memory.

7 3D Image Segmentation Method of Hepatobiliary Diseases Based on Support Vector Machine

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Medical image segmentation is not only an important application field of image segmentation, but also a classical problem. So far, there are many segmentation methods, including classical methods and segmentation methods combined with emerging theories. This paper mainly studies the three-dimensional image segmentation method of hepatobiliary disease based on support vector machine. The training sample set was three-dimensional images of hepatobiliary diseases obtained at different times. In the experiment, 20 positive samples and 20 negative samples were selected, of which the positive samples were giant regions containing hepatobiliary diseases in each sequence, because the positive samples contained three-dimensional images with strong tag and weak tag. Therefore, the trained support vector machine can accurately identify the target region in the original image regardless of the strength of the tag line. The selection of negative samples should include non-target areas in the original image, which are easy to be confused with the target area. The number of samples and the selection of sample areas are directly related to the training results. Therefore, both positive and negative samples should contain as many possible areas as possible. Through the support vector machine to identify the hepatobiliary disease image, one could accurately find out the specific location of the disease region and its accuracy is still very high. The support vector machine method has good classification performance in small sample, nonlinear and high dimensional feature space, aiming at the characteristics of medical image segmentation. The method of three-dimensional image segmentation of hepatobiliary diseases is studied based on support vector machine. The classification and recognition of three-dimensional images of hepatobiliary diseases by support vector machine can provide a reference basis for practical surgery, which has a very important practical significance.

Adaptive Threshold Segmentation Method for Weak Edge Anatomy Image

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Due to the deficiency of the inherent mechanism of imaging and the complexity of the internal structure of biological tissue, the targets in the image often show incompleteness and some weak edges with small grayscale and poor contrast appear. It seriously affects the accuracy of edge segmentation in the later stage. In order to solve this problem, this paper mainly studies the adaptive threshold segmentation method of weak edge anatomical image. Edge is an important information in image vision and one of the most basic features of image. In order to eliminate the over-cutting phenomenon caused by the traditional watershed algorithm in the process of edge detection, a new over-cutting region merging algorithm is proposed. This method can segment the complex target image into a series of simple regions that reflect the basic structure features of the target, and then use the contour extraction algorithm to remove the pixels in the image, and the final part is the edge of the image. In this paper, the adaptive threshold algorithm is used for image segmentation and the mathematical morphology corrosion algorithm is used to realize the image edge detection algorithm. It is proved theoretically and experimentally that the algorithm has the following advantages, (1) the merging mechanism of small regions is introduced, so the phenomenon of over-cutting of target image can be suppressed to a certain extent. (2) Image threshold segmentation can extract the complete image outline and make the edge of the detection continuous. (3) The corrosion algorithm of mathematical morphology ensures that the edge of the detected image has only one-pixel width, the edge location is accurate, and the overlap of adjacent edges caused by the increase of edge width is avoided. (4) The edge of the image can be enhanced by threshold segmentation and the edge can be extracted reliably by using corrosion algorithm. The algorithm improves the deficiency of the cost function of the traditional algorithm on the weak edge, and has a good segmentation effect on the weak edge of the image.

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Symptoms and Characteristics of Mania in the Era of Public Opinion Based on Clustering Algorithm

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Nowadays, the society has entered the age of the media, in which people have more information based on the expression of the reporter, the increase in the mode of speech and the shortening of time of communication, so that the formation of public opinion is easier and the various contradictions are prominent and the influence of public opinion is becoming more and more important. The public opinion has brought an infinite pressure on the people of the present age and it is easy to succumb to bipolar disorder. In order to analyse the characteristics of the symptoms of bipolar disorder in the public opinion, application of clustering algorithm in feature analysis is put forward. In this paper, 120 patients with bipolar disorder were used as the subjects of the study and the symptoms of the clinical diagnosis of the hospital were mapped to the high-dimensional feature space by using the Mercer nucleus and the cluster was carried out in the feature space. Due to the mapping of the kernel function, the feature of the bipolar disorder, which has not been presented appears to pop out, so that it can be better clustered. Patients with manic depression often feel extremely helpless, lose interest in family and work, ignore them, but sometimes the mood suddenly rises, which is at a loss as to what to do. Most of the causes of the disease are caused by heavy living stress and drug abuse. The emotional repetition cycle of adult patients is longer, after several months of depression, it

will be active for several months, but the onset cycle of children is shorter, and the mood can rise and fall several times in one day. Clustering algorithm can be used to show the hidden symptoms of patients with manic depression, and this method can provide more breakthroughs for the treatment of patients with manic depression.

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Clinical Characteristics of Bladder Urothelial Neoplasms Based on Fluorescence Diagnosis

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The disease of urothelial carcinoma of bladder will have serious influence on people's normal production and life, so that the timely diagnosis and targeted treatment are necessary. This study is proposed to analyse the clinical characteristics of bladder urothelial neoplasms based on fluorescence diagnosis. A total of 100 patients with bladder urothelial carcinoma in the Nangang Branch of Heilongjiang Provincial Hospital were selected as the research subjects and divided into the study group using different protocols for diagnosis and the reference group with 50 patients in each group. The reference group performed routine examination and the study group implemented fluorescence diagnosis mode. The clinical characteristics of the 2 groups were observed and compared. The clinical features of fluorescence diagnosis of bladder urothelial neoplasms include smooth mucous membrane in the trigonium of bladder under microscope and abnormal size and morphology of both kidneys. Left and right urine delivery orifices are fusiform, except for static calculi. There were multiple low-density foci in the liver and the shadows when the ureter and bladder on the right side of the two kidneys were obviously positive and the parenchymal density was abnormally changed. Circular high-density shadows were seen in the lower segment of the ureter on the left side and positive calculi shadows were seen in the walking area of the ureter on the right side. There is no obvious abnormality in bilateral renal pelvis. No hydronephrosis is observed. As for bladder and urethra, there were new organisms and stones and other lesions in filling bladder. Multiple low-density shadows in liver. Fluorescence diagnosis of bladder urothelial neoplasms has important application value and can be popularized.

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Hearing Impairment in Infants with Congenital Cytomegalovirus Infection

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Cytomegalovirus is the most common virus in human congenital infection. Only 5 % of infants have clinical symptoms at birth and most of them die within hours to weeks after birth. Many babies have obvious sequelae, such as sensorineural deafness. Asymptomatic babies at birth can also develop delayed symptoms from weeks to years after birth. Therefore, the study of congenital cytomegalovirus infection on hearing impairment in infants and young children was brought up. The growth, development and hearing of 65 cases of congenital CMV infection and 82 cases of non-infected children were measured and followed up from 6 mo to 4 y after birth. With The contents of the interview included: physical examination, developmental quotient test and listening test. During the test, infants were in a sleeping or quiet state and were tested in a quiet room. Using ILO - 292 otoacoustic emission analyser produced by otodynamics Company, the rapid screening program was selected. The pulse width of short sound was 80 μ s, the sound mode was 3 negative waves with equal amplitude, the pulse interval was 12.5 ms, the stimulation intensity was 80 \pm 3 dB SPLs, and

the scanning time was 12.5 ms. The signals were collected from A and B buffer memory for integral and statistical processing. Screening index of test the total reaction energy of TEOAE is above 5 dB SPL, the repetition rate of reaction wave is more than 50 %, and the signal-to-noise ratio (SNR) of reaction wave is at least 3 dB SPLs in the frequency range of 1-4 kHz. There was no significant difference in growth and development between the 2 groups. There was a significant difference between the infection group and the control group (8 cases) and the control group (1 case). In the neonatal period of the infection group, 7 cases (9 ears) were followed up, 9 cases (11 ears) failed the TEOAE hearing test, and 1 case (1 ear) failed the TEOAE hearing test in the control group. The failure rate in the infection group was significantly higher than the control group. During neonatal period, the binaural reaction energy infection group was significantly lower during follow-up. ABR was detected in 14 cases in the control group, including 9 cases (17 ears) in the infection group and 1 case (1 ear) in the control group. Congenital CMV infection may have no significant effect on the growth and development of infants, but the hearing damage cannot be ignored.

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Causes and Preventive Measures of Triad of Knee Joint Injury during Running

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The objective of this paper is to study the causes and prevention of trinity of lacquer joint injury during running. The triad of knee joint injury refers to the rupture of medial collateral ligament, medial meniscus and cruciate ligament caused by severe traumatic injury of knee joint. From 2017 to 2018, 22 patients with lacquer joint injury during running were treated. Among the 22 patients, 19 were males and 3 were females. The oldest was 67 y old and the youngest was 2 y old, with an average of 41 y old. The patient felt the sense of tear in the joint when he was injured, the joint immediately relaxed and lost stability. After the injury, the patient often walked on the tip of the foot, the medial side of the knee joint was significantly swollen, the subcutaneous blood stasis, blue and purple, and the knee joint was strongly extended. There was obvious pain at the ligament fracture, and the pain was more obvious in 9 cases with tibial intercondylar crest fracture. The longest time to see a doctor was 7 d, the shortest was 1 h, with an average of 11 h. Of the 22 cases, 3 cases were massaged by local health centre, and the other 19 cases were treated immediately after injury. The so-called knee joint instability is mainly caused by ligament injury, while the triad of knee joint injury is the rupture of medial collateral ligament, medial meniscus and cruciate ligament caused by severe traumatic injury of knee joint. The mechanism of injury is that when the knee joint is flexion, the foot is fixed, and the external force acts on the knee joint or the outside near the upper and lower part of the knee joint, resulting in a sharp valgus of the knee joint, the human body in order to balance or in the process of falling. Knee joint strength abduction results in the triad of knee joint injury. Therefore, it is necessary to improve the understanding of the triad of knee joint injury, in order to early diagnosis and early treatment. This group of cases proved that only when the general condition is not allowed and the avulsion fracture of the tibial spinous process is not displaced, non-surgical treatment can be used and in other cases, surgical treatment should be taken as soon as possible.

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Epidemic Characteristics and Prevention and Cure Measures of Chronic Infectious Diseases among College Students

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Colleges and universities are a special community with a high density of population. College students are the main subjects of life, lacking various social experience and their outlook on life and the world are not yet stable. To understand the characteristics of chronic infectious diseases among college students, it is necessary

to carry out health education intervention. Three hundred and eighty eight college students majoring in health education were investigated using a questionnaire. All students had the highest awareness rate of basic concepts of AIDS, 95.4 % before education and 98.9 % after education, followed by the source of infection of pulmonary tuberculosis (education). Before and after education (86.3 %, 88.9 % after education), there was no significant difference in education before and after education ($p>0.05$). The lowest rate of knowledge was the total disease (1.3 %), and 60.3 % after the end of the health-care activities. The correct response rate of other infectious diseases was higher than that of the first measure after health education ($p<0.05$). After the intervention, the questionnaire was tested again and the results were analysed. The knowledge of AIDS and other infectious diseases is statistically different before and after health education. ($p<0.05$); the knowledge and attitude of public health and safety, the formation of behaviour and the improvement of the test before and after the test. There was no significant difference between the information of the source of the infection of tuberculosis and the prevention and control of hepatitis B ($p>0.05$). The occurrence and epidemic characteristics of chronic infectious diseases in the school are closely related to the knowledge of health and disease prevention and the way of health behaviour. The effect of public health safety knowledge and behavioural health education is ideal. Students showed high interest in the knowledge of emergency and emergency treatment.

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Emergency Treatment Method of Muscle Strain in Track and Field Based on Isokinetic Technology

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Isokinetic muscle strength test and training technique is a new and practical technique for muscle function evaluation and muscle function training. Studies have confirmed that isokinetic muscle strength test can be used for quantitative and objective evaluation of muscle function and can be used for the prevention, diagnosis and rehabilitation of sports injury of athletes. This paper mainly investigated the emergency treatment of muscle strain in track and field based on isokinetic technology. It is very important for track and field athletes to recover as soon as possible after injury in sports. The biggest advantage of the isokinetic test system is that the tension produced by the muscles in each part of the joint activity is the same as the load, which can be used as a highly targeted training means for the strength recovery of injured athletes, which is both safe and effective. And according to the different parts and stages of injury, different forms of training can be adopted, such as isokinetic centripetal muscle training, isokinetic centrifugal muscle training, continuous passive training and so on. In order to guide coaches to deal with muscle strain in track and field, it is easy to determine the state in which muscle is most likely to produce maximum muscle strength in order to guide coaches to deal with muscle strain in track and field. The current research shows that the muscle strength produced by muscle centrifugal contraction is greater than that produced by centripetal contraction and isometric contraction, and the order of maximum tension produced by muscle contraction is centrifugal contraction>isometric contraction>centripetal contraction. This is because the muscle in centrifugal contraction is different from centripetal contraction, it not only involves the contractile components of muscle tissue, but also the intervention of non-contractile components, so that the torque output of muscle increases obviously. Therefore, this kind of muscle contraction has the characteristics of high strength and low energy consumption. Because muscle centrifugal contraction plays a certain role in maintaining the stability of joints, enhancing muscle strength, improving exercise ability, emergency treatment of muscle strain and so on. Therefore, isokinetic centrifugal muscle strength training has a certain significance in the emergency treatment of muscle strain of athletes. Centrifugal muscle strength training can be carried out on isokinetic instrument.

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High Yield Cultivation of Wheat Crops and Control Technology of Scab

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Fusarium head blight (FHB) is a destructive disease that occurs worldwide. It can reduce the yield and quality of wheat, and the toxins produced by its pathogens also endanger human and animal health. In recent years, great progress has been made in the study of biocontrol factors of wheat scab at home and abroad, which will surely make biological control the main means of controlling wheat scab. In this paper, the occurrence and harm of wheat scab, the main biological control factors and the existing problems in biological control were reviewed and analysed and the development prospects of biological control of wheat scab were prospected. The methods are as follows, 1) From the perspective of bacterial control, *Bacillus subtilis* B-30210 and *Pseudomonas fluorescens* MKB158 were used. 2) From the point of view of fungal control, the most important one is *Cryptococcus luteus* OH182.9. *Cryptococcus luteus* OH182.9 was used alone, and *Cryptococcus luteus* OH182.9 was mixed with other biological control factors. As a result, the genetic modification of plant pathogens and the transfer of antagonistic microorganisms can be regarded as the main research focus in biological control. Biotechnology can achieve artificial modification of biocontrol bacteria. Under biotechnological methods, bacterial genes with strong antagonism will be transferred to microorganisms that are easy to parasitize plants. The biological control of wheat scab is still in the primary stage of development. The related technology is not mature and there are many problems. With the active development of modern agriculture and based on the concept of sustainable development, biological control technology has been developing continuously, which has also attracted people's attention in many aspects in environmental protection work. Therefore, along with the existing technology, it is necessary to give microbial metabolites, antibiotics, derivatives structure understanding, give effective improvement, to ensure the full control of pathogens.

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Intelligent Recognition Method of Brain Injury Image Based on Computer Vision

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To study the intelligent recognition method of brain injury image based on computer vision. With the development of high and new technologies such as computer network, artificial intelligence and image recognition, the position image of brain injury can be obtained by using brain injury detector or high definition scanning technology and then the technology of image processing and computer vision can be used. It makes it possible to collect and analyse brain injury information automatically. Automatic collection and analysis of brain injury information first classifies and identifies the brain injury image, then separate the brain injury site from the image, obtain three-dimensional omni-directional information and finally analyse it. It has important theoretical significance and practical value for the judgment and treatment of brain injury. In this work, 72 patients with brain injury were classified by image recognition and then their brain injuries were identified and analysed. The automatic recognition and calculation of brain injury images were studied by means of dual wavelet transform (DT-CWT) and mathematical morphology, which provided a theoretical basis for the prediction and comprehensive treatment of brain injury and other minor injuries. The results were, by comparing the texture feature extraction methods based on classical Gabor transform and traditional gray co-occurrence matrix, a brain injury image region recognition method based on DT-CWT and support vector machine (Libsvm) was adopted. Secondly by analysing and studying the

number of mathematical forms, the results showed that the method is practical and feasible. The target detection algorithm based on Harr feature is applied to the target detection of brain injury image. In the image segmentation technology, the actual effects of various image segmentation methods on target segmentation in complex background are analyzed and compared and it is found that in the image recognition of brain injury. The automatic threshold segmentation method or fuzzy C-means clustering technique is effective for the S component of colour image HSI model. In this study, the recognition model and automatic counting system of brain injury are established by using the techniques of image recognition, support vector machine and mathematical morphology, which provides a theoretical basis and practical case for the automatic recognition and treatment of brain injury image.

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Design of Disease Diagnosis System Based on Helical CT Image

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In order to help patients diagnose early and receive timely treatment, a disease diagnosis system based on spiral CT image was designed. According to the data processing flow, the system can be divided into 3 modules, region of interest extraction module (ROI), feature extraction and feature selection module, and classifier module. In this paper, liver diseases are taken as an example to design. Because of the high similarity of common liver diseases in CT images, it is difficult to design a computer-based liver-aided diagnosis system. Therefore, this paper uses multi-stage abdominal CT scan data as the input of the system. First of all, the system combines the level set method and the region growth method to propose the lesion as ROI. Then the statistical features of liver texture based on gray histogram, the statistical features of liver texture based on gray co-occurrence matrix and the temporal features based on multi-phase liver CT map are extracted as feature vectors, and the features are selected by principal component analysis. Finally, after dimension reduction and optimization, the feature vector is input into the classifier module and the support vector machine is selected as the classifier algorithm, and the system is designed as a three-layer cascade binary classifier. The diagnostic accuracy of normal and abnormal, hepatic cyst and other, hepatic haemangioma and liver cancer were obtained, and the receiver operating characteristic curve was given according to the particularity of medical diagnosis, which can be used as a reference to judge the performance of the system. Verified by the experimental data, the system runs stably and achieves high diagnostic accuracy. Among them, the classification accuracy of normal and abnormal liver, which is the most important discriminant is 99.49 %, which proves the reliability and effectiveness of this method. This system can provide auxiliary suggestions for the diagnosis of doctors, can reduce the workload of doctors to a great extent and can give objective diagnostic suggestions for lesions with significant individual differences. Doctors can synthesize or compare their personal experience with the auxiliary diagnostic opinions given by the system, so as to form more accurate and scientific diagnostic results.

TRACK 2: PHARMACEUTICAL ANALYSIS

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The Application of Supported Magnetic Photocatalyst in the Separation and Analysis of Antithrombus Drugs

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In order to improve purification of antithrombotic drugs and the purification efficiency of drug separation, an attempt was made to apply supported magnetic photocatalysts in the analysis of antithrombotic drugs. An improved nano-TiO₂ photocatalyst with magnetic properties was prepared by self-propagating combustion, sol-gel, powder-sol and coprecipitation with butyltitanate and titanium trichloride as main raw materials. The supported magnetic photocatalyst was used to enrich and separate the drugs with similar thrombus structure and imprinted molecules in the drug. This study provides a better method for drug separation and extraction of active components from drugs. The experimental conditions are simpler, the separation effect is ideal, and the detection sensitivity is significantly improved. Supported magnetic photocatalysts are effective in the extraction of antithrombus drugs, and the application of these catalysts in drug separation and extraction will become more and more extensive.

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The Application of Molecular Sieves Catalyst in the Desalination and Protection of AIDS Drugs

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Zidovudine is the first antiAIDS drug approved by FDA in the world. It is the most basic combination of antiAIDS drugs and is also widely used in China. There have been many reports on the synthesis of zidovudine, but most of the routes are long and costly. In order to reduce the cost of synthesis, the application of molecular sieves catalyst in desalination protection of AIDS drugs was studied. The key intermediates of oxygen bridge were prepared by tervaleryl chloride as a protective group and β -thymidine as raw material after tervalerylation, methylsulfonylation and cyclization under alkaline conditions. In addition, in the step of desalination protection, the molecular sieves with a size of about 450 nm were synthesized. The dense and defect-free ZSM-5 and Fe-ZSM-5 molecular sieves could be obtained by crystallization at 453 K for 10 h by secondary growth method and the molecular sieves catalysts were used for desalination protection. The desalination protection with molecular sieves catalyst has replaced the widely used ion exchange resin treatment method, which can greatly save the cost of desalination protection of AIDS drugs, and the yield is high. A new route with low cost, simple operation and ideal yield has been successfully developed.

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The Repair of Liver Injury with Dandelion Compound

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Liver injury is a common disease in our country. It is very easy to develop to be chronic hepatitis, liver cirrhosis and even liver cancer, which seriously affects the health of the people. Therefore, the mechanism of the study on the repair of liver injury and the search for effective treatment are the hot topics of the common research at home and abroad. The current western medicine mainly uses antiviral, immunoregulatory, hepatoprotective, lowering liver enzymes and antihepatic fibrosis therapies. However, these treatments have the disadvantages of high recurrence rate and many adverse reactions. Therefore, the traditional Chinese medicine dandelion compound, an effective and effective treatment method, which is worthy of further research and discussion. Rats with hepatic injury were prepared, in which one group of rats was given intraperitoneal injection until the end of a 6-week trial period. Studies have shown that abnormal changes of immune function, release of inflammatory factors and apoptosis are important mechanisms of liver injury. Under the guidance of traditional Chinese medicine theory and based on the above research basis, the

efficacy and mechanism of dandelion on liver injury were studied by using modern analytical methods and technical means. The results showed that dandelion compound could improve the phagocytic function of macrophages in immunocompromised organisms and obviously accelerated the recovery and growth of suppressed immune organs. It is effective in improving liver function and clinical symptoms, and provides experimental and scientific basis for clinical dandelion compound treatment of liver injury. By exploring the mechanism of the compound in repairing liver injury, it was found that dandelion compound had bidirectional immunomodulatory effect and its protective effect on hepatocytes and antiliver injury was closely related to the regulation of immune function. Thus an experimental basis for dandelion to repair liver injury was provided, which would lay a foundation for further study of the compound.

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A New Application of Adaptive PID Control Method for Microbial Limit of TCM Preparations

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Traditional Chinese medicine (TCM) preparations are widely used in clinical practice. In the actual production process, the control effect may be always good enough or may fall below the requirements. Specifically, the microbial content in the medicines is likely to go below the standard, even accompanied by the waste products. This directly brings huge economic losses to producers. To tackle this issue, an adaptive PID control strategy was especially designed to realize the control, where the PID parameters were adaptively adjusted online in real time depending on the working conditions, consequently getting the microbial limit of the TCM preparation under control. The experimental results showed that the adaptive PID control approach could solve the problem of microbial limit temperature control of TCM preparations. In this work, a new method based on online self-tuning PID was firstly proposed to control the microbial limit of TCM preparation. The software combining with the PI control could overcome the problems that may be found with the conventional PID control method as to adaptability, response and adjustment time. Secondly, with the help of the combined control algorithm, a system model for microbial limit control was established in SIMULINK, with the optimal parameters to be obtained by simulating operation; subsequently, a hardware system was built up in line with the microbial limit control requirements of TCM preparations and the hardware of the system requirements. According to the simulation results, the self-tuning PID and PI were written into the PLC program for debugging; finally, through the multi-sensor measurement on the control effect, the system achieved the optimal target value for the purpose of precise control. Therefore, the microbial limit of the TCM preparation met the requirements. It has been proved by experiments that the moist heat sterilization time was 15 to 40 min, displaying the time error less than 0.1 %. The temperature was controlled at a range of 100-121°, with temperature error less than $\pm 1^\circ$ and the control effect was up to the microbial limit of the drug preparation. This method is suitable for the microbial limit control of most Chinese herbal medicine preparations of rhizomes, minerals, animals and nuts. The combination of online self-tuning PID control and PI control can effectively solve the problem of accurate temperature control in the microbial limit of TCM preparations, and provide effective theoretical support for microbial limit control of TCM preparations.

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Regulation of Mineralized Collagen and Microstructure on Differentiation of Bone Marrow Mesenchymal Stem Cells

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Although bone tissue has a certain ability of regeneration and repair, it is still not enough to compensate for the large bone mass defect caused by pathological fracture, trauma and other factors. Factors such as insufficient peripheral blood circulation, infection or systemic disease can also increase the difficulty of bone defect treatment. Bone transplantation materials can be divided into autologous bone, allogenic bone and artificial bone materials. Autologous bone and allogenic bone are limited in clinical application because of their respective defects, so artificial bone materials have gradually become a new research focus in the field of regenerative medicine. Mineralized collagen is a biomimetic composite that simulates the chemical composition and microstructure of bone matrix. There are few reports on the relationship between mineralized collagen and human adipose-derived mesenchymal stem cells (hADSCs). This paper focuses on the regulation of mineralized collagen and microstructure on the differentiation of bone marrow mesenchymal stem cells. A wafer of mineralized gum was prepared, the phase composition and molecular structure of the material were detected by X-ray diffraction and FTIR. The wettability of the material was evaluated by contact angle. The surface morphology of the material and the adhesion and growth state of the cells on the material were evaluated by environmental scanning electron microscope. WST-8 method was used to observe cell proliferation, alkaline phosphatase activity was used to detect early osteogenic differentiation of hADSCs and real time PCRb was used to compare the expression of osteogenic marker genes. The chemical composition and microstructure of mineralized collagen were similar to those of natural bone matrix and hADSCs showed good adhesion and growth behaviour. This study showed that mineralized collagen and microstructure can show good biocompatibility and osteogenic induction ability, and has potential application value in the field of bone tissue engineering.

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Flavor Characteristics and Nutritional Value of Microbial Fermented Food

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Microbial fermentation is an important way to produce food, which was deeply loved by people, enrich the variety of food, form people's daily food. One of the most important sources of food in the research of microbial fermentation food flavour characteristics and nutritional value, provide effective means for food diversity, rich people's food choices, has the important theoretical research value. In the process of research, this paper first analysed the fermentation of flavour substances, including fermentation material, sour flavour substance, vegetables, spicy flavouring substances, microbial fermented milk soy products, such as beverage alcohol flavour, taste characteristics and nutritional value of fermented foods, material in the process of fermentation system passes through lipase, protease, cellulase, peptide enzyme, amylase and so on

the many kinds of complex enzyme system, and through esterification, alcohol fermentation, Maillard reaction, a variety of reactions such as esterification, and the resulting esters, acids, aldehydes, alcohols flavour substances. Microbial fermentation process were introduced in this paper the basic process and microbial fermentation using the basic principle and so on, put forward the microorganism fermentation to fat, protein, sugar processing, the fermentation and other substances to produce acids, aldehydes, ketones, alcohols, esters and other material, an acid sweet, flavour and ester aroma, roast meat is sweet, sweet and so on a variety of flavours, flavour fermented foods to biological, dietary fibre, flavonoids and polysaccharides in the food such as some active ingredients effectively keep at the same time also to bilge gas factor, soy oligosaccharides, bean smell substances such as adverse factors to the human body. Microbial fermented soy products included knife granules, sour milk and sour soy milk. These are ready-to-eat soy milk products formed by microbial fermentation. They have unique flavour, high quality and low price, and contain many probiotics. Wine beverage adopts the principle of microbial fermentation, which has many effects such as antiseptic and appetizer, activating blood and removing stasis, improving appetite, calming nerves, prolonging life and expressing one's aspiration. Through microbial fermentation, the activity of water, acidity and osmotic pressure of food are greatly changed, the production of spoilage microorganisms is inhibited, and the new colour, taste and aroma of food are increased. It effectively improves the health care function and nutritional value of food. It is of great nutritional value to reduce cholesterol, improve constipation, regulate the intestine, fight cancer and enhance the immune function of the human body, so the research on the nutritional value of microorganisms and the fermentation mode should be strengthened.

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TRACK 3: HEALTH CARE AND TREATMENT

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Modelling and Analysis of the Effect of Taijiquan Training on Preventing Recurrence of Chronic Cardiovascular Diseases

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Cardiovascular disease is a common clinical disease. In recent years, the number of patients with cardiovascular disease has been increasing year after year. Cardiovascular disease is very harmful. It not only has a serious impact on people's quality of life, but also has a serious impact on people's life and health. Therefore, this paper explores the effect of Taijiquan on preventing cardiovascular disease in the elderly, and provides a theoretical basis for the prevention of cardiovascular disease in the elderly. One hundred twenty six healthy elderly people in a community from April 2012 to April 2013 were selected as the study subjects, 65 of them without Taijiquan exercise as the control group and 61 of them with Taijiquan exercise as the observation group, and the incidence of cardiovascular diseases was compared between the two groups. The general data of the 2 groups of elderly people were investigated and statistics were recorded, including age, sex, height, weight, blood pressure, and the incidence of chronic diseases. Sixty five elderly people in the control group were given health knowledge and cardiovascular disease prevention knowledge education, and their living habits and dietary habits remained basically unchanged. For 61 elderly people in the observation group, besides the above education, regular Taijiquan exercise was conducted. The blood pressure of the 2 groups before and after training was observed and the incidence of cardiovascular diseases was observed. There was no significant difference in systolic and diastolic blood pressure before and after training between the control group and the control group ($p=0.05$). The systolic and diastolic blood pressure of the observation group after training was significantly lower than that before training and the systolic and diastolic blood pressure of the observation group after training was significantly lower than that of the control group after training ($p=0.05$). The incidence of cardiovascular disease in the observation group was 1.6% lower than that

in the control group (9.2%, $p=0.05$). Taijiquan exercise has a good effect on preventing cardiovascular disease in the elderly.

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The Effect of Landscape Garden Education on the Mood of the Patients with Bipolar Disorder

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Some studies have pointed out that people are prone to depression under the pressure of life, work and so on. When people are affected by internal and external factors, they will produce negative emotions. Therefore, it is essential to prevent and alleviate the mania. Landscape architecture education is an effective new method to improve psychological problems, which plays a positive role in promoting psychosomatic health. Landscape architecture is an important space for connecting to nature and people. In the process of appreciating beautiful scenery and relaxing body and mind, people can also receive knowledge of nature, ecology, culture, aesthetics and so on. As a link for connecting with nature, landscape architecture can provide places and materials for education. It plays an important role in promoting the love of life, edifying its character, helping patients with manic depression to understand and protect the ecological environment, and at the same time soothing the disease. Several patients with manic depression were selected and scheduled for 3 mo of landscape education to let the patients enter the nature and be in good contact with each other. Let the body and mind be influenced by education and nature at the same time. The changes in their condition at the end of the course of treatment were investigated. The landscape architecture education had a good relieving effect on patients with manic depression. Through the combined treatment of patients with manic depression, it has been effective at the beginning. Under a period of treatment, patients with manic depression have come out of the disease and returned to smile. Landscape architecture education made patients feel happy and provided a targeted scheme for the mental health of patients. The landscape garden education played an important adjuvant role to treatment with drugs to relieve the symptoms, adjust the negative emotion, reduce the pathological experience, promote the recovery of the disease and become a good supplement in the treatment of mental illness. In the course of treatment, not only the efforts of the landscape educators, but also the subjective initiative of the patients, can be achieved through the cooperation of both parties. It has good curative effect in the adjuvant treatment of the depression, further play and improve the effect of the therapy to relieve the depression, and will be the direction to continue to work in the future.

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Application of Acupoint Massage Nursing in Convalescent Stage of Patients with Cerebral Apoplexy Hemiplegia

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It is found that acute cerebral infarction patients are characterized by rapid onset, difficult to control, high fatality rate, and poor prognosis, which seriously affects the quality of life of patients with acute cerebral infarction. Therefore, the effect of acupoint massage therapy on patients with cerebral apoplexy and hemiplegia was put forward. 60 patients with cerebral apoplexy and hemiplegia treated in our hospital were analysed and discussed. There were 21 female patients and 39 male patients, the age of the patients was between 32 and 42 y and the average age was 36 y. Sixty cases of cerebral infarction were treated by random experiment. The patients with hemiplegia were divided into the experimental group and the control group. The patients in the experimental group were treated with acupoint massage therapy combined with nursing intervention measures of traditional Chinese medicine. The results showed that there was no significant

difference between the 2 groups and there was obvious comparability in clinic. After the patients with cerebral infarction and hemiplegia entered the hospital for treatment, the nurses carried out clinical treatment measures and routine nursing intervention measures for the patients, while the patients in the control group received routine nursing intervention measures. On the premise of receiving the routine nursing intervention measures, the patients in the experimental group were given acupoint massage and traditional Chinese medicine nursing intervention. After a period of treatment, the neurological function, the function of exercise, the ability of life and the degree of depression of the experimental group and the control group were significantly improved compared with that before nursing. The traditional Chinese medicine acupuncture point massage therapy can be applied to the patients with cerebral apoplexy and hemiplegia, which can promote the patient's recovery speed, and has wide application in clinical practice.

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The Influence of Scientific Piano Training on Alleviating the Incidence of Shoulder Neuritis

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Shoulders control our entire arms, including picking up things and lifting, which are done by the joints of the shoulders. Nowadays, many people experience shoulder neuropathy damage, mostly caused by injury (acute or chronic) leading to inflammation of the shoulder nerve, some of which can last for several years. Scientific piano training is a non-drug intervention method, music as a therapeutic tool, patients through listening to beautiful music and scientific training can relieve the nerve of the shoulder; correct playing the piano can exercise the movement of the shoulder freely, control the incidence of shoulder neurosis. The scientific training of piano has become a collection of doctors, a new interdisciplinary subject of learning, physiology and music aesthetics. The patients with the shoulder neuritis are divided into the observation group and the control group, and the control group is kept in a normal way of life; the observation group is given the scientific training intervention of the piano, and each cell of the whole body is mobilized to achieve the effect of training through the coordination of the exercise finger joint and the hand and eye; after a period of training and observation, the incidence of shoulder neuritis in the 2 groups was compared. The results showed that the scientific training of the piano can relieve the neuritis of the shoulder and can relax the spirit and make the shoulder nerve relax and have regular movement. In this study, scientific piano training as a means of soothing shoulder neuropathy, music would help the brainstem reticular endothelial system relieve pain stimulation input, enhance inhibitory nerve stimulation, close the conduction of pain nerve impulse of valve, in order to distract attention and relieve pain. Scientific piano training can coordinate the whole body through certain limb movements, regulate physiological and pathological mechanism, accelerate blood circulation, improve metabolism and inhibit neuropathy to a certain extent.

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The Relieving Effect of Muscular Endurance Exercise Training on Severe Neuromuscular Weakness

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Severe neuromuscular weakness can influence patients' life and work to varying degrees and reduce the quality of life. This study has analysed the relieving effect of muscular endurance exercise training on severe neuromuscular weakness and provided valuable guidance for clinical treatment. Two hundred patients with severe neuromuscular weakness were recruited as research subjects and were divided into 2 groups, the research group and the control group. Patients in the research group were adopted muscular endurance exercise training mode therapy based on conventional drug treatment mode, while patient in the control

group were adopted conventional drug treatment mode only. The therapeutic effects of the two groups were compared. The research group carried out muscle endurance exercise training every day, practicing with different body parts on each day, differentiated the body part training well every day and every week. The same muscle needed a 48-h rest before the next muscular endurance training. Six groups trained with 15-20 times weight with the time interval between groups appropriately extended to 1 min. four to five actions were chosen for each part to practice to make sure that the muscles were relaxed before and after the exercise, to prevent excessive fatigue and muscle strain. Comparing the therapeutic effect of the 2 groups, the improvement in neuromuscular weakness in the research group was significantly higher than that in the control group, $p < 0.05$. In order to actively improve the symptoms of severe neuromuscular weakness, muscular endurance exercise training measures are essential.

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Therapeutic Effect of Acupuncture and Moxibustion on Bronchial Asthma

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Asthma is a heterogeneous disease, usually characterized by chronic airway inflammation, the typical clinical manifestation of which is recurrent dyspnea. Most of the symptoms can be improved by self-treatment after treatment. Hormone drugs have a strong antiinflammatory effect. These are often used as drug of first choice in the treatment of asthma, but these have adverse reactions. Long-term use of hormone drugs can also produce tolerance and the cure rate is low. Acupuncture and moxibustion has a long history in treating asthma in China. In recent years, with the popularization of acupuncture and moxibustion, more and more asthmatic patients seek to obtain better therapeutic effect of asthma through acupuncture and moxibustion. This paper proposed a treatment method of bronchial asthma based on acupuncture and moxibustion to improve the therapeutic outcome. Ninety-eight patients with bronchial asthma who were hospitalized from January 2017 to January 2019 were randomly selected as the study subjects. They were divided into the experimental group and the control group, 49 cases each. The control group was treated with Western medicine, while the experimental group continued to use acupuncture and moxibustion therapy on top of the western medicine. The effect and recurrence in the 2 groups were observed and compared. Out of the 49 patients in the experimental group, 30 were markedly effective, 17 were effective, 2 were ineffective and the implementation effect was 95.92 %. Of the 49 patients in the control group, 15 were markedly effective, 22 were effective, 12 were ineffective and the implementation effect was 75.51 %. The implementation effect of the experimental group was significantly greter than that of the control group ($p < 0.05$); after 6 mo follow-up, the recurrence rate of the experimental group (4.08 %) was significantly lower than that of the control group (20.41 %, $p < 0.05$). Acupuncture and moxibustion therapy for bronchial asthma in the clinic exerted good effect, alleviated the pain of patients, effectively improved their clinical symptoms, with low recurrence rate and high safety and has extensive practical value in clinic.

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Rehabilitation Effect of Straight Leg Raising Exercise on Lumbar Muscle Strain Disease of Modern College Students

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This study is to explore the rehabilitation effect of straight leg high lifting exercise on lumbar muscle strain disease in modern college students. For the patients with protrusion of lumbar intervertebral disc with nerve compression in modern college students with lumbar muscle strain, the removal of nucleus pulposus can be considered if the conservative treatment is ineffective. The surgery could remove the pressure and relax the nerve pathway, which alleviated the symptoms of nerve compression in the lower extremities. However, if

there is no effective postoperative exercise, scar adhesion can occur at the surgical site, which affected the outcome of the surgery. From October 2017 to October 2018, 52 cases of lumbar intervertebral disc herniation caused by simple lumbar muscle strain disease in a hospital were selected to perform nucleus pulposus excision and nerve root canal enlargement and the patients were instructed to conduct straight leg elevation training on the affected side of the lower limbs in the early postoperative period to observe the clinical effect. The patients were followed up for 6 to 12 mo and there was no recurrence. According to the full score of JOA in 29 cases of low back pain, the scores of 52 patients were more than 20, of which 47 (90 %) cases were more than 24 points and 5 (8 %) cases were 22 to 24 points. Straight leg training is helpful to improve the short-term effect of lumbar muscle strain disease and prevent nerve root adhesion in college students. Therefore, patients should be encouraged to carry out lower limb straight leg elevation training in the supine state early after operation and the elevation height should increase gradually and reach more than 60° as much as possible within 1 w after operation, so that the nerve root can keep sliding in the process of straight leg elevation training. Maintain the nerve pathway reconstructed during the operation, prevent the nerve from forming adhesion with the surrounding scar and at the same time, it can also relax the relative shortening of the nerve root due to the long-term compression of the nerve root before operation. Increasing the range of movement of the lower extremities is not affected by previously relatively fixed or shortened nerve roots. Such straight leg elevation training should begin on the first day after operation and last until 6 w after operation, that is, basically through the period of hematoma formation and scar sclerosis and contracture. The results of this group also support the above point of view, and the short-term effect after operation is satisfactory.

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The Rehabilitation Effect of Regular Exercise on Cervical Spondylosis in Modern Young People

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Modern medicine believes that cervical spondylosis is mostly caused by degenerative changes of vertebral tissue in the elderly. The objective of this investigation is to adopt regular sports (aerobic) exercise recovery method for patients with cervical spondylosis and explore the curative effect of regular sports rehabilitation in order to find a kind of rehabilitation therapy with high curative effect with no recurrence or less recurrence for patients with cervical spondylosis. There were 21 males and 17 females in 38 cases of cervical spondylosis, with an average age of 43-48 y. All subjects had a history of cervical spondylosis for 2-6 y. All patients were treated with traction and massage in hospital for 1 or 2 courses. The subjects were randomly divided into 2 groups. There were 19 cases in the experimental group and 19 cases in the control group. The experimental group formulated the exercise prescription beforehand, followed up for 2 years, and exercised 7 d a week, 30-100 min/d; during the recovery period of serious illness, daily exercise could be divided into 2-4 times; after stable illness, exercise 60-100 min/d. Of the 19 cases in the experimental group, 9 (47.37 %) cases fully recovered from the exercise prescription, 6 (31.58 %) cases partially recovered and 4 (21.05 %) cases relapsed due to fever and cold. In the control group, 7 cases recovered partially, accounting for 36.84 %; 6 cases recovered once, accounting for 31.58 %; 4 cases failed, 4 cases relapsed twice, accounting for 21.05 %; 2 cases relapsed 3 times, accounting for 10.53 %. The effect of uninterrupted and scientific sports rehabilitation therapy on cervical spondylosis patients is significantly better than that of self-recovery cervical spondylosis patients. There are many rehabilitation methods for patients with cervical spondylosis, but the most effective rehabilitation method appeared to be regular exercise rehabilitation to achieve quick and complete recovery without any recurrence or with low recurrence.

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The Effect of Swimming Training on the Rehabilitation of Patients with Osteoporosis

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The objective of this paper is to study the relationship between swimming and osteoporosis. However, the effect of swimming exercise on the rehabilitation of patients with osteoporosis has not been reported at present. To this end, the effect of swimming exercise training on the rehabilitation of patients with osteoporosis has been put forward. A total of 40 people were trained in swimming. All of them were swimming for more than 3 times a week, which persisted for more than 4 y. Among them, 20 were male and 20 were female and the age was between 60 - 69 y. The average male age was 64.4 and the female was 62.7 y, and the swimming period was 4-15 y. The control group consisted of 40 retired veteran cadres in a certain area, all of whom met the criteria for healthy elderly people established by the Chinese Medical Association in 1982. The age ranged from 60-69 y, with a mean age of 64.7 and a female of 61.9 years old. The parameters of each group were represented by mean±standard deviation. The male and female of the swimming group and the control group were compared and the t-test was carried out. According to the length of the swimming period, the subjects were divided into three groups, each of which was tested by F, and the t-test was carried out on the basis of this. The bone mineral content in the old is critical with increasing age, especially in postmenopausal women and easily fractures due to osteoporosis. The main reason for senile osteoporosis is the reduction of the amount of bone, endocrine dysfunction, decrease of digestion function, the nutrition disorder and the movement. The results showed that the long-term persistent swimming training can delay the bone loss, increase the bone mineral content, slow the development of the osteoporosis, and can even make the patients with osteoporosis reach the rehabilitation effect. Swimming exercise is one of the most popular sports in the elderly. It is a simple and feasible way to prevent senile osteoporosis and reduce the incidence of fracture. It is suitable to be popularized in the middle-aged and the elderly.

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The Effect of Sports Rehabilitation on Joint Injury Training

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Sports injury to the knee joint is a common phenomenon in modern sports and the characteristics and frequency of the knee joint injury is dependent on the sport itself. In sports, the incidence of knee injury is high and it is difficult to recover. However, Sports still play an irreplaceable role in the recovery of knee joint injury. In this paper, the method of restoration of joint injury is proposed. As a means of the restoration of knee joint injury, sports have been widely used, but most people do not know the methods of sports and the training is not strictly controlled according to the training methods and time requirements of sports. The injury recovery is often not satisfactory. Ten participants were tested by the knee injury criteria and the physical diagnosis methods, most of which were composite lesions. Of these, 2 cases were of meniscal injury, 6 cases of ligamentum injury and 2 cases were of ligament injury. All these belonged to the chronic injury type with the duration of the injury is about one year, the shortest being 2 mo. It is in accordance with the principle of the selection of sports-trained knee-injured participants, that is, their knee injuries are caused when they are involved in related sports training and they do not belong to the acute injury, do not need to perform the necessary surgical treatment, but also can hold for 3 mo and the training period. The physical exercise training is especially obvious to the improvement of knee joint swelling. Two of the 10 participants in the pre-training study found that two of the two meniscal injury cadets were positive, and 2 of them had a

slight swelling, and a total of 4 participants were positive. After 1 mo of training, 2 of the 4 positive participants had recovered and were significantly improved as compared to the pre-treatment level. The effect of sports training on the knee joint pain reduced pain and restored the function of the knee joint. It's more effective for athletes to fight force, increase the level of competition, sports training needs to follow the traditional method for a long-term to achieve satisfactory fitness effect.

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The Effect of Badminton on the Prevention of Cervical Spondylosis in Modern Young People

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Cervical spondylosis refers to a series of clinical symptoms caused by degeneration of cervical intervertebral disc, hypertrophy and hyperplasia of cervical spine and neck injury, or prolapse of intervertebral disc, thickening of ligaments, stimulation or compression of the spinal cord, nerves and blood vessels. In recent years, with the development of economy and society, the pressure of work is increasing and the number of young patients with cervical spondylosis is increasing. This part of the population is prone to cumulative strain because of long-term work needs to sit at the desk with a fixed bent neck posture. Therefore, the incidence of cervical spondylosis in young people is increasing year by year. In this paper, the clinical effect of badminton on the prevention of cervical spondylosis in young people was analysed. Sixty young patients with cervical spondylosis for the first time in a hospital were selected as the subjects of study. These patients were randomly divided into the observation group and the control group. There were 31 patients in the observation group, 16 male and 15 female. The youngest patient was 21 y and the oldest was 48 y. There were 29 patients in the control group, 16 male and 13 female. The youngest was 20 and the oldest was 46. Twenty-nine patients in the control group were allowed to continue their daily habits, while the experimental group was told to take part in badminton sport for an hour every day additionally. Six months later, the two groups were investigated and the recurrence of cervical spondylosis was analysed. There were 5 cases of cervical spondylosis in the observation group (16.1 %) and 12 cases of cervical spondylosis in the control group (41.4 %). Badminton has a significant effect in reducing the incidence of cervical spondylosis, besides promoting metabolism and improving immunity.

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The Effect of Yoga Exercise on the Rehabilitation of Cervical Spondylosis in Modern Young People

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Cervical spondylosis is the general name of various symptoms and signs of cervical lesions, also known as cervical syndrome. In recent years, the incidence of cervical spondylosis in the youth is increasing, which affects their physical and mental health. It is one of the common clinical diseases and requires rehabilitation treatment. Yoga has a healing effect on the human body and can improve, alleviate or control many chronic diseases by bringing a balance between mind and the body so as to ease the tension caused by work pressure. Hence yoga is very suitable as a rehabilitation exercise for the young patients with cervical spondylosis. The purpose of this study is to explore the preventive and therapeutic effects of yoga on young patients with cervical spondylosis, and to provide experimental basis and reference value for the development of exercise prescriptions for young patients with cervical spondylosis. Sixty young patients with cervical spondylosis, aged 29 y on average, 28 male and 32 female, were selected from the outpatient department of Linyi People's Hospital. Another 34 healthy young people without a history of cervical spondylosis were selected as subjects, with an average age of 29 y. All subjects had no specific physical exercise plan before the experiment. Sixty

patients with cervical spondylosis were randomly divided into groups A and B. The 34 young people without cervical spondylosis were divided into group C. Systematic yoga training was conducted for 12 mo for groups A and C. Group B was the control group and did not participate in yoga training. Before training, the cervical wave amplitude of cervical spondylosis group (A, B) was lower than that of group C ($p < 0.01$), but the duration was longer ($p < 0.01$). After training, the cervical wave amplitude of cervical spondylosis group A and control group C were increased and the duration was decreased ($p < 0.01$). The cure rate of cervical spondylosis was found to be 82.85 %. Therefore, it can be concluded that yoga training could prevent and treat young patients with cervical spondylosis. Therefore, Yoga exercise could be regarded as a sports prescription for treating cervical spondylosis.

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The Effect of Exercise Intervention on the Treatment of Early-stage Depression in College Students

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The purpose of this investigation is to study the basic principles of the treatment of depression, which affects the study and life of contemporary college students. Exercise therapy could improve and treat by adjusting the mood, establishing self-confidence and a feeling of wellbeing. To this end, this method of intervention for early depression in college students is proposed. Forty nine (534) students with early depression of a college were assessed by Zung's self-rating scale and the Hamilton Depression Scale. The 49 patients were divided into the control group (group C, $n \leq 24$) and the exercise group (group E, $n \leq 25$). The group C and group E were treated with running, rope skipping, fitness and dance combined with group activity in addition to psychological and behavioural therapy and the group E was divided further into the control group (group C, $n \leq 24$) and exercise group (group E, $n \leq 25$ group). Exercise ability $8.4 \leq 11.2$ mes, subjective sensory (REP) 13, target heart rate (THR) 135/min, rope skipping 60-80/min, exercise time $30 \leq 60$ min, one exercise should last at least 30 min, in addition to preparation and finishing activities, at least 20 mi should be available. N the rate of exercise was between 135 and 164 times/min and the number of exercises was on average from 3 to 5 times, and the effect of the exercise-assisted treatment was verified through a number of aerobic exercises. The incidence of early-stage depression in the normal college students was 9.17 %. After 2 mo of exercise therapy, the depression symptoms of all the students were significantly reduced. The scores of SDS and HAMD before treatment, the difference between the group E and the group C was not significant and after treatment, the difference between the group E and the group C was not significant; after the treatment, the difference between the group E and the group C was not significant. The score of group C was lower, and the score of E group decreased significantly, and the effect of group E and group C was significantly reduced, and the follow-up of 4 and 6 mo was not recurrence. Exercise intervention has obvious curative effect on depression of college students. Combining with various aerobic exercise treatment methods, the therapeutic effect is more remarkable.

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The Innovation of College Students' Physical Health Management Model under the Background of Great Health

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In the context of big health, the innovation of health management model of college students has not been involved. On this basis, this study puts forward an innovative approach to the big health perspective of college students through a health management model. This study through interview and discussion, questionnaire, records, according to the preliminary design of evaluation index, evaluated management of the students' physical health. Based on sports, sociology and other theories, the data are analysed

comprehensively to form an objective and comprehensive analysis report, paving way to the follow-up research. First of all, in contrast to the concept of great health students exhibit a low level of physical health. From the perspective of big health, it is necessary to strengthen the cooperation between the two aspects; the declining trend in college students' physical fitness triggers the society to innovate health management aspects to improve the health of college students. Secondly, in the context of big health, there are some obstacles to the innovative mode of college students' physical health management. For example, the construction of physical health management system is flawed, the top-level system design is too general, the related supporting system along with implementation of supervision is not perfect. Universities and colleges in general pay too much attention to examination results, which are the indicators of students' performance, while the student health is not monitored and managed and it is difficult for students to know their health condition through physical examination. Under the background of great health, it is imperative to innovate the management mode of college students' physical health. Innovative ideas of college students' physical health management mode are mainly based on the construction of college students' physical health management framework, the realization of college students' physical health management process, and the implementation of follow-up of college students' physical health management. First of all, the construction of college students' physical health management framework must start from the 4 aspects of family, school, hospital and government to establish a sustainable development mechanism. Secondly, the process of college students' physical health management should include daily exercise, pre-, mid-way and post-monitoring chain and achieve the healthy development of students' physical health through monitoring feedback. Third, is the follow-up work of college students' physical health management, where it is necessary to establish a diversified reward and punishment system, improve the tracking management and feedback system, and formulate the physical health promotion plan.

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Investigation of Fitness Service Industry in Sichuan Province from the Perspective of Great Health

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At present, healthy China has become a national strategy and the big health industry has a huge scope for development. In the process of promoting the cause of great health, the fitness service industry has become an important part of building a strong sports country in the new era and an important part of building a public sports service system. Therefore, taking the fitness service industry in Sichuan Province as the subject under the perspective of general health, this paper conducted investigative research. The purpose is to get the basic information in this field by comprehensively understanding the current situation of the fitness service industry in Sichuan Province. Through analysis and logical demonstration, one could find the problems and constraints of the fitness industry, to better implement the outline of the National Fitness Program and the National Fitness Program. The future sustainable development of fitness service industry provides decision-making basis. Through literature survey it is possible to grasp the current situation and trends of the research. In view of the current situation of fitness service industry and related academic issues of fitness service industry, targeted visits are made to sports industry experts and scholars. Based on the information obtained from the survey, the status of the fitness service industry in Sichuan province is summarized through logical analysis and deduction and the existing problems and development constraints were analysed. This paper surveyed the scale, structure and performance of Sichuan fitness service industry marketing strategy to find that fitness service industry market competition pattern in Sichuan province is not high, market is relatively concentrated, fitness service industry products are quite different, there are some fitness service industry barriers to entry, fitness service industry economies of scale is not high, fitness services provided by the product quality satisfaction is not high, fitness service market positioning is not accurate and that there was lack of competitiveness. With the concept of great health, the reform and

development of fitness service industry in Sichuan province has become inevitable. The establishment of fitness service industry development thought by the concept of big health, introduced the fitness service enterprise outside the developed area, guided the present fitness service market layout, and realized the diversification. Provide fitness service products, improve the quality of fitness service products, achieve the accurate positioning of fitness service market.

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Sports Nutrition Supplementation Strategy Based on Elimination of Sports Fatigue

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Bone and muscle tissue must be adapted to exercise. Even for athletes who continue to do intense training every day, nutrition intake without considering physical or health requirements can reduce athletic ability. In modern competitive sports, exploration of athletes' physical ability, skill and psychological ability has approached the limit of human physiological energy. The competitive strength of elite athletes varies little, often only a few hundredth of a second or a few centimeters. In addition to scientific training and rehabilitation measures, athletes must also pay attention to proper diet and nutrition in order to win competitions. Statistical description method, keyword co-occurrence analysis method, cluster analysis, social network analysis and strategic coordinate analysis method are used to discuss the current status of sports nutrition and sports fatigue. The main research topics and hot spots were analysed, research topic content and development trend was scrutinized to obtain reference for related research. Numerous studies have shown that most chronic diseases are associated with inadequate physical activity and poor nutrition. The combination of increasing physical activity and reasonable nutrition is effective in preventing and alleviating some chronic diseases such as atherosclerosis, chronic obstructive respiratory disease, cerebrovascular disease, high blood pressure, obesity, osteoporosis and some cancers. In addition, proper exercise combined with reasonable nutrition played a significant role in promoting the growth and development of children and adolescents, improving heart and lung function, improving people's endurance and reducing body fat. Fat is an important energy storage in the body, physical exercise can improve the human body's ability to use fatty acids through oxidation and fat metabolism can be enhanced to save the consumption of glycogen, thus improving endurance. Too much fat intake will affect athletes' body shape and the completion of some difficult movements. At the same time, it would reduce the storage and utilization of muscle glycogen and liver glycogen. Sugar is the main energy source in sports. When it is oxidized for energy supply, it consumes less oxygen and produces high heat. The glycogen in the body is closely related to endurance. The formation of immunoglobulin contributes to the improvement of immune function. Different dietary standards are developed for athletes of different training levels, training periods, ages and genders. Combining with sports training, dietary planning and nutritional intervention should be further studied and skeletal muscle metabolism should be further studied in sports population with insufficient dietary intake. The formulation of standard balanced diet and reasonable supplement of trace elements need to be developed. It is necessary to prepare a detailed, specific nutrient-based daily recommended standards. In addition, bioengineering, genetic engineering, advanced food processing technology, nanotechnology, transgenic technology and computer science should be widely used in sports nutrition.

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Pay Attention to Health Management to Improve the Quality of Life

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Modern people live under great pressure. Due to the influence of work relationship, life style and other

factors, more and more young people have inferior health. Under these conditions if attention was not paid to health management, quality of life would get deteriorated. Health is inseparable from regular work and rest and a healthy diet, regular effective exercise, a good lifestyle are necessary to build a healthy body and improve the quality of life. This investigation used literature research, interdisciplinary research and logical reasoning. According to the research purpose, extensive evaluation of literature and news to understand the current status and possible problems of health management from three aspects such as, policy support, talent training and operation guarantee. To master the proper knowledge structure of health management through interdisciplinary research; finally, some suggestions to improve health knowledge system are put forward by using logical reasoning. Personal health management is to provide professional health management services such as health education, health assessment, health promotion, health tracking, health supervision and medical guidance and consultation based on the data analysis of personal living habits, personal medical history and personal health examination. Exercise intensity is more likely to cause physical injury, walking speed should be matched with their physical fitness. Also, it is necessary not to blindly pursue the number of steps. Combine one's own physical condition, gradually improvement of the speed and exercise time. People with chronic diseases need more attention when exercising. The person with weaker physical quality, can move in letting systemic place as far as possible. This can better regulate the function of the organs of the whole body, promote metabolism and enhance physique. The person with fatter body, to achieve reduction in weight, must increase walking time and walking speed gradually from slow to medium speed according to personal situation. Long-term adherence is helpful to improve myocardial metabolism and reduce vascular sclerosis. So, it is necessary to pay attention to personal health management, take good care of the body, maintain self-discipline, get rid of bad living habits, follow scientific and reasonable diet, active exercise and fitness to enjoy a high-quality happy life for the rest of the life.

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Sustainable Development Countermeasures of Fitness Square Dance

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As an important form of social culture, fitness square dance has become an indispensable part of urban cultural life. With the implementation of national fitness program and the extensive development of national fitness activities, square dance, like bamboo shoots after the Spring Festival, shows a trend of vigorous development, active in every corner of the motherland. However, what is worrying is that, while strengthening people's health and promoting exchanges, square dance also produces various social problems, which reflects the dilemma of the sustainable development of square dance and hinders the development of mass sports and social harmony. Using the methods of literature, questionnaire survey, interview and statistics, this paper analyses the development status of fitness square dance. Public sports facilities are directly related to the needs of urban residents' sports space and sports. In the rapid growth of urban construction, material, resources, public space, the differences between the value distribution, the lack of humanization space design, urban sports venues are restricts the mass sports facilities construction, the people lack of enough leisure space, not met the basic sports venues, the contradiction of supply and demand is easy to trigger a square dance practitioners and the surrounding residents, the contradiction of the first performance in the square dance fitness places on the choice of contradiction. In the final analysis, it is the contradiction between the lack of facilities and the need of mass fitness. In addition to urban planning, people's fitness venues should be considered. Cultivate public awareness and intensify propaganda. Legal policies to be implemented and management systems should be clarified. Square dance as a fitness measure will be introduced to colleges and universities to strengthen the construction of a backbone team. Strengthening the construction of the backbone team of square dance is an important way to promote the development of square dance. Huangzhou district dance association has excellent teaching resources, which can provide systematic training and guidance for square dance coaches. Regularly organize training classes for square dance coaches, study national and folk dance elements at home and abroad, and improve the theoretical quality of square dance coaches, hold square dance competition regularly to promote mutual communication between coaches and players, encourage the innovation of square dance, invite professional dancers or dance teachers to go deep into the square dance team for guidance, help improve the

choreography and improve the ability level of the square dance backbone team through practical guidance and guidance. To strengthen the construction of the training network system, the dance association can conduct professional training for people who are specially responsible for cultural publicity in the local and neighbourhood communities and towns and then organize dance lovers to learn, so as to realize the point-by-point and level-by-level amplification and radiation effect, and promote the healthy and orderly development of square dance.

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The Effect of Rope Skipping on College Students' Obesity

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With the rapid development of China's economy, people's living standards have been continuously improved leading to development of obesity, a common problem these days in big cities and among the younger generation. Obesity is a common metabolic disease in modern society, which not only affects people's morphology, but also induces hypertension, cardiovascular diseases and other major causes. This article employs literature, interview, mathematical statistics, logical analysis, through an investigation on college students to explore the impact of rope skipping on college students' obesity. How this method can be amalgamated with other methods to cause weight loss is one of the main research topics. Obesity is mainly excessive body fat content, weight loss is to reduce fat, the reduction of fat content will promote the oxidation of fatty acid decomposition. Long-term aerobic exercise can improve the utilization of body fat by accelerating fat mobilization and increasing the efficiency of fat supply. Rope skipping exercise belongs to a kind of aerobic exercise, in which the body is given priority to with lower limb after bounce and pedal action, powerful and rhythmic oscillation of the double arm, especially the body axis and the waist with the onset of twist, rotate, flexion, contraction of the muscles on the inside and the diaphragm layer. Through such a sport a lot of heat dissipation occurs in the human body by increasing energy expenditure, reducing the accumulation of fat in the body and inhibiting the accumulation of fat cells. Meanwhile, it can improve the excitability of sympathetic nerve, promote the increase of secretion of cortisol and catecholamine and strengthen the catabolism and metabolism of body fat. Through skipping rope movement it is possible to effectively control the synthesis of fat and increase the supply of fat, thereby promoting the fat metabolism. In addition, skipping can promote students' balanced physical development, and develop accuracy, flexibility, coordination, rhythm and other qualities. Main points of rope skipping single swing main points of body parts of rope skipping main points of the body straight but not hard, landing should not use the back heel, to prevent concussion. While jumping height should be appropriate, with the rope just over the foot is appropriate, in order to prevent the bare feet bone collision when landing and it is necessary to the body to relax when practicing.

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Physiological Balance Analysis of Children's Health and Nutrition in the Age of Microecology

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Nutrients play an important role in the process of human growth and intelligence development. There is a

close relationship between the actual nutritional status of human body and specific dietary behaviour. Dietary behaviour, namely dietary habits, is an important factor affecting children's growth and even adult health. Good dietary behaviour can not only promote children's physical development, lay the foundation of children's intellectual development, prevent nutritional diseases, but also play an important role in preventing childhood and adult obesity, dental caries, malnutrition and some chronic diseases after adulthood. The article employed two methods, first the literature review in which many electronic literature and books were consulted to summarize the current status and research results of children's health and nutrition, second the questionnaire survey method in which research need-based questionnaires were set around children's health and nutrition, and the respondents were analysed and guided to ensure the authenticity of the data collected. Because human body cannot synthesize micronutrient, it must absorb from outside. Micronutrients are important nutrients for children's growth and development. When micronutrient intake is insufficient for a variety of reasons, a variety of deficiency symptoms would occur. The nutritional status of infants and young children was related to the frequency of traditional dietary intake, while the nutritional diseases and intelligence development were related to the frequency of animal protein and nutritional diet intake. In the process of nutritional intervention for rural infants and young children, it is necessary to guide and intervene their guardians' infant feeding patterns according to their individual health conditions. Nutrition and health of children are inseparable. Reasonable feeding methods, good eating behaviours and healthy eating patterns are important guarantees for children's physical and mental health. At present, protein and thermal malnutrition in children has been significantly reduced, but micronutrient deficiency is still widespread, especially the deficiency of vitamin A, vitamin D, calcium, iron and zinc must be paid attention to. Attention must be paid to the prevention of micronutrient deficiency, with emphasis on prevention and emphasis on dietary nutrition guidance. Blind supplementation of a single micronutrient may affect the absorption of other micronutrients and harm children's health. In addition, as the eighth largest nutrient in the human body, probiotics have important physiological functions. The clinical use of probiotics is safe and effective. The era after antibiotics will be the era of microecological preparations. Probiotics contribute to the digestion and absorption of nutrients, have antimutagenic and anticancer properties, improve blood lipid metabolism, prevent cardiovascular diseases and delay the aging of the body. In addition to the fact that probiotics can reduce hypertension caused by high cholesterol, the blood pressure lowering effect of probiotic metabolites has become a hot topic in recent years.

Development Status and Theoretical Adjustment of Chen Style *Taijiquan* in Different Cultural Areas

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Taijiquan has been recognized as one of the best fitness sports by people in many countries all over the world. Chen *taijiquan*, as the mother of *taijiquan*, has played a positive role in promoting the development of *taijiquan*, but there are some defects in its promotion and dissemination. From the perspective of different cultural areas, this paper investigated and analysed the promotion mode of Chen-style *taijiquan*, so as to provide a basis for decision makers. Literature material method, questionnaire survey method, expert interview method, logical analysis method, mathematical statistics method. Define tasks and research objectives according to the plan. Firstly, collection and arrangement of literature was completed to analyse statistics of relevant data and materials. To formulate research contents, to investigate and interview Chen's *taijiquan* in different cultural areas, and to make statistics, analysis and arrangement of relevant data and materials; Compared investigation and interview results, sorted out the development status of Chen's *taijiquan* in different cultural areas, and analysed and formed preliminary results, based on the current situation of the development of Chen's *taijiquan* in different cultural areas, the existing problems are found and solutions are sought and the development mode of Chen's *taijiquan* in different cultural areas is analysed and explored to form the adjustment scheme. The Chen style *taijiquan* culture connotation is thick, the inside information is rich, the intrinsic value and the development prospect are incomparable to other kinds of boxing. Core, deputy area, edge area must work together, common development, especially the core

area and deputy district from the *tai chi* on the promotion and development of cultural industry based on national conditions, the paper, cities, grasp the *taiji* culture industry marketing pattern, the handle of Chen style *tai chi chuan* and different culture area of society, economy, culture, management, and other factors, the relationship between seize the opportunity, change ideas, emancipate the mind, the innovation mechanism, to attract talents and the team, make Chen style *tai chi chuan* cultural industries along the direction of standardization, to become a beautiful scenery of the local signboard and card.

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Sports Rehabilitation Promotes Functional Research in the Physical Training of Boys (12-15) in Football

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Rehabilitation of sports injuries is very necessary for the treatment and prevention of sports injuries. In this paper, based on the characteristics of competition, training and growth of young football players, a rehabilitation physical training program is designed to explore the effect of rehabilitation physical training on the treatment and prevention of sports injuries. Through the methods of literature review, expert interview, questionnaire survey, experiment and mathematical statistics, this paper studied the sports injury and rehabilitation training of adolescent male football players. The common sports injuries occurred in the lower limbs, mainly in the thigh, calf and ankle joints, while the incidence of injuries in other parts was low. The degree of injury was mainly mild injury, accounting for 69 %, followed by moderate injury, and the proportion of severe injury was the lowest. Most sports injuries did not affect training. In the course of sports injury, the incidence of acute injury is higher than that of chronic injury. The types of sports injuries mainly included bruises, contusions, muscle and ligament injuries. The athletes with sports injuries were divided into the experimental group and the control group, with 50 boys in each group. The experimental group received 60 min of rehabilitation training in each session, 4 times a week for 12 w. The test results showed that there was no significant difference in the total score of FMS test between the experimental group and the control group before the experiment, and there was no significant difference in the results of each sub-item. After rehabilitation training, there were significant differences in the FMS total scores between the experimental group and the control group. The total score of the athletes in the experimental group was significantly different before and after the rehabilitation training. There was no significant difference in the total scores of the control group before and after ordinary football training. The incidence of sports injury is high in junior boy's football team. Common sports injuries occurred in the lower limbs, mainly in the thigh, calf and ankle joints, and the degree of injury is mainly mild. In the course of injury, the incidence of acute injury is higher than that of chronic injury. Abrasion, contusion, muscle and ligament injury are the most common sports injuries. Rehabilitation training for athletes with sports injuries in junior boy's football teams is conducive to the recovery of sports injuries, the improvement of athletes' physical sports ability, especially for the improvement of athletes' lower limb sports ability.

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The Inheritance of *Huangmei Yuejia* Boxing from the Perspective of Healthy China

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From the perspective of healthy China 2030, it is essential to study the inheritance of *Huangmei Yuejia* boxing from the perspective of healthy China to provide a basis for decision-making. The inheritance of *Huangmei Yuejia* boxing in healthy China was studied by means of literature, field investigation, expert

interview and logical analysis. Literature was reviewed to clarify the origin and rheological track of *Huangmei Yuejia* boxing; field investigation of *Huangmei Yuejia* boxing inheritance situation and development status and from the perspective of healthy China 2030, attribution research *Huangmei Yuejia* boxing inheritance and development of a grand plan in the right way, The effect of *Huangmei Yuejia* boxing on treating chronic diseases and regulating internal and external environment of human body was studied. Based on logical reasoning and analysis of the cultural value, martial arts and fitness value of *Huangmei Yuejia* boxing, the scientific fitness factors were selected out while the common fitness elements were identified to boost the implementation of healthy China 2030 and the development of national fitness. The construction of a healthy China system should be extracted from many elements, such as traditional national culture, national spirit, courtesy society, physical and mental health, physical fitness and happiness. *Huangmei* family boxing is the culture in China only born armed boxing, in addition to blow such as art, such as drain the springs work, iron movement, such as health achievement method, stripping out the keeping in good health content, applications and scientific improvement, can promote the development of the healthy China, to meet the needs of the people for a better life. *Huangmei Yuejia* boxing is based on the theory of *Yin* and *Yang*, 8 diagrams and 5 elements and contains rich philosophy of traditional Chinese medicine. By practicing *Huangmei Yuejia* boxing, it is possible to regulate muscles, bones, *qi* and blood from the inside out to improve the health level. The system of inheriting and developing *Huangmei Yuejia* boxing's healthy body and mind was explored to help realize the grand blueprint of healthy China 2030 and to support the wellbeing of society in all respects.

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Distinguishing and Analysing the Characteristic Theory of Competitive Ability of Triathlon from the Special Characteristic Angle

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Triathlon as a multiple combination project, its competitive ability characteristics and three children as a single race show characteristics of competitive ability have a certain similarity, there also exist some difference, the difference is mainly produced in children after the combination between competitive ability (positive and negative) of the migration and the relationship between the children of the competitive ability put forward new requirements. This study takes the development law of competitive ability and core elements of competitive ability of each sub-item of triathlon as the main research object. The research focuses on the role of the 3 sub-items in their respective competition units and their relationship. Assisted by triathlon race rules for research object, analysing from the angle of the special features on behalf of the competitive ability of physical, technical, psychological and tactical, outside of the dominant characteristics such as intelligence and can reflect the relationship between each item and its contribution to overall recessive characteristics, on the basis of summarizing the winning rule project, in order to provide guidance to the project practice training. In addition, road cycling and long-distance running projects reflect the high consistency demand for tactical application ability, sports intelligence and psychological ability. However, the differences among the 3 sub-elements are reflected in the 3 aspects of special sports skills, body shape and special sports quality, which are determined by the special characteristics of each sub-item. After all items are combined in the competition of competitive ability in the process of core elements can also order with item combination, the relationship between children and children's contribution to the overall and to meet the requirements of the rules of the contest and change, its and the difference between the single race can be is considered to belong to one of the competitive ability of this project features. After the combination of the 3 sub-items of this project, the 3 levels of speed quality, strength quality and contingency ability have a higher impact on the competition results than those of each sub-item as a single independent competition. the influence level of the 3 sub-items on the total score after combination were, swimming>running>cycling; the progressive form of the competition determined the interactive relationship among the 3 sub-events. The former sub-events have both promoting and restricting effects on the latter sub-events. The special

characteristics determine the winning rule of this event, physical fitness is the fundamental, swimming is the foundation, cycling is the core, running is the key and mind is the guarantee.

TRACK 4: APPLICATION OF TECHNIQUES AND METHODS IN MEDICINE

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Application of the Fuzzy Self-tuning Control Method for Medium Sterilization in Sterilizing Inspection of Drugs Based on Chaos Optimization

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The influence of sterilization of the medium in the sterility test of a drug directly affects the quality and efficacy of that drug. Conventional control schemes are sometimes difficult to come up with the development of medium sterilization in pharmaceutical sterility testing. In this paper, the offline fuzzy self-tuning controller for chaotic optimization was firstly used to obtain the optimal parameters. Secondly, these were programmed into the STM32 single-chip microcomputer, achieving the automatic control of the medium sterilization. Finally, the experimental results were used to analyse the sterilization effect of the medium. The results showed that by way of the self-tuning fuzzy control, the medium sterilization control effect in the sterility test of a drug was in line with the national medical standard. A medium sterilization control system for sterility inspection of drugs based on STM32 single-chip microcomputer was developed. The control system consisted of a heater, a damp heat sterilizer, a 16-way temperature validator, a Palltronic integrity tester, a test kit and an air filter. The system worked by controlling the voltage of the heater through STM32 programming and fuzzy self-tuning algorithm. The temperature of the damp heat sterilizer could be regulated, allowing the air to come through the filter. The temperature was detected by a 16-channel temperature verifier. Experiments showed that 12 movable thermocouple probes were evenly distributed in various parts of the moist heat sterilizer cavity, ensuring one of the cavity probes as a contrast and a cold spot is designed. After the sterilization process ended, the sterilization section was confirmed. It is proved that the temperature uniformity in the cavity did not exceed $\pm 1^\circ$, which was in line with the requirements of GMP verification specifications. This indicated that the temperature distribution experimental data satisfied the verification requirements. The results obtained confirmed the temperature indication, sensor, temperature recorder value, monitoring of the device's own system temperature display and temperature probe temperature, and finally the automatic control program. The sterility test of the drug revealed that the error between the time recorder and the standard time was less than $\pm 1\%$, the chamber temperature in the chamber was 121° , with the temperature error less than $\pm 1^\circ$; the temperature of the constant temperature incubator control was kept between $56-60^\circ$, with the temperature error less than 2% . Such fuzzy self-tuning control effectively solved the problem of accurate temperature control and provided an effective theoretical support for sterility check temperature control.

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Application of 5S Management Concept of Cardiovascular and Cerebral Vascular

Chronic Diseases in Practical Teaching in Colleges and Universities

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Chronic diseases refer to diseases that have long-term accumulation and morphological damage. Chronic cardiovascular and cerebrovascular diseases are one of the main diseases leading to human death. In order to enhance people's attention to the prevention of cardiovascular and cerebrovascular chronic diseases and improve people's understanding of cardiovascular and cerebrovascular chronic diseases, this paper puts forward the concept of 5S management in practical teaching in colleges and universities, which can be used in the teaching of cardiovascular and cerebrovascular chronic diseases in colleges and universities. 5S management is an excellent management method originated in Japan and it is the fundamental way for many enterprises to improve production efficiency and improve the personal moral character of employees. This paper briefly introduced the meaning of 5S management concept, analysed the relationship between professional quality, experimental teaching and 5S management idea, and proposed some concrete ways of implementing 5S management method in the experimental teaching of college students and the possible problems in the process of implementation. As a result, the application of 5S management concept in practical teaching in colleges and universities could deepen students' understanding of chronic cardiovascular and cerebrovascular diseases, increase students' attention to these diseases and provide students with a certain basic guarantee for the prevention and treatment of these in future employment. 5S management concept can improve the quality of experimental teaching and students' learning efficiency, cultivate students' good habits, and achieve the effect of improving students' literacy. At the same time, the application of this concept can greatly increase people's understanding of cardiovascular and cerebrovascular diseases.

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TRACK 5: MEDICAL APPARATUS AND INSTRUMENTS

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New Fibre Optic Magnetic Field Sensor Based on Magnetic Field Detection of Medical Equipment

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This paper presents a small all fibre optic magnetic field sensor for magnetic field detection of medical equipment. In recent years, medical equipment, as a new high-tech examination method, has become an important tool for human disease examination, which has been applied more and more widely. Because of the safety of treatment, one of the key problems in the application of medical equipment is the effective detection of magnetic field distribution intensity. The magnetic field sensor can effectively detect the magnetic field intensity distribution of medical devices, and obtain the examination results more effectively and accurately. Magnetic field sensors can convert various magnetic fields and their varying quantities into electrical signal output. The optical fibre magnetic field sensor has the advantages of high sensitivity, small volume and low interference, so it has a wide application prospect in the field detection of medical devices. The fibre optic magnetic field sensor designed in this paper detects the information of magnetic field intensity through the basic principle of magnetic field and the principle of anti-resonant waveguide. Experimental results show that the sensitivity of the fibre optic magnetic field sensor is greater than 108 pm/Oe, and the dynamic range is 80 Oe-230 Oe. The fibre optic magnetic field sensor has high sensitivity and dynamic range, which is expected to be widely used in magnetic field detection of medical equipment.

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The Application of Ultrasonic Diagnostic Equipment in the Diagnosis of Muscular and Skeletal Diseases

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Ultrasound diagnosis is an indispensable part of modern medical imaging. Due to the rapid development of ultrasound diagnosis technology, the application of ultrasound in the diagnosis of musculoskeletal system is more and more widely, which can provide clear dynamic images for observation and real-time treatment under the guidance of ultrasound. In the diagnosis and treatment of musculoskeletal injury, continuous wave or pulsed wave ultrasound can be used. The frequency should be 317 MHz, the sound intensity should be ≤ 10 MW/cm². In the treatment of muscle spasm, continuous wave, frequency and sound intensity were 1 MHz and 1500 MW/cm², respectively, and the frequency and intensity of low intensity pulse ultrasound were 0.8×1.5 MHz and 30 MW/cm², respectively. Continuous wave, frequency and sound intensity were 0.8±1.8 MHz and 2.5±40 MW/cm², respectively. Therefore, the type of ultrasound should be reasonably selected for diagnosis after preliminary judgment of the patient's condition. In addition, the new ultrasound technology has unique advantages in the diagnosis and treatment of skeletal injuries. Ultrasonic elastic imaging is accessible. The tissue hardness is judged by the parameters such as tissue strain and shear wave velocity under the action of ultrasound. There is a large acoustic resistance difference between soft tissue and bone tissue, and there is obvious acoustic attenuation, which is not conducive to the observation of soft tissue by two-dimensional ultrasound, and it is not easy to detect very low echo synovium, while ultrasonic elastic imaging can effectively detect very low echo synovium. In this paper, the application of ultrasonic diagnostic equipment in the diagnosis of muscular and skeletal diseases was deeply studied, and its diagnostic efficiency was improved. Different types of ultrasound can diagnose musculoskeletal injuries and can dynamically observe the pathological changes in real time. It is a kind of treatment time, simple operation, good economy and safety. Means of non-invasive treatment of the effect. The application of ultrasonic diagnostic equipment in the diagnosis of musculoskeletal diseases is in-depth, and its diagnostic efficiency is increasing. Different types of ultrasound can diagnose the musculoskeletal injury, and can observe the pathological condition in real time, and is a non-invasive treatment instrument with short treatment time, simple operation, good economy and safe and effective. The clinical application value of the ultrasound in the diagnosis and treatment of the patients with musculoskeletal injuries is high, and has wide application prospect.

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Multimodal Magnetic Resonance Imaging of Brain Structure in Patients with Obsessive-compulsive Disorder Based on SVM

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This paper is to study the feasibility of multimodal magnetic resonance imaging of brain structure in patients with obsessive-compulsive disorder based on SVM, and to further study the changes of gray matter in patients with obsessive-compulsive disorder from the point of view of multivariate model analysis. Multimodal magnetic resonance data were collected by whole brain scanning with 3 T Siemens Tim Trio MRI scanner in Xuanwu Hospital, including 64 patients with amnesia mild cognitive impairment (aMCI) and 64 normal NCaMCI patients. There were 24 (SCD) patients with subjective cognitive impairment and 57 normal NCSCD patients. There was no significant difference in age and education level between the two groups. The gray matter volume (GMV) at the whole brain voxel level of sMRI and the partial anisotropy fraction (FA) and the average diffusivity (MD) calculated by diffusion tensor imaging (DTI) data were selected. The three indexes are fused and SVM is used to construct the classifier to recognize aMCI and the classifier to recognize SCD. The accuracy, sensitivity, specificity and robustness of the two cross-validation

methods, LOOCV and 10-fold were verified. The results are as follows: 1. The accuracy, sensitivity and specificity of aMCI recognition by fusion classifiers were as follows: (1) LOOCV verification: 83.59%, 78.13 % and 89.06%; (2) 10-fold verification: 83.70%, 78.64% and 88.75%, respectively. The results of the two methods are similar, and both show that the performance of fusion classifiers is better than that of single-parameter classifiers. 2. Scatter plot and fitting line trend show that the decision value of all subjects is negatively correlated with MMSE score. The correlation coefficients are as follows: fusion classifiers $r = 0.382$ GMV based classifiers $r = 0.362$ FA based classifiers $r = 0.337$. the correlation coefficients are as follows: fusion classifiers $r = 0.382$ GMV based classifiers $r = 0.362$ FA based classifiers $r = 0.337$; The r of MD-based classifiers is 0.326, and the associated probabilities are all $p < 0.0001$. The absolute value of r of fusion classifiers is the largest, and the credibility of fusion classifiers is higher than that of single-parameter classifiers. 3. The AUC of fusion classifiers, GMV-based classifiers, FA-based classifiers and MD-based classifiers are 0.8621, 0.8230, 0.7859 and 0.8562, respectively. The fusion classifier ROC curve is the closest to the upper left corner, the AUC is the largest, and the effect is the best. 4. The most recognizable gray matter regions of aMCI and NCaMCI were mainly located in the medial temporal lobe, anterior cuneiform lobe, cingulate gyrus, parietal lobe and frontal lobe, and the most recognizable white matter regions were located in corpus callosum, cingulate, corona radiatum, frontal lobe and parietal lobe. 5. LOOCV is used to verify the accuracy, sensitivity and specificity of SCD classifiers: (1) GMV-based classifiers: 33.33, 33.33 and 33.33 %, respectively. (2) FA-based classifiers: 41.67, 37.50, 45.83 %. (3) MD-based classifiers: 47.92, 54.17, 41.67 %. Based on the image characteristics of gray matter abnormality and white matter changes extracted from whole brain voxels extracted from sMRI and DTI, SVM is used to construct auxiliary diagnostic classifiers, which has a strong ability to identify aMCI patients at the individual level. The advantages of integrated multimodal features in the identification of aMCI patients were highlighted, and the relationship between abnormal gray matter, white matter changes and their distribution patterns in aMCI patients and pathophysiology was revealed.

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Computerized Tongue Diagnosis Based on Multi-features Fusion

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As a significant diagnostic approach in the area of traditional Chinese medicine, tongue diagnosis has always been of great research value. With the development of computer-aided traditional Chinese medicine, computerized tongue diagnosis, which intends to conduct medical diagnosis through analysing tongue images, is receiving more and more attention. However, conventional computer vision methods do not achieve satisfying performance because of the subjectivity and complexity of tongue diagnosis. How to extract appropriate features from tongue images and establish a reliable connection between image features and diagnostic results is still a problem to be solved. A hybrid method for computerized tongue diagnosis is proposed to comprehensively utilize various features including both visual low-level features and deep features obtained by convolutional auto-encoders. Having constructed a tongue image dataset, a large set of unlabelled image patches is collected and sent to a sparse auto-encoder to learn local features. Global features are then obtained through a multilayer convolutional neural network. At the same time, conventional low-level features including color and texture are also extracted. All the features are finally combined into a vector and sent to a softmax model for tongue diagnosis. Experimental results on benchmark datasets show the multi-features fusion based method achieves good accuracy in computer-aided tongue diagnosis. Satisfying performance is already obtained in the experiments based on convolutional sparse auto-encoder. The fusion of auto-encoder features and visual low-level features is able to further improve the diagnostic performance. It is feasible to apply sparse auto-encoder based unsupervised feature learning into computerized tongue diagnosis. The auto-encoder features and low-level features can complement each other and be comprehensively utilized to achieve better performance.

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Facial Image Based Disease Diagnosis Using Convolutional Neural Networks

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In the field of traditional Chinese medicine, face observation is a unique diagnostic method to predict the health condition of a person. With the rise of artificial intelligence and computer vision, researchers have started to apply facial analysis techniques into automatic disease diagnosis for facial images. However, limited progress has been made for the reason that the result is easy to be influenced by the external factors, for example, lightening condition. How to apply computer vision methods into facial image based disease diagnosis without interference from external physical conditions still puzzles the researchers in this area. A deep learning framework for facial image based disease diagnosis is presented to make use of the feature representation ability of convolutional neural networks. In order to avoid the interference from image background, a fully convolutional neural network is first employed to determine the human face region. A convolutional neural network including multiple convolutional layers and pooling layers is then utilized to obtain representative features of facial images. At last, these features are grouped as vectors and fed into a SoftMax regression model for facial image based disease diagnosis. Experiments on benchmark datasets demonstrate that the deep learning approach obtains good performance in disease diagnosis for facial images. The fully convolutional neural network is able to accurately determine the face regions. The proposed framework outperforms the framework without employing a fully convolutional neural network to get rid of the background information. The convolutional neural network based deep learning method is applicable in disease diagnosis for facial images. The utilization of fully convolutional neural networks can further improve the diagnostic performance.

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Deep Learning Based Gastric Cancer Detection in Endoscopic Images

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As a common form of malignant tumor, gastric cancer has become a fatal gastrointestinal disease. Early-stage gastric cancer detection by endoscopic technique is an effective approach to lower gastric cancer mortality, but the difficulty of visual inspection and the inexperience of endoscopists lead to high error rates. Considering that image recognition technologies have been successfully applied to diagnostic imaging in medical areas, researchers started to study the feasibility of gastric cancer detection in endoscopic images. However, how to use image recognition technologies to detect subtle changes in endoscopic images and accurately predict gastric cancer is still a challenging topic. A deep learning method is presented to apply a latest object detection algorithm called feature fusion single shot multibox detector into gastric cancer detection in endoscopic images. A feature fusion module is employed to concatenate features with different scales, and down-sampling blocks are utilized to create feature pyramid. These features are grouped and sent to a series of multibox detectors for gastric cancer prediction. Diagnostic accuracy is finally tested on a benchmark dataset including stomach images from patients who have gastric cancer lesions. The detection performance is evaluated in terms of sensitivity, specificity, miss-diagnoses rate and misdiagnosis rate. Experiments prove that the feature fusion single shot multibox detector based deep learning method achieves outstanding performance in gastric cancer detection based on endoscopic images. The feature fusion single shot multibox detector method is able to improve the performance over existing convolutional neural

networks-based methods with a little sacrifice in efficiency. It is feasible to apply deep learning methods to gastric cancer detection in endoscopic images. The feature fusion module in feature fusion single shot multibox detector is beneficial to improving the detection performance.

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Structure Arrangement and Application of New Type LNG Heating and Gasification Plant

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The structure arrangement and application of new type liquefied natural gas heating and gasification plant are discussed. This paper discusses the working principle of the new liquefied natural gas heating and gasification device, and studies the various systems of the device, among which the combustion chamber inner and outer cylinder, gas recirculation system, gas rotator, gas cone nozzle and automatic water injection system are all designed with independent intellectual property rights. In addition, the structure arrangement and application of new type liquefied natural gas heating and gasification device are discussed. At present, liquefied natural gas has become an extremely important resource of energy reserves, and the liquefied natural gas industry has become the fastest growing industry in the world. Liquefied natural gas usually only exists in low temperature and high-pressure environment. Therefore, it needs to be heated and gasified in the first place when it is used. Therefore, liquefied natural gas gasification device is an indispensable and important equipment, which plays an extremely important role in the efficient utilization of liquefied natural gas. Therefore, a new type of liquefied natural gas rapid gasification equipment has emerged. The device ensures the safe operation of the device and improves the operation efficiency by using the innovative technologies of flue gas circulation system, water injection system and air swirl. Based on the success of the test, the industrial application device was manufactured, and the test was carried out to determine whether the device is reasonable or not. The test results show that: (1) the new type of LNG heating vaporizer load adaptability, and can adapt to the external gas load to increase rapidly; (2) the smoke exhaust loss, efficiency, fuel consumption rate and heat dissipation loss of the new LNG rapid gasification device have all reached the requirements. When the load is between 1800-2200 m³/h, the efficiency has exceeded 95 %. When the load is 1976 m³/h is close to the design load of 2000 m³/h, the efficiency is 96.35 %, while the maximum load can reach 2800 m arcs; (3) the new LNG rapid gasification device itself fuel consumption rate is relatively low, only 1.5%, so meet the requirements of energy conservation. The new liquefied natural gas rapid gasification device has many advantages, such as fast start-up, high thermal efficiency, compact structure, small occupation area and high gasification rate, and it will not be affected by environmental conditions. Therefore, it is very suitable for small and medium-sized areas where the natural gas supply network cannot be connected due to various reasons.

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Effect of Acupuncture and Transcranial Magnetic Therapy Apparatus on Children with Poor Intelligence

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With the development of modern medicine, more and more children with brain injury have been treated, but at the same time, some children have a certain degree of mental retardation, which bring a lot of burden to

the family and society. In order to improve the intelligence level of children and lay a foundation for their return to society, this paper puts forward the observation of the curative effect of acupuncture and moxibustion plus transskull magnetic therapy instrument on children with mental retardation. 120 children with mental retardation were divided into 4 groups according to mild, moderate and severe. Group I ($n \leq 30$) was given family intelligence training, group II ($n \leq 30$) was treated with intelligence training and acupuncture plus transskull magnetic stimulation, group III ($n \leq 30$) was given intelligence training, and group IV ($n \leq 30$) was given intelligence training, Monosialic acid tetrahexose gangliosides 2 ml acupoint injection, group IV ($n \leq 30$) were treated with intelligence training, acupuncture plus transskull magnetic stimulation, monosialic acid tetrahexose gangliosides 2 ml acupoint injection. The course of treatment is 3 months. According to the Gessel development scale, the development quotient. Of each group was measured before and after treatment. The effective rate and mild, moderate and severe development quotient were compared before and after treatment. There were significant differences in mild to severe mental retardation in group II, group III and group IV ($p < 0.01$), and there were significant differences in moderate and severe mental retardation in group IV ($p < 0.01$). It can be seen from this study that intelligence training combined with acupuncture plus transskull magnetic stimulation and drug acupoint injection has achieved significant curative effect on children with mental retardation. Acupuncture combined with transskull magnetic stimulation combined with early acupoint injection can improve the intelligence level of children with mild to moderate mental retardation. Therefore, in the treatment of children with mental retardation, especially those with mild to moderate mental retardation, it is suggested that the multi-means treatment method of integrated traditional Chinese and western medicine should be adopted early in order to improve their intelligence level and social adaptive behaviour ability, so that they can return to society as soon as possible.

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Technological Progress in Monitoring the Capping Gap of Penicillin Drug Production Line Based on Visual Attention

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The quality of penicillin packaging directly affects the quality of drugs, which is naturally related to the care of patients. Traditional monitoring programs are facing more difficulties in adapting to the production and packaging of modern penicillin drugs. In this paper, a kind of special online visual monitoring system of penicillin is firstly designed to optimize the structure of the detection system. Secondly, the visual monitoring system matched with the production line is developed. Full consideration is then given to the relationship between the overall delay time of the system and its camera focal length, object distance and camera imaging. The visual monitoring algorithms and processing procedures are finally created. The experimental results show that the use of such visual imaging technology may promote the monitoring effect of penicillin drugs up to the national medical standard. An online visual monitoring system for penicillin was developed in this work. This was a dedicated control system that consisted of an industrial computer, an image acquisition card, a CCD camera, a lighting system, a monitoring platform and a mechanical structure bracket. The system worked by transmitting the image of penicillin bottle cap to the industrial computer through the imaging machine, data acquisition and visual processing system. The image processing algorithm was analysed to output whether the penicillin cap was qualified or not. Here the image processing algorithm was the core, i.e. getting the outer contour and gap profile of the cap. Using the area labelling algorithm, the capping area was automatically spotted, and then the cap width was calculated with respect to the number of pixels. The actual width of the bottle cap was incorporated to determine the relationship between the number of pixels and the actual length in the image. Experiments showed that the proposed system was 100 % in accuracy, except for the maximum error of 0.015 mm, which was in line with the requirements of medical national standard verification. The visual monitoring system, lighting system and visual processing algorithm were identified to run the automated control program. According to the analysing results, the imaging experiment of penicillin drug caps presented the error percentage of 2.34 % and the average error

percentage of 1.12 %. This proposed visual imaging technology has gone an extra mile on effectively solving the problem of penicillin drug cap monitoring as a theoretical and technical support.

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TRACK 6: HEALTH EDUCATION

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The Prevention of Mental Illness of College Students by Health Education under the Background of Big Data

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With the advent of big data's era, great changes have taken place in people's way of life and thinking habits. Big data's idea and technology have brought new opportunities and challenges to the mental health education of college students facing multiple pressures of study, emotion, employment and life. In the face of this situation, this paper analyses the characteristics of big data's background, briefly expounds the opportunities and challenges faced by college students' mental health education under the background of big data, and further puts forward some relevant countermeasures for the prevention of college students' mental diseases under this background, so as to promote the mental health development of college students. The university can obtain the psychological characteristics of the college students by analysing the data acquired by the social platform such as WeChat, QQ chat, and micro-blog. The psychological evaluation constructs a sound psychological database, analyses and estimates the psychological condition of the students in time, and finds that the students can carry out psychological intervention early in the case of psychological problems, guarantee the mental health of the students and prevent the occurrence of the psychological problems in advance, and promote the physical and mental health of the students. The health education proposed in this paper plays a very important role in the prevention of mental illness of college students under the background of big data. Through the investigation, it is found that this education method has obvious effect among the majority of college students. The function of preventing all kinds of mental illness has been fully achieved. Make rational use of big data's advantages and characteristics to innovate the work of mental health education, improve the quality of mental health education of college students, and promote the development of mental health education in colleges and universities. For colleges and universities, the goal of college students' mental health education should not be to solve the psychological problems of college students, but to prevent the psychological problems of college students. It can be seen that, under the support of the large data of the personal information of the students, it is of great significance to set up the mental health prediction mechanism of the college students by analysing the data. The arrival of the great data age makes us realize the complexity of the change of things, and also gives us the possibility of analysing the changing law of the things and further solving the problem, which brings new opportunities to the work of the mental health education of the college students, and also brings the challenge.

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The Clinical Treatment Effect of Sociological Education on Social Phobia in Adolescents

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With the increasing number of adolescents suffering from social phobia, sociological education has been widely used to treat social phobia in adolescents. 150 adolescent students were included, all of whom had the right to know and all of whom had social phobia. For this part of teenagers, the model of sociology education is implemented in the fields of poetry learning, story teaching, prose appreciation, outdoor collective activity area activities, social fields, art fields, health fields. The implement of education for teenagers is to improve their comprehensive quality level and to improve their psychological state. By comparing the psychological state of adolescents before and after the implementation of sociological education, the results showed that the scores of anxiety and depression were significantly improved and significantly reduced ($p < 0.05$). Moreover, compared with the scores of various indicators of social phobia, the results showed that after the treatment, they were significantly lower than before the treatment, with $p < 0.05$, indicating the statistical significance. The implementation of sociological education mode for adolescents with social phobia can significantly improve the treatment effect, actively improve the degree of social phobia, and form a sound personality and establish a good social mentality.

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The Effect of Athletes' Meniscus Tear Repair under Sports Education

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A rupture of the meniscus cartilage in the knee joint is known as a meniscus tear, and the cause of the tear is torsion force in knee flexion or full flexion. Medial meniscus tear is more common than lateral meniscus tear, which is related to the anatomical characteristics of meniscus. This study is to analyse the effect of athletes' meniscus tear repair under sports education. Select 200 athletes with meniscus tear as research objects and divide them into the control group for conventional therapy and the research group for conventional therapy combined with sports education. Statistics are made on the effect of athletes' meniscus tear repair under physical education, and meanwhile treatment patterns are compared with those of the control group. Comparing the meniscus tear repair effect of patients in the two groups, the results show that in terms of healing time, the repair time of the research group is significantly shorter than that of the control group, $p < 0.05$; Compare the VAS scores in two groups, the score of research group is (2.19 ± 0.23) , while the score of control group is (5.21 ± 0.27) . The study group is significantly lower than that of the control group, $p < 0.05$; Comparing the quality of life in the two groups, the results show that the research group is significantly higher than the control group, $p < 0.05$. For athletes who suffering from meniscus tear, physical education mode can be actively adopted to help repair the meniscus tear as soon as possible and reduce the hospitalization time of patients.

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The Improvement Effect of Positive Ideological and Political Counselling on Depression Patients of College Students

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The objective of this paper is to observe and analyse the effect of positive ideological and political counselling on the depression of college students, and to produce positive guidance for the positive improvement of the

depression of college students. 120 cases of college students with depression were selected as research objects and divided into two groups: the reference group that is only implemented conventional drug therapy, and the research group that is implemented positive ideological and political counselling based on drug therapy. Both groups have 60 patients, and the improvement effect of depression in the two groups was compared. After different treatment modes, the depression score of the study group was (28.3 ± 0.3), and the depression score of the reference group was (39.8 ± 1.2). Compared with the reference group, the effect of the study group was more obvious ($p < 0.05$), that is statistically significant. Currently, the number of college students suffering from depression is increasing, which has different degrees of impact on college students' life and study. Therefore, the implementation of positive thinking and political counselling is very important, which can significantly improve the psychological state of patients with depression and reduce the depression score, which has important practical value.

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The Relieving Effect of Mental Health Education on Patients with Generalized Anxiety Disorder

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This study is to observe and analyse the improvement effect of mental health education on the psychological state of patients with generalized anxiety disorder, and to produce positive guidance for actively reducing the state of patients with generalized anxiety disorder. 160 patients with generalized anxiety disorder are selected as research objects and divide into the control group that only implement conventional drug therapy and the research group that implement mental health education based on drug therapy. Each group has 60 patients, and the improvement effect of anxiety disorders in the two groups is compared. After different treatment modes, the anxiety scores of patients with generalized anxiety disorder in research group are (25.3 ± 0.3), and the depression scores of depressed college students in the control group are (38.5 ± 1.2). Compared with the control group, the effect is more obvious in the research group, $p < 0.05$, it has statistical significance. Currently, the number of patients with generalized anxiety disorder continues to increase, affecting patients' lives and work to varying degrees. Therefore, the adoption of scientific mental health education model is particularly critical, and it is of great practical value to carry out corresponding guidance in physiological and psychological aspects, obviously improve the psychological state of patients with anxiety and reduce anxiety score.

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Mental Health Literacy of College Students Is Optimized

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With the development of global economy and China's comprehensive reform and opening up, people's ideology, values, lifestyle and cultural needs have undergone corresponding changes. This change has a particularly significant impact on college students' behaviour. The behaviour of college students is largely

influenced by psychological factors. The diversity of psychological forms determines the diversity of college students' behaviours. The influencing factors are not only influenced by subjective factors such as cognitive level, but also by social, school and family environment. Therefore, how to effectively improve the mental health quality of college students has become the main problem to be solved in the current ideological and political education in colleges and universities. This paper takes the optimization of college students' mental health quality as the research object, tries to use pedagogy, psychology and other related theories as the guidance, and uses empirical analysis method to explore the optimization of college students' mental health quality. Through the form of self-designed questionnaire, the information of the open questionnaire is collected and sorted out. The establishment of reasonable mental health model of college students can accurately analyse their psychological state and provide theoretical basis for optimizing their psychological quality. When modelling the mental health quality of college students, we should extract the characteristics of college students with psychological phenomena, and build models according to the attributes of different mental health quality categories, so as to accurately extract the characteristics of college students' psychological phenomena. This paper presents a method to optimize the quality of college students' mental health. This model analyses in detail the causes, characteristics and manifestations of psychological phenomena of college students, and ranks the stages of psychological activities of college students when the objective environment is inconsistent with the needs of the main body. A kind of statistical subversive psychology has formed the subjective cause of college students, and has the psychological factor of rebellious behaviour, which can provide a strong basis for improving the mental health level of college students. At the same time, we hope to collect more sample information of different types of student groups in the following research, and compare them with students with mental health literacy, so as to make further research for the school to identify the mental health literacy of college students in advance. Finally, due to time constraints, this study did not verify the research results by tracking cases of college students' mental health literacy. We hope to do some research and improvement in this aspect in the future to further understand the differences in the results of this study.

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The Necessity Analysis of the Knowledge Dissemination of Hypertension Disease Prevention in Public English Teaching

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The objective of this paper is to analyse the effect and necessity of spreading knowledge of hypertension disease prevention in public English teaching, and to provide important guidance for prevention and control of hypertension disease. With the increasing number of people suffering from hypertension, we should actively prevent and control the disease and try our best to reduce the prevalence rate. During the period of public English teaching in college, we should teach students the knowledge of hypertension prevention, so that students can have a deep understanding of the factors causing hypertension. Therefore, in this study, during the teaching of college public English, students are taught the teaching strategies of hypertension disease prevention, that is, carefully explain the prevention and control measures of pathogenic factors, matters requiring attention, lifestyle, dietary methods, so as to enable students to master the scientific knowledge of hypertension disease prevention. Students' enthusiasm for learning was significantly increased, and they had more knowledge of hypertension, which enabled them to form correct living habits and eating habits, and to have an in-depth understanding of English words and sentences related to diabetes diseases, thus improving their overall quality. Public English teaching in hypertension disease prevention knowledge dissemination effect is significant. It is necessary and can be widely used.

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Identification and Countermeasures of Students' Psychological Diseases in Group Psychological Counselling Activity Class

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With the rapid development of society, the mental health of students is becoming more and more worrying, and the mental health education of students is getting more and more attention from the society. At present, some schools have opened mental health education classes to improve students' mental health quality. However, the practice in recent years has found that the psychological education courses in various schools are not balanced and there are many disadvantages. How to optimize students' mental health education courses and explore teaching methods in line with students' mental health is an important subject at the present stage. The purpose of this paper is to explore and construct a group counselling mental health teaching model which is easy to operate and can effectively improve the mental health level of middle school students, and to provide new ideas for students' mental health education. In this paper, two classes of grade 7 in Qufu Experimental Middle School were selected as research objects. At the same time, the experimental group was pretested psychologically. The experimental group formally started group counselling mental health teaching after completing the test, while the control group attended classes as usual without any intervention. After the teaching, the students' mental health level was measured in two classes at the same time. After that, the measured data were statistically analysed and compared with the pre-measured data. The results show that the overall mental health level of the experimental group has been improved to some extent after the experiment. Mental health all dimensions except interpersonal tension and sensitive and emotional balance two dimensions have significant difference, the rest of the dimensions were not significant, but the experimental group in addition to depression scores improved the post-test on any dimension scores were decreased, the rest of the control group in hostility, depression, heart imbalance of three dimension score has increased, the rest all dimensions are decreased. Group psychological counselling activity class can effectively guide students' psychological diseases, and can effectively reduce students' psychological diseases by identifying and designing corresponding countermeasures.

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Current Situation and Countermeasures of Health Consciousness Cultivation of College Students in Physical Education

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China health education center has released survey data on the health of college students, and the current situation of healthy diet and physical exercise is worrying, showing the problem of weak health consciousness of college students, and the cultivation and establishment of health consciousness of college students is a strong guarantee for a good learning state and quality of life. This article employs two methods. Literature research: through the Internet search, CNKI database, books and periodicals and other ways to consult and related literature, understand and analyse the concept of health awareness. Inductive summary method: through the health problems of college students and health consciousness of the cultivation of the relevant discussion, summary analysis of college physical education in the cultivation of health consciousness of college students played a positive effect. Nowadays, people pay attention to the overall health of a person. According to the ministry of health's recommendation of at least 6000 steps of physical activity per day for adults, 50.2 % of college students failed to meet the standard, reflecting the fact that college students spend less time on sports. The health of college students not only requires a healthy body, but also requires a good state of mind, society, intelligence, morality and consciousness. Students in the process of sports health consciousness training, physical education curriculum by means of education guide, gradually inspire students' interest in sports and health awareness training, the formation of sports demand, teach students to be life-long benefit sports knowledge and skills, in fully stimulate students' intrinsic sports enthusiasm and

interest, students can be in continuous physical health could gradually formed in the process of exercise fitness consciousness. With the rapid development of The Times, material life and spiritual life have reached a new level, but people's health accompanied by social pressure, life style, ecological environment and many other problems, people's attention to health has become increasingly significant. College stage is the key stage for the formation and stability of college students' health consciousness. College physical education curriculum takes the cultivation and formation of students' health consciousness of physical education as the goal, is to realize the important form of students' lifelong physical education, and takes the overall development of students as the foundation. Through learning, guiding and helping college students master the content and skills of sports health knowledge, pay attention to the healthy and comprehensive development of students, give full play to the continuity of education, make students develop good sports behaviour habits, establish health awareness, and benefit for life. The cultivation of lifelong sports concept is an important goal of college physical education curriculum, which can help college students improve their sports health awareness, develop the habit of consciously participating in sports, enhance their physical fitness, cultivate good sports ability, and establish the concept of lifelong sports.

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Sports Humanistic Health Education Based on the National Health Vision

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It is a complicated systematic project to improve the pertinence and effectiveness of humanistic quality in physical education. Physical health education takes people as the object, so the core value of cultivating students' humanistic quality physical education, the purpose of this paper is to cultivate the share of teaching experience of humanistic quality in physical education, the learning experience of this paper, how to apply teaching curriculum design, students' feedback, and the application of physical health education in the future. This article employs two methods. Literature method: a large number of electronic literature and books were consulted to summarize the current situation and research results of sports humanistic health education theory; Questionnaire survey method: according to the research needs, set up a questionnaire around the health education theory. Comparing the current situation of humanistic quality education at home and abroad, this paper discusses the construction of humanistic quality of physical health from the perspective of the cultivation of humanistic quality in physical education, which has certain enlightenment for the reform of humanistic education curriculum in physical education colleges in China. For a long time, physical education in China has paid too much attention to students' professional knowledge and ignored the humanistic quality education. The main manifestations are as follows: students' knowledge in literature, history, philosophy, art and other aspects is relatively short and narrow; Poor written expression ability, unable to accurately and fluently write documents and other practical documents; Lack of full understanding of social status, cannot grasp the trend of social development. This ideal and goal can be matched with the idea of physical health education and integrated into the actual curriculum and teaching. In terms of curriculum design and teaching objectives, it is possible to combine textbooks with humanistic education concepts to guide students to think about the significance of health to human history, as well as the significance of health to society, economy, culture and individual life, so as to complete the ideal of physical education and humanistic education. On the curriculum design, through the four stages of experiential learning cycle: concrete experience, reflective observation, the concept of abstraction, experiments in the activity, to the student's personal experience as study materials, enhance its active participation in the process of learning motivation, to strengthen the students' reflection, to help students to their own past experiences connected with the current learning situations. How to let the student through the study of sports health, understand the role of health on its own development and influence of the teaching material and teaching guidance, students are encouraged to observe from reality, understanding of the interaction between the health and social life, to clarify the physical significance of individuals and groups, to achieve the teaching goal of sports humanistic education thought.

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Methods and Strategies of Health Promotion Mechanism of Campus Sports

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The unhealthy lifestyle of college students, such as insufficient exercise, insufficient sleep, irregular working and rest, and unreasonable diet, greatly affects the quality of college students' campus life. Therefore, it has become an urgent problem to change the current situation and improve the physical health of college students. Based on the analysis of relevant literature and practical investigation, this study agrees with the view that adolescent health promotion is a multi-field and all-round promotion. It is pointed out that sports are the main means to promote the health of teenagers, but there are many factors related to health, including physical activity, healthy lifestyle, disease prevention, mental health, safety emergency and risk aversion. The relationship between health promotion and health education. Health promotion is a general mobilization activity aimed at building a healthy environment for people, including health education activities. Health education is the main activity form of health promotion. Health education, as the basis and means, affects the effect of health promotion. However, any kind of health education cannot exist independently, and must be supported by health promotion resources and environment, in order to play its role in health education, otherwise the role will be greatly limited. The theoretical system of "health promotion" is established based on people and the healthy environment. The popularization of subject knowledge can only play a part, but the influence of the healthy environment on campus behaviour is immeasurable. Taking physical education as an example, it is easy to learn sports skills, but difficult to develop sports habits. Therefore, the health of teenagers cannot be pinned on a certain course or a certain discipline. School leaders, teachers, students and social health related personnel form the human environment on the campus health work relationship chain. In this environment, the attitude of superiors, the attitude of teachers in different disciplines, the attitude of classmates and the health attitude of social personnel can all produce positive or negative effects. Physical education, psychology, information science and other disciplines affect and promote the health of students. Including the depth of theoretical research on health promotion by teachers and students as well as the intensity of the combination of theory and practice, which directly affects the progress of work and the ability to overcome difficult problems; Teaching environment: it mainly refers to the teaching reform achievements such as the course quality of physical education and psychology with health as the main goal, subject integration and so on, which affect the practice quality of students' health promotion. The quality of material places provided by schools for health is the guarantee factor for students' health participation and education.

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Optimization Strategy of College Physical Education and Health Classroom Teaching

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In terms of the form of college physical education, more attention is paid to the application of practice, while the importance of health teaching is ignored. As a result, dangerous situations such as bump and fall often occur in the practice of physical education courses. College physical education should be closely combined with healthy classroom teaching, with "health" as the development goal, so that students can better understand sports knowledge through physical exercise in the process of practice. Not only that, through the organization and management of healthy classroom, physical education teachers can better grasp the students' psychological characteristics and ideas, to make the teaching content better spread to the hearts of students. This article employs two methods. Literature method: a large number of electronic literatures, books, sorting and summarizing the current situation of college students' sports health awareness and research results; Questionnaire survey method: according to the research needs, set up a questionnaire around sports awareness and behaviour, and analyse and guide the respondents to ensure the authenticity

and scientific of data collection. Data were analysed by using Excel software, chi-square test and radar chart analysis. This paper analyses the importance of the integration of college physical education and health classroom. Then from the teaching classroom, teaching facilities and other aspects of the university physical education and health classroom teaching management problems; then, several strategies are proposed for the existing problems. Strict classroom teaching, lack of interest in teaching. Almost there are few sports in teaching process, teachers will be too stressed the importance of health and sports, in their view in the junior middle school stage have a good mastery of the protection measures, so this kind of “unhealthy” sports teaching slowly will make students lose interest in learning, leading to the university sports teaching. The teaching equipment is backward and the learning mode is obsolete. College physical education is of great significance to the physical and mental development of students. In the process of physical education teaching, it is necessary to strengthen the integration of college physical education and healthy classroom teaching, give full play to the significance of theoretical guidance and practice, and enable students to achieve all-round development. What's more, the school should keep practicing, improving and developing college sports, emphasizing that college sports, like other courses, should become an indispensable part of college life. As an important supporting system for China's future development, college students' physical education not only affects their physical fitness, but also has a more important significance for future development. For example, in work, a strong body is of great significance for long-term work.

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The Integration and Development of College Physical Health and Life Education

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With the increasing influence of sports culture in modern education, life and work, physical fitness, health, green and vitalization have become an important entry point for the reform of college physical education. But how to into life in the university sports education, how to in the process of integration, deal with and solve the present situation of college physical education teaching of all kinds of life threatening safe hidden trouble, how to guarantee the quality of the teaching reform of university sports health and processes, is the current life education concept collide with the university sports teaching idea and try the practice application, especially the need to solve the key problems in advance. This article uses two methods. Literature method: many electronic literatures and books were consulted to summarize the current situation and research results of college students' awareness of physical fitness. Questionnaire survey method: according to the research needs, set up a questionnaire around sports awareness and behaviour, and analyse and guide the respondents to ensure the authenticity and scientific of data collection. Use Excel software to check and analyse the collected data. Life education is always emphasize “seeking education itself and the education reform in power, inner scale convergence”, insist the attention and find out the life potential of students and teachers, and college sports teaching in “education” thought, but also fully embodies the life education concept attention and trying to achieve “the revival of the lives of real people” an important embodiment. Teaching reform itself is a kind of educational change behaviour that can show the unique charm of teaching, students and schools as well as teachers' spontaneity. The integration of life-oriented teaching concept in college physical education reform is not only conducive to the exertion of teachers' subjectivity and innovation, but also helpful for teachers to have a closer understanding of students' needs, and even to understand the dynamic development needs of students of different levels and categories. College physical education itself is a research method to explore the development process of human life. Whether it is the inheritance of sports spirit in college physical education or the skill cultivation required by reaching the standard of skill index in college physical education, it is a special expression of the direct and delicate expression of education's concern for students or the subject of education, or the expression of education's inner motivation. Because of this, it is not only necessary but also objective to integrate the idea of life-oriented education into the reform of college physical education. When carrying out the characteristic design of sports items with the help of local culture, teachers must take the correlation between sports and society, health, character, life and culture into consideration, instead of simply borrowing, introducing and transforming, such as dragon and lion dance and national sports.

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The Influence of Innovative Ideological Counselling on Alleviating the Incidence of Depression in College Students

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The objective of this paper is to explore the effect of innovative ideological counselling on alleviating the incidence of depression in college students through the investigation of depression, ideological level and coping style of college students. A questionnaire survey was conducted among 755 college students from freshman to junior in a university by using self-rating depression scale, five-factor thought level scale and simple coping style scale. Correlation analysis and regression analysis were used to explore the effect of ideological counselling on depression of college students. The intervention study is to select the eligible subjects from the investigation and study as the objects of the intervention study, and to carry out a randomized controlled study, to carry out innovative ideological counselling intervention in the experimental group, while the control group does not participate in any intervention. To explore the effect of innovative ideological counselling on depression, coping style and emotional stroop task. The scores of self-rating depression scale, five-factor thought level scale, coping style scale, emotional stroop task response time and correct rate were compared before and after intervention. The average score of depression of college students was 44.508 ± 8.583 , including no depression (73.91 %), mild depression (20.53 %), moderate depression (34.37 %) and severe depression (0.79 %). There was significant difference in depression among college students in grade ($F=3.586$, $p<0.05$), but there was no significant difference in sex, only child, family location, family integrity and religious belief ($p>0.05$). The average score of ideological level of college students was 126.706 ± 11.699 . there were significant differences in the ideological level of gender, only child and family ($t<3.521$, $p<0.05$, $p<0.05$, $F<6.324$, $p<0.05$), there was no significant difference in grade, family integrity and religious belief ($p>0.05$). The comparison between the experimental group and the control group at different time points showed that the score of depression in the experimental group was significantly lower than that in the pre-test and significantly lower than that in the control group. The scores of immediate post-test and delayed post-test of thought level were significantly higher than those of pre-test and significantly higher than those of the control group. Innovative ideological counselling can not only directly act on depression, but also indirectly act on depression through positive coping style. Innovative ideological counselling can effectively alleviate the incidence of depression in college students.

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The Preventive Effect of Ideological and Political Education on Students' Depression

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In recent years, the number of students suffering from depression has increased year by year, showing an upward trend, which has aroused widespread concern in society and the media. This is a heavy topic for any frontline ideological and political educators. More and more students suffer from depression, which makes ideological and political educators have to face it. As an important teaching activity affecting students' study, life and thought, more and more attention has been paid to the ideological and political education in schools. Actively exploring the countermeasures of ideological and political education to solve students' depression can help students correctly cope with the specific problems encountered in their study and life, and provide positive guidance. Provide operational suggestions for students' frustration education, life education and prevention of depression. Therefore, in order to reduce and control this phenomenon and promote social stability, it is of great theoretical and practical significance to study the countermeasures to deal with

students' depression from the perspective of ideological and political education. Through random interviews with the students around them, we can find out their learning situation, living environment, their growing background and psychological state, and ask them about their understanding of the problem of "depression". At the same time, they collect and investigate the cases of depression and its causes through the network and other channels. Schools should strengthen the education of ideological and political education, attach importance to students' mental health education, guide their correct values, and give full play to the joint role of school, family and society. The prevention method of students' depression put forward in this paper has achieved good results, which can effectively judge whether students suffer from depression or not, and provides a targeted basis for ideological and political education in schools. Based on the comprehensive analysis of the causes of students' depression, this paper analyses the present situation and function of ideological and political education in the prevention of students' depression, and the countermeasures to improve and solve this problem. Strengthen students to love life, cherish life, so that they grow up healthily and comprehensively. It is emphasized that one of the important goals of ideological and political education in schools should be to cultivate students' firm will and treatment of study and to work tenaciously, so as to lay a good foundation for them to move to work in the future.

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Thinking and Discussion on Mental Health Education Activities in Higher Vocational Colleges from the Perspective of Positive Psychology

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Based on the perspective of positive psychology, this paper analyses the problems of mental health education in higher vocational colleges, and discusses and analyses the methods and strategies of practicing mental health education activities in contemporary higher vocational colleges, to improve the education of students' positive and healthy psychology in higher vocational colleges. In the research process, this paper firstly analyses the problems in the mental health education of students in vocational colleges, and then discusses the new methods and strategies to improve the mental health education of college students by using positive psychology, so as to optimize the construction of the mental health education activities of students in vocational colleges. In the analysis of mental health education activities in higher vocational colleges, this paper found that the mental health education in higher vocational colleges is too extreme and too focused on the correction of students' mental problems. Higher vocational colleges focus their mental health education on whether students have mental illness, especially whether students have suicide or harm others. Considering the Angle is not comprehensive, is to consider the very serious students may appear psychological problems, limitations are too strong. There is a lack of professional teachers of positive mental health education in mental health education, which leads to a special phenomenon that the use of mental health education resources in schools is concentrated on a few students with mental health problems. Lack of targeted comprehensive coverage of students' mental health education strategy. Therefore, it is necessary to make a new orientation to the mental health education goal of vocational college students based on positive psychology. Using positive psychology to innovate new methods to improve students' mental health education. Discover and explore students' multi-talent, let students feel that through their own efforts can make their strengths shine, and then feel the joy of victory. Use students' interests and hobbies, or help students find their own interests and hobbies, so that they can feel the joy and happiness of applying what they have learned. Such an experience plays an important role in shaping students' positive and optimistic attitude towards life. The method and strategy analysis and innovation of mental health education activities in higher vocational colleges from the perspective of positive psychology can directly reflect the importance and significance of contemporary mental health education of students in higher vocational colleges. Through the reorientation and strategy analysis of educational activities, it is better to provide help for vocational college students to establish a healthy psychological state.

The Effect of VR Art Education on the Behavior of Children with Congenital Heart Disease

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There are many applications using VR in medical field. Many of these are associated with the training of medical students, or new approaches to mapping and visualizing medical conditions, which are often complicated. This application combines the two. At Lucile Packard Children's Hospital, Stanford pediatric cardiologist was able to use VR simulation to simulate a patient's heart defect. These VR models can be used as a tool for the use of the attending surgeon or to present medical status to patients and families. This paper discusses the effect of VR treatment on behaviour in children with congenital heart disease analysis. 186 children with congenital heart disease who were successfully treated with VR were divided into surgical group and interventional group according to their VR treatment. The psychological behaviour of 186 children with congenital heart disease was measured by child behaviour scale before operation and 6 months after operation. The total gross score of psychology and behaviour of children with congenital heart disease after treatment was significantly lower than that before treatment. The total score of psychological behavior and the crude score of aggression factor in the intervention group were significantly lower than those in the surgical group ($p < 0.05$), and the total score of psychological behavior, depression and social withdrawal in the intervention group were significantly lower than those in the surgical group ($p < 0.05$). The crude scores of shrinkage and discipline violation factors were lower than those in surgical group, and the difference was statistically significant ($p < 0.05$). The results showed that VR operation was superior to other treatment methods, and the psychological and behavioural status of CHD children after treatment was obviously better than that before treatment, which indicated that CHD children were not only suffering from physical diseases, but also suffering from various psychological problems. According to the report, experts assessed the psychological behaviour of seemingly normal CHD children and showed that compared with the previous results of CHD children, they reduced inexplicable fear, anxiety, depression and disciplinary violations. Congenital heart disease should be early. The effect of different operation methods on the psychological behaviour of the children is different, and the interventional VR therapy is superior to the surgical treatment, and the corresponding psychological intervention is necessary throughout the course of the course of the disease.

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TRACK 7: ENVIRONMENT AND HEALTH

The Effect of the Government's Debt and Power on the Effect of the Local Disease

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The local diseases not only harm the health of the patients but also threaten the life safety of the patients. The division of the government's debt and power is of great value to the clinical application of the coupling of the local disease. To this end, the analysis of the effect of government's debt and power on the effect of local disease is proposed. The study object was selected from April 2014 to July, 2015, and the informed consent was signed. Among them, 1259 pupils, 674 men, 585 women, 7-14 years old, mean age (10.8-2.5) years old, 1233 housewives, 31-49 years old, average year. The age was (42.6±1.3) years old. According to the actual situation of the region, the questionnaire on the coupling of local disease effect between primary school students and housewives was established. Researchers were told to fill out the questionnaire before and after the division of government debt rights and responsibilities. All the participants in this study

explained the knowledge of government debt rights and responsibilities and the knowledge related to endemic diseases. The division of government debt rights and responsibilities refers to the patients with lack of knowledge of epidemic diseases according to the subjects of the study. The teaching staff should explain the details and clinical significance of the relevant examinations of endemic diseases in a simple and understandable language. The division of government debt rights and responsibilities is carried out, and the research before and after the division is analysed and compared. Awareness of local disease-related knowledge. The recognition rate of the local disease is 85.27 % (2125/2492), the coupling rate of the local disease is 99.80 % (2487/2492) and the coupling rate of the local disease is 95.47 % (2379/2492), which is significantly higher than that of the pre-division of 78.17 % (1948/2492), 87.24 % (2174/2492), 84.39 % (2103/2492), and the difference is of statistical significance ($p=0.05$). Scientific and reasonable government debt the effect of the division on the control of endemic diseases is remarkable, and the understanding and understanding of the local diseases can be obviously improved, thereby fundamentally reducing the incidence rate of the disease, and is of great significance in clinical application and is worthy of further popularization.

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The Elderly People's Sports, Health and Pension Paths from the Perspective of Internet Plus

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The continuous progress of science and technology, medical and health care has been effectively guaranteed, people's life expectancy has been extended, health has become everyone's pursuit. The development of information technology and the impact of the Internet have made people's demands more diversified. It is an urgent need of industrial development, an important symbol of social civilization and progress, and an important content of realizing the Chinese dream to alleviate the old-age care problem brought about by the aging population and enable the elderly to truly enjoy the old life of "depending on the old, being supported by the old and having fun for the old". Existing policies and researches generally agree on the possibility and feasibility of the integrated development of "sports + endowment" in China. This paper adopts literature, questionnaire survey, PEST analysis and other methods to study the pension problems caused by the aging population. China's sports industry has developed by leaps and bounds, and people are attaching more and more importance to national fitness. Sports for the elderly has a positive role in promoting "healthy aging". Adhere to physical exercise within one's power, is conducive to the prevention of arteriosclerosis, coronary heart disease, hypertension and other threats to the elderly disease; Sports for the elderly can enhance the physical and mental health of the elderly and promote their continued socialization. As the pension market attention by people and The Times background and realistic demand, combined with the state of the sports industry vigorously support, extending pension industry chain, break the barrier of the industry, industry sources, the depth of mining pension market potential, build "based on the social progress, children began in trust, finally parents satisfied" new endowment mode is very necessary. "Internet + community + sports health" is a new old-age care mode based on community, with health maintenance and physical exercise as the core and the Internet as the link. The elderly sports health market prospects are very broad. The elderly has a high demand for joining the service clubs for the elderly, and they approve of sports and health maintenance. The need for parents to participate in senior service clubs is also recognized by their children. To combine the construction of sports culture with community pension and take the road of marketization, the government should increase the supply of public pension services and let social organizations participate in community sports culture pension services. From the practical level of industrial integration, this paper makes a prospective analysis of the situation and pattern of the integrated development of China's sports industry and pension industry, and proposes that the government and enterprises should provide services for the healthy development of the integration of the two industries, timely adjust their positioning and improve

their supply measures.

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An Economic Burden Evaluation Model for Myocardial Infarction Based on Analytic Hierarchy Process

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The number that suffering from myocardial infarction disease is increasing ceaselessly, and there are many pathogenic factors including living environment, diet, work pressure and so on. The treatment of the disease requires a certain amount of economic spending, and this study is to explore the economic burden evaluation model for myocardial infarction based on analytic hierarchy process. The selected patients with myocardial infarction are to be included in this study, and implement the economic burden assessment model for myocardial infarction based on analytic hierarchy process, so as to deeply grasp the economic situation of patients with myocardial infarction. The incidence of acute myocardial infarction in China is about 0.45 to 0.55 %, and the incidence in cities is higher than that in rural areas, and the incidence of men is higher than that of women. In 2018, the incidence of acute myocardial infarction was 0.3239 % in urban areas and 0.1799 % in rural areas respectively. The death rate of acute myocardial infarction increased with age. As the same with incidence, the death rate of acute myocardial infarction in urban areas is higher than that in rural areas, and the death rate of acute myocardial infarction of men is higher than that of women. The DALY loss due to acute myocardial infarction in people over 25 years old was 3.57DALY_S/ 1000 population in 2000. The economic burden evaluation model for myocardial infarction based on analytic hierarchy process can be used to understand the economic status of patients with myocardial infarction and provide an important basis for improving treatment plans.

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Sports Health Strategy of College Students in Haze Environment

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Fog haze people unawares by invading the body in the respiratory tract and lung, causing respiratory diseases, diseases of the cardiovascular system, blood system, reproductive system diseases, such as strep throat, bronchitis, emphysema, asthma, rhinitis, inflammatory, long-term in this environment will also cause lung cancer, myocardial ischemia and injury. The methods used in this article are as follows. Literature method: Questionnaire survey method: according to research needs, questionnaires are set around haze environment and health, and questionnaire analysis and guidance are given to the respondents to ensure the authenticity and scientific of data collection. Use Excel software to check and analyse the collected data. According to the air pollution index, the haze level is assessed to analyse the impact on college students' health. The composition of haze is very complex, including hundreds of atmospheric chemical particles. One of the major health hazards is the diameter of less than 10-micron aerosol particles, which can directly enter and adhere to the human respiratory tract and alveoli. In particular, submicron particles will be deposited in the upper and lower respiratory tract and alveoli, causing acute rhinitis and acute bronchitis and other diseases, if long-term exposure to this environment, will also induce lung cancer. Haze weather in the air pollutants, low pressure, easy to induce acute cardiovascular disease attack. When the fog is heavy, the content of water vapor is very high, if college students do outdoor sports, sweat is not easy to discharge, thus

causing chest tightness, blood pressure rise. In a clear, clean environment, the skin becomes moisturized, while smog clogs pores and makes it harder to breathe. Haze weather can also weaken the ultraviolet near the formation, so that the activity of infectious bacteria in the air enhanced, more prone to infectious diseases. According to the characteristics of college students, the early warning system and countermeasures of haze level should be based on guidance. According to different levels of haze, relevant departments of the school should timely adjust the rigid requirements for college students to participate in extracurricular physical exercise. Gloomy haze weather due to weak light and resulting low pressure, easy to produce a pessimistic mood, encounter unpleasant things and even easily out of control. When the air pollution index is less than 100, college students can have normal outdoor activities. When the air pollution index reaches the level of light pollution, healthy people may show irritation symptoms, but the impact is not big, and people with heart and respiratory diseases should reduce physical exertion and outdoor activities; when the air pollution index reaches moderate pollution, symptoms are common among healthy people. The elderly and people with heart and lung diseases should stay indoors and reduce physical activity. When heavy pollution is reached, college students should avoid outdoor sports.

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Prediction of Economic Burden of Disease Treatment for Diabetic Patients in Rural Residents

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Diabetes mellitus is a common frequently-occurring disease, and the economic burden of diabetes mellitus in rural areas of China is significantly lower than that of urban patients. Therefore, reducing the economic burden of diseases among rural residents has become a problem that cannot be ignored. Therefore, this paper puts forward the method of combining literature research with field investigation. According to the different economic development and geographical location of each region in Shandong Province, several cities and counties were selected as the survey areas, and 16 villages were randomly selected. The diabetic patients in each village were counted by rural doctors, and 10 patients in each village were randomly selected for investigation. The establishment standard of the sample is the township where the clinical diagnosis is diabetes mellitus. Village resident patients. Secondly, the prevention and treatment of diabetes in rural areas is carried out with the community as the basic unit, and the economic burden of disease in rural patients is reduced. According to the analysis of the economic burden of diabetes in rural residents, the author put forward the popularization of health education, publicize the knowledge of health, guide the scientific treatment of patients in rural areas, standardize their medical behaviors and scientific lifestyle to reduce the hazards of complications; establish a scientific referral mechanism to improve the allocation efficiency of rural medical health resources, guide patients with diabetes in rural areas to choose medical institutions correctly and improve the utilization rate of medical services; rectify the confusion order of drug market in rural areas and standardize rural areas. Drug market increase the economic income level of rural residents and establish the medical security system of rural residents. The main factors that affect the economic burden of the rural diabetic patients are the complications, the disability, and the choice of the medical institution. The invention can effectively judge whether the direct non-treatment cost and the indirect economic burden of the diabetic patients in the rural area are affected by the family care, and the annual hospitalization expense of the rural diabetic patients is influenced. It is also possible to judge the proportion of the economic burden of the male and female patients according to the difference of the economic burden of the patients with different sex diabetes. Diabetes is a chronic disease which determines the economy of diabetes. Burden research is a research with cost-benefit characteristics. It is very necessary and important to improve farmers' income, popularize new rural cooperative medical system, rectify rural drug market, popularize health knowledge, and construct rural diabetes basic medical service system.

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The Influence of Hand-painted Style Illustration Art on the Treatment of Autism in Children

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This study is to explore the intervention effect and mechanism of hand-painted style illustration art therapy on children's self-disease, so as to provide reference for effectively improving the mental health of autistic children. 52 autistic children were randomly divided into experimental group (n=27) and control group (n=25). The experimental group received 10 months of hand-painted illustration art therapy, and the control group did not do any intervention. Before and after the experiment, the Autism behavior Test scale (ABC), the Child Autism rating scale (CARS) and the Autism treatment Evaluation scale (ATEC) were used, and the Psycho-educational Profile third edition (PEP-3) were scored, and the problem behavior of autistic children was quantitatively scored by on-the-spot observation. This paper analyzes the mechanism of hand-drawn style illustration from the perspective of clinical psychology. In the post-test, the total scores of CARS, ABC scale and ATEC scale and the scores of each factor in the experimental group were lower than those in the control group ($t=-2.832, -3.220, -2.145, -2.417, -2.901, -2.218, -2.079, p<0.01$); The scores of the four items of "painting intention", "painting", "painting" and "propositional painting" in the experimental group were all higher than those in the control group, and the differences were statistically significant (Z values were -2.688, -2.187, -2.251, -2.328, $p<0.05$); The number of patients with stereotyped behaviour, self-injury behaviour, aggressive and destructive behaviour and abnormal emotion in the experimental group was significantly lower than that in the control group (4.530, 6.363, 4.590, 7.865, $p<0.05$). In the test group, the number of people with stereotyped behaviours, nssi behaviours, aggressive and destructive behaviors, and abnormal emotions were lower than those in the control group, and the differences were statistically significant (χ^2 values were 4.530, 6.363, 4.590, 7.865, $p<0.05$). The art therapy of hand-painted style illustration is effective and reasonable for the improvement of psychological function and behaviour level of autistic children.

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The Preventive Mechanism of Recurrence of Severe Metatarsophalangeal Arthritis in Dance Students

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The vigorous development of dance art provides many dance talents with the space to give full play to their personality and fully develop their ability. With the increasingly fierce competition, dancers will take on more and more training intensity, and the resulting damage probability will also increase. Metatarsophalangeal joint bears great pressure in dance movement, there is serious metatarsal arthritis, it is easy to recur in the process of dancing, in order to reduce and prevent the recurrence of dance inflammation as much as possible, so that dance students can train scientifically and reasonably. Only a good physique can adapt to such a high frequency and professional training, only the use of theoretical knowledge and practice to reduce dance damage. The probability of injury can prolong our artistic life. In order to prevent the recurrence of severe arthritis of metatarsal toes, the following points should be done: (1) Fully prepare for warm-up work and relaxation before training. (2) Nutritional matching is required in diet. (3) The training steps should be arranged reasonably. (4) As a dance major, we should bear in mind that the correct practice method is the foundation of preventing dance injury. Before doing difficult skills, you should make your mind clear and then put it into action, think twice before you act. In this paper, the present situation of students' injury in dance is investigated and analysed. Based on the analysis of the cause of the severe arthritis of the toe of the students from all levels and angles, the preventive measures and some practical solutions are put forward, and the good results are obtained, and the construction of the local colleges and universities is further improved and enriched. Through investigation and analysis, the dance injury of dance

major is mainly soft tissue injury, which is related to many factors, such as improper preparation activities, excessive local load and so on. Therefore, it is of practical research value and popularization significance to prevent the recurrence of severe arthritis of metatarsal toes in professional students, both from the point of view of reducing the sports injury of dance students and from the construction of dance subject.

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Low Noise Engineering Cost Budget Model Considering the Health Status of Patients with Neuroweakness

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Considering the healthy state of patients with neuroweakness, it is of great significance and function to the project cost budget in real life, and is the key to ensure the smooth completion of the project on schedule. Therefore, the low noise considering the health state of patients with neuroweakness is proposed to analyse the project cost budget model. The semi-quantitative analysis and structure of the system that the architectural design parameters affect the engineering cost are carried out. Based on this, the design parameters such as building scale, floor height, floor number, plane shape and total height of the building are divided into levels, and the design parameters which have a great influence on the project cost are found out, and the influence of the change of parameters on the cost is deeply analysed. Taking small high-rise residential buildings as an example, combined with multiple regression analysis and actual engineering cost data, a rapid budget model of engineering cost is established. In view of the relationship between design parameters and cost, a systematic research method based on “multiple regression analysis model of explanatory structure model” is proposed to optimize a practical sound barrier project. By comparison, the two schemes of “noise reduction target” and “unit optimal value barrier” show better overall value than other schemes with “unified barrier height”. Other slightly adjusted designs are designed to minimize the number of affected buildings or reduce the cost of sound barriers. In this case, the best design scheme with high overall value, high average noise reduction value and relatively small number of remaining affected buildings after noise reduction is selected. It is estimated that 25% investment can be saved by using the design of single barrier height. The cost of low noise project considering the health status of patients with neuroweakness is low. In the field of environmental noise control technology, the low noise of patients with neuroweakness is one of the important means to control the cost of the project. In the low noise project cost, we should actively develop the healthy patients with neuroweakness, and reduce the project cost and cost budget.

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Bulletin of Future 5G + Sports and Health Industry Development New Era

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The arrival of 5G era marks that the era will enter a stage of rapid development. Sports and health are one of the most effective foundations for promoting 5G development, and talents also play a crucial role in the emergence of 5G. The growth of talents cannot be separated from the support of the health system, so 5G and sports health complement each other, and the combination of 5G and sports health is also an inevitable trend. To cultivate interdisciplinary talents who can adapt to the new society and meet the needs of modern market, accelerate the integration and development of 5G and the sports and health industry, improve the overall health status and quality of life of the people, improve the national economic level and build a modern country. Literature method, expert interview method, mathematical statistics method and logical

analysis method are used to discuss the broad prospects of future 5G+sports and health industry. The relationship between “5G+sports health” is studied from various aspects. Finally, the better development of future 5G+sports health is studied through the analysis of some literature data, to improve the current situation of sports health industry and seek for the future. Research methods such as literature and logical analysis are used to make “5G+sports and health” industry development obtain effective theoretical basis, more scientific and practical. The emergence of “5G+sports health” industry, a new product, will change the traditional sports industry structure. In 5G with “high speed, low latency, large connection”, under the characteristics of 5G will become an important driving force of sports health industry, under the macro policy countries vigorously support the development of sports industry, the economic level is increasing, the demand of sports health industry also gradually increased, and at this time, give priority to with 5G of sports health industry will take the place of the old industry, amalgamation of the two parties is inevitable. Meanwhile, it will also drive the sports industry to a new development field, such as 5G+events, 5G+e-sports, 5G+leisure sports, 5G+sports education and a series of new industries will emerge under this development trend. Under the support of 5G, big data and artificial intelligence technology, the sports and health industry will form visualized and perceptible AR images to analyse people’s health state at anytime and anywhere to provide people with optimal diagnostic plans. The major factors contributing to the slow development of the emerging industry of “5G+sports health” are as follows: Lack of interdisciplinary talents; Aging thinking of traditional industries; At this stage, we should strengthen communication with the government and get more policy support. The government, the school and the market work together to cultivate interdisciplinary talents with innovative thinking and meeting the needs of the modern market.

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Construction of Adolescent Physical Health Promotion System Based on Society, School and Family

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Youth sports health promotion is a complex and systematic project, which needs extensive participation and cooperation from society, school, family and teenagers themselves. Therefore, in order to further implement the party central committee on strengthening the opinions of the youth sports constitution, establishing and perfecting the youth sports health promotion of long-term mechanism, must establish the government responsibility consciousness guided by social, school, family and the parties to cooperate with the new pattern of their own youth, to form the organic coordination mode of multi-level and comprehensive linkage, his business, individual, and safeguarding the smooth progress of the adolescent health promotion work give full play to the true value of physical education of adolescent health promotion. Goal is to promote adolescent youth sports health promotion system in the right way widely participate in sports, improve the level of their mental and physical health, and as the basic factors influencing the youth sports health promotion system: society, school, family, individual is playing and bear the system within the organism, the personality system, the role of the social system and cultural system. With the help of parsons’ AGIL model structure, this study established a youth sports health promotion system on the premise of ensuring the system functions to play. The theory of “structural functionalism” holds that structure determines function and function improves structure. The goal direction of social action depends on the structure of the social system. If the structure is perfect, the goal of social action will be achieved. In order to make social action achieve its goal, the system must have a reasonable and orderly structure. Parsons, pointed out that the social action system to achieve the goal of all depends on the system of adaptation, goal attainment, integration and latent pattern maintenance function effectively, and the efficiency of each bearing structure are dependent on their respective organism system, the personality system, the perfect degree of the social system and cultural system. Therefore, the perfection of the structure of the four interrelated and interacting subsystems in the system is the prerequisite for the realization of the goals of the social action system. In order to ensure the effective functioning of the system, the subsystems such as the organic system and the personality system must have a complete internal structure, and the society, family, school and its own system assume the roles of the above four systems in the adolescent sports health promotion system. Therefore, only because of full cooperation and coordination between school and social system, the structure

of the organic system can be improved, thus promoting the system to play its adaptive function.

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The Theory of Sports Health Development Based on Human Body Adaptation

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With the continuous improvement of people's material and cultural level and the level of social civilization, people expect more and more health. How to promote people's health through sports and nutrition has become the focus of people's concern. Regular physical activity and proper nutrition are the most important guarantees of health, because people's health depends on medical care, genetics is more dependent on the environment, and lifestyle and conditions are more important. Therefore, we should exercise, more emphasis on the life lies in scientific exercise, if the exercise is not scientific, will bring negative effects on human health. The article employs two methods. Literature method: a large number of electronic literature and books were consulted to sort out and summarize the theoretical status and research results of physical fitness adapted to human body; Questionnaire survey method: according to the research needs, set up the questionnaire around the sports health theory, and conduct questionnaire analysis and guidance for the respondents to ensure the authenticity and scientific of data collection. Studies show that people who exercise regularly have a larger chest circumference breathing difference, while those who rarely exercise have a smaller chest circumference breathing difference. Regular exercise, because the elasticity of the lungs greatly increased, respiratory muscle strength also increased, so lung capacity than normal people. In addition, exercise can make breathing deeper, improve breathing efficiency, regular exercise can reduce per minute, the benefit of breathing slower is to make breathing muscles have more rest time. The average person breathes shallow, while athletes breathe deeper. Regular exercise and adaptation to climate change can help prevent respiratory diseases. With the development of history, people's understanding of health has roughly undergone the transformation from gods medical model, biomedical model to biological psychosocial medical model. WHO puts forward the new concept of health: health refers to not only physical health, mental health and good social adaptation, but also moral health? Only these four aspects of health can be considered as complete health. This is the latest and most authoritative concept of health. Therefore, health is a dynamic adaptive process, which means constantly adapting to changing biological and social environments. Right amount motion is beneficial to health, often participate in sports activity to go to the activity in nature especially, can improve big brain to offer blood and oxygen circumstance, make cerebrum cortices excited sex is strengthened, make the person's head is clear, thinking is agile. And at the same time through the human body movement, muscle contraction and relaxation constantly respond, so as to realize the excitement of the nervous system and control function of exercise, prompt response, flexibility, improved sensitivity, but also improve the nervous system on the cardiovascular system, respiratory system and motor system organ system regulating function, effectively enhance the body's immune function, prevention and treatment of diseases and improve health.

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Current Situation and Countermeasures of Health Consciousness Based on National Health of Urban and Rural Residents

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In order to ensure the completion of a well-off society in an all-round way, the party central committee has made a "much starker choices-and graver consequences-in" period "healthy China construction" policy decisions, and points out that health is the necessary requirement of promoting the all-round development of human beings, is an important symbol of country prosperous and the people's happiness, and promote a healthy China construction is to realize "two one hundred" grand goal inevitable requirement, is the

inevitable requirement of the national health maintenance, is the implementation of the “comprehensive” four strategies to promote the inevitable requirement of deepening reform, steady growth, promote the reform and restructuring, the inevitable requirement of livelihood. By using the methods of literature, mathematical statistics, logical analysis and questionnaire survey, this paper studies and analyses the related problems. In urban and rural analysis of residents’ attention to food and food collocation recognition degree. So rural and urban residents get their food from the same source, but the main difference is that ingredients entering urban areas are more tightly regulated. Analysis of the results of the survey, the residents of daily health care don’t know, think of its effect on chronic disease prevention and treatment, as everyday care has a positive effect on the prevention and treatment of chronic disease, but it is difficult to implement, a few people optimistic attitude, believe you can through the network propaganda to promote daily care to life. Urban and rural residents have a weak sense of seeking medical care, which indirectly reflects that the implementation of China’s medical security system is not universal at this stage. Compared with urban areas, rural residents pay much less attention to health due to the limitations of many factors such as education. Although the health awareness of urban residents is relatively high, but in terms of action is still far from the idea, can really pay attention to the family diet collocation, control pollution, adopt a reasonable work and rest schedule, daily health care is still a small part. Farmers in most areas have just lived a well-off life and their thoughts have not kept pace with The Times. But in recent years, with the attention degree to the problem of pollution and health state, rural residents also gradually pay attention to the living environment and their own health to achieve universal health goal, must from the government, society and work of urban and rural residents and so on three aspects: government to escort, pay attention to health problems in poverty-stricken areas, efforts to narrow the gap between urban and rural; Social security to provide a variety of jobs and quality infrastructure, improve residents’ health awareness; Residents attach great importance to learning and equip themselves with advanced knowledge, so as to improve health awareness scientifically.

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The Influence of Health Consciousness on College Students’ Behaviour and Countermeasures

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Physical education classroom teaching in colleges and universities is an important link of school physical education, an important connection point of the transition from school physical education to social physical education, and a key point of cultivating students’ physical health consciousness. It has a significant impact on the establishment of “health first” and “lifelong physical education”. This article employs two methods. Literature method: review a large number of electronic literatures to summarize the current situation of college students’ physical health awareness and research results; Questionnaire survey methods: according to research needs, the questionnaire was set around sports awareness and behaviour, and the respondents were analysed and guided. The statistical results show that there is a significant difference between male and female students in exercise and choice of good living habits ($p < 0.05$). Male students think that exercise is more important than good living habits, while female students think that good living habits are more effective than exercise. There is no significant difference between them in a reasonable and balanced diet ($p > 0.05$), but the overall proportion is not high, which indicates that college students are not regular in their daily life and cannot have a reasonable diet on time. The main difference between male and female students in the choice of ways to maintain health reflects the difference between the sexes. Male students tend to be physically mature, prefer sports more than female students, and are more likely to develop good habits of physical exercise. Girls physiological characteristics, like quiet, not strong interest in sports, therefore, it is necessary to strengthen the girls in sports awareness and sports training on the guidance and training. In terms of the influence of sports awareness on physical exercise behaviour, 27.5 % of the surveyed students do not understand that some college students only view physical exercise in isolation and separate sports health awareness from physical exercise behaviour. Exercise, life and eating habits have the greatest impact on college students’ physical health. College students recognize the importance of physical exercise, but lack

enthusiasm and perseverance to participate. Leisure sports have become the fashion for college students to do physical exercises. The weak consciousness of physical health restricts college students to form the habit of taking part in physical exercise. The three subjective factors of “laziness”, “lack of time” and “lack of sports partners” are the most important restricting factors that affect college students’ physical exercise, indicating that the weak health consciousness of college students’ physical exercise causes difficulties for them. The lack of technical guidance for college students’ extracurricular activities and the lack of school sports facilities affect the enthusiasm of college students to participate in physical exercise, which is not conducive to the cultivation of the habit of physical exercise.

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The Linkage Mechanism of Adolescent Sports Health Promotion Based on AGIL Functional Model

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Youth sports health promotion linkage mechanism refers to the government’s policy, objectives and requirements drive (mechanism), integrated community, school, family and other resource sharing mechanism, the formation of complementary advantages of resultant force (collaboration mechanism) organized youth sports activities, the formation of sports rules, establish the correct values, mutual guarantee of youth sports participation, promote the all-round development of body and mind. With the help of the AGIL function model in parsons’ structural-functionalism theory, this study constructs the youth sports health promotion system in China on the premise of ensuring the full play of the system functions, and points out the functional deficiency of the youth sports health promotion system in China in combination with the current reality. The exertion of the system’s adaptive function depends on the society, family and school to provide enough resource guarantee for the effective linkage of the system, while the operation of the sharing mechanism realizes the maximum benefit of resource utilization. The sharing mechanism is conducive to the smooth operation of the system linkage process and the efficient realization of the system linkage goals, including venue sharing, personnel sharing, information sharing, value sharing and benefit sharing. In the process of system linkage, society, school, family of sharing platform, flexible mechanism of carrier of advantages, such as technical guidance personnel advantage through the complementary advantages to build a shared sports participation in the environment, satisfy the youth sports participation of sports facilities, professional organizations and the need of technical guidance, sharing in the activities at the same time, the spread of policy information, concept of fitness, fitness knowledge, *etc.*, in order to maximize the linkage of the system to achieve goals. Through the dissemination of government related policies, school sports culture, community sports culture, fitness knowledge, sports rehabilitation and other diversified information, to ensure the long-term stability of youth sports health promotion system. Put forward the effective strategies of perfecting our country’s youth sports health promotion system, namely the government’s policy, objectives and requirements drive the integration of community, school, family and other resources, formed complementary advantages of resultant force, youth sports activities, so that both the formation of sports rules, establish the correct values, mutual support and the participation of youth sports, promote the all-round development of body and mind, the link validity depends on the efficient and effective motivation mechanism, sharing mechanism, society, school, family, youth interaction to form the coordination mechanism and guarantee mechanism.

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Adolescent Mental Health and Network Anti-addiction System Strategy

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With the rapid development of the Internet in our country, in recent years, teenagers have more and more

access to the Internet. The adolescent stage is a transition stage from childhood to adulthood, which is a crucial period for the formation of their outlook on life and values. In this phase, the network has brought them a lot of convenience, also affects teenagers still has not yet fully formed the value orientation, moral concepts, such as teenagers also highlights the pros and cons of the Internet problem, attempts to explore the network of the dual effects of the healthy growth of teenagers, and based on reality, focus on the future, play the positive role of network on teenagers put forward the basic train of thought, and overcome the negative effects network for teenagers put forward relevant countermeasures and suggestions, aims to build a positive, healthy and upward network culture atmosphere, guide teenagers grow up healthy growing. The factors that affect the mental health of primary school students in the network environment are analysed by investigation, measurement and experiment. The influence of Internet on students' mental health development was studied by means of literature, data collation, case study and experience summarization. This paper mainly analyses the common psychological problems of teenagers, and puts forward corresponding strategies, aiming to help and encourage them to establish the desire to improve their health, explore the rules and ways to maintain and improve their physical and mental health, and create a warm and harmonious psychological environment. The network has its very positive role and significance to the growth of young students, but there are indeed a variety of factors that have adverse effects on the healthy growth of young students, some of which directly harm their physical and mental health, and affect the formation of their ideological and moral consciousness and outlook on life, many problems are not to be underestimated. Schools should do more to guide students and improve their quality. Parents need to spend more time nurturing their children and doing good guardianship.

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AGIL(L) Model-based Systematic Study on Adolescent Physical Health Promotion in Society, School and Family

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Established norms and values of the external behaviour of sports value demands actors and internalize standard of value, social role through the different performance of convergence behaviour and activate the real source of the internal power, promote the youth sports participation, but the basis of an analysis of the I (mode - maintenance) exist the following problems in the Chinese youth sports health promotion system research less. With the help of parsons AGIL function model theory of structural functionalism, this study established China's youth sports health promotion system on the premise of ensuring the system function play, and pointed out that China's youth sports function lack of systematic health promotion. Sports value criterion is the social organization and social members to meet the requirements of sports value, including the view of sports value and view, and so on, is that people in the long-term production practice and communication practice, according to the needs of people of sports, interests, the pursuit and desire of the established rules and procedures, with a general and unified value. In any social form, social actors abide by the unified sports value norms based on expressing their own motives, which is conducive to the convergence of sports attitudes and behaviours, and forms the resultant force to promote the realization of system objectives, thus making the system in a harmonious and orderly state. Guidance in order to maintain the system actors, unify the thought of all the actors, to eliminate the tension action, must be in the sports value norms gradually internalized to the ideas of the actors, arouse the needs of the organism system, stimulate the motivation of organism system, formed the internal effective and lasting power to guide their own external behaviour; this process is the value internalization. Youth sports much starker choices-and graver consequences-in planning, points out that to enhance quality of teenagers, should make full use of all kinds of propaganda media transfer advanced education idea, talent and proverbs, build a positive participation in sports and have a range of personal development and social public opinion that abs, actively creating the atmosphere of campus sports culture, advocate scientific health concept of life. Internalization of youth sports culture also is a kind of process, this is external to the family, school, the behaviour of the individual requirements through the main body of the adolescents receiving or internalized learning into the main body intrinsic values, become the subject orientation of their behaviour guidance standard, and the deeper the norms internalization, accept the better, the more can form stable values.

The Long-term Mechanism of the Benign Development of Students' Physical Health Level

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Since 1985 students physical health monitoring in our country, the provinces actively follow up and implementation of relevant test standard got better implementation and promotion, but has always been the promote the physical health of students in school activities also only stay on mastering the related physical data, therefore, in a series of problems, physical health test department of education to realize we need to improve the students' physical health level, except in the whole society to form a good atmosphere, focus on student health. It is necessary to establish an effective management system, put the concept of students' physical health management in the communication and feedback of students' physical health assessment results to schools, students and parents, find out the problems through assessment and analysis, and put forward personalized sports prescriptions and suggestions according to the problems of different students and groups. The article employs two methods. Literature method: many electronic literatures and books were consulted to summarize the current situation and research results of college students' awareness of physical fitness. Questionnaire survey method: according to the research needs, set up a questionnaire around the sports health system, and analyse and guide the respondents to ensure the authenticity and scientific of data collection. In view of the current urban school sports field area is limited to improve the small field junior high school student's physical fitness management model; At the same time, it also carries out research on model innovation, such as the management model of improving junior middle school students' physical health level through directional sports. The research on the improvement of students' physical health level by the teaching and management of diversified sports characteristic items; the junior middle school physical education class by the target teaching and the physical education quality management experiment research and so on. The results show that at present most students the option of average high school teaching actual exercise load far short of demand, different sports to the development of students' physical health level has obvious advantages, also has certain defects, especially aerobic stamina diathesis, due to the characteristics of the project is easy to ignore, professor in the teaching of tactics is more of a low level, simple repetition. In response to this problem, some high schools have tried the "package management" mode. Package type management mode, refers to the options in ordinary high school physical education and health teaching process, according to different characteristics of the sports and the actual teaching situation, to the different option to set the corresponding teaching plan, students select project as the main teaching content, and auxiliary projects targeted reasonable collocation, make physical health level of students get balanced comprehensive development, improve the quality of classroom teaching, a teaching management mode so as to realize the course objectives.

The Relationship between Mental Health Positive Emotion and Job Burnout among Ideological and Political Educators

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This study is to master the relationship between mental health, positive emotion and job burnout in ideological and political education staff. 510 ideological and political teachers were selected by stratified sampling method and 500 valid questionnaires were collected. There were 200 female teachers and 300 male teachers. Its age distribution is 80 people under 25 years old, 200 people between 25 and 34 years old, 150 people between 35 and 44 years old, 50 people between 45 and 50 years old, and 20 people over 50 years old. At present, there are few studies on the correlation between mental health, positive interest and job burnout

of ideological and political workers in academic field. Relevant studies show that job burnout is the main reason for the unstable situation of teachers in China. Job burnout has a serious impact on teachers' mental health, which affects the quality of education and teaching. Job burnout makes teachers have bad psychological, physiological, behavioural and emotional conditions, and affects their performance and development. In addition, the negative educational behaviour caused by job burnout will also have an impact on the quality of teachers and the realization of educational goals, resulting in a series of adverse consequences. If teachers' job burnout is not adjusted in time, it will be mistaken as a problem of working attitude, leading to teachers' suffering and pain and giving vent to their negative emotions to students. In order to achieve ideological and political education staff stress management, avoid the occurrence of job burnout, improve the level of psychological health of teachers. Hypothesis: there are different levels of mental health, positive emotion and job burnout among ideological and political teachers of different genders and schools; Teacher burnout has mediating effect on mental health and positive interest. 500 ideological education staff were tested. During the test, researchers emphasized the importance of truthful answers to the policy-makers and asked them to carefully read the instructions before filling in the answers. In order to ensure the authenticity of the test, anonymous survey was used. After sorting out and collecting the questionnaires, SPSS software was used to input, sort out and analyse the questionnaires, regression analysis, correlation analysis and variance analysis were used, and a path graph was created to realize the analysis description. At present, ideological and political education staff have great pressure, serious job burnout and low mental health level. In addition, job burnout is an important factor between mental health and job stress.

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A Macro Review of China's Sports Development from the Perspective of Healthy China 2030

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Misplaced exercise schedules are one reason for the declining physical fitness of Chinese teenagers. The "Healthy China 2030" initiative focuses on improving people's health, and is driven by innovation in systems and mechanisms. It aims to promote healthy living, improve health services, and focus on improving medical care, the built environment, and healthy development of health industries. This article employs two methods. Literature method: many electronic literatures and books were consulted to sort out and summarize the achievements of "Healthy China 2030". Questionnaire survey method: according to the research needs, questionnaires are set around "Healthy China 2030" development, and the respondents are analysed and guided to ensure the authenticity and scientific nature of data collection. Use Excel software to check and analyse the collected data. As the strength of competitive sports affects a country's international image to some extent, some sports managers in China believe that sports with a large number of gold MEDALS will develop, which seriously ignores the practical significance of mass sports, and mass sports cannot be effectively guaranteed and supported. And the development of competitive sports is not harmonious, although the Chinese sports in the Olympic Games a good performance, but careful analysis, the development of competitive sports in China is not harmonious, sports talent serious fault, advantage obviously, weak project is also very obvious, China is now a sports power, but still is not a sports power, deformation of athletic sports and mass sports development seriously affected the healthy development of sports. "Healthy China 2030" is a sign that China is on the road of "independent development" of sports. To measure physical and mental health; In the future, sports should take improving people's physical and mental health as the fundamental goal and make sports serve people's all-round development. Based on localization, integration of internationalization, oriented to the future; To develop, a country must integrate with the world. The development of Chinese sports must also carry forward the advantages of traditional national sports. Only by integrating the advantages of foreign countries can comprehensive and healthy

development be achieved. “Healthy China 2030” is a major opportunity for the development of competitive sports, leisure sports, school sports and sports industry in China. The healthy and comprehensive development of sports in China is the basis for the “Healthy China 2030”. The healthy and comprehensive development of Chinese sports is the general trend of realizing the health of China and the health of all the people.

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TRACK 8: MISCELLANEOUS

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Automatic Classification of Brain Function Network in Patients with Severe Depression Based on Pattern Recognition

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In today's society with huge competitive pressure, the incidence of depression is still high. At present, there is no medical examination or laboratory can be used as a basis for the diagnosis of depression. The diagnosis of depression is mainly based on clinical diagnosis, which depends largely on the clinical experience of doctors, and the accuracy of diagnosis is low. Therefore, how to improve the diagnostic accuracy of major depression is an important issue that doctors are concerned about at present. In order to build an auxiliary diagnosis model and provide a new method for the diagnosis of depression, in order to improve the accuracy of diagnosis of depression. The functional brain network of all subjects was constructed in a continuous threshold space (8-32 %) and the complex network theory was used to analyse the brain network of depression patients. The eigenvalues of the brain network of depression patients could be extracted from various dimensions. Different attribute combinations were used and SVM classification algorithm was used to classify all subjects. Classification study was carried out. The combination of global attributes and local attributes as classification features has the highest classification accuracy, and the combination of node attributes and global attributes as classification features has a higher classification accuracy than that of using only node attributes or global attributes as classification features. This result further illustrates that the classification accuracy will be different from that of using only node attributes or global attributes as classification features. The combination of dimension and feature values selected from different angles as classification features can improve the classification accuracy. Using the combination of global attributes, extreme values of node attributes and AUC of node attributes as classification features, the brain network of depressive patients can be represented from different dimensions. The accuracy of the classification model is higher. The results are consistent with the existing research results and can be used in assistant diagnosis of depression.

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Surface Reconstruction Method of Three-dimensional Multimodal Medical Images

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The theory of three-dimensional multimodal reconstruction of medical image surface is to reconstruct the three-dimensional image of the target object by processing the discrete three-dimensional data field. At the same time, its knowledge field involves computer science, graphics and image theory and related medical knowledge. Therefore, it is a complex cross-discipline. Three-dimensional reconstruction of medical images is very effective in improving the accuracy of disease diagnosis. The technology of three-dimensional multimodal reconstruction of medical image surface is mainly divided into two methods: surface rendering algorithm and volume rendering algorithm. In this paper, the principle, algorithm process and ambiguity of

MC (Marching Cubes) algorithm are studied and analysed. At the same time, the problem of ambiguity is solved by using the asymptote idea of hyperbolic. Through the experiment, the three-dimensional image of human brain bone is reconstructed, and the reconstructed image can be rotated, enlarged and dragged. In the aspect of volume rendering technology, this paper uses the ray casting algorithm, and studies the implementation principle of the algorithm, the processing steps of the algorithm and the synthesis order of the sampling points. Through the experimental reconstruction, the three-dimensional image of human brain volume rendering is obtained, which can also rotate, enlarge and drag the three-dimensional image. Surface rendering mainly uses the idea of equivalent surface to reconstruct the surface of the object through triangular patch splicing, because it operates with less voxel elements, fast operation speed and good real-time interaction. The different techniques used in surface rendering lead to great differences in the effects of different surface rendering algorithms. Because the MC algorithm uses voxel by voxel to extract the equivalent surface, the effect of smooth triangular patch connection is more accurate and the quality is higher. It provides experimental basis and theoretical basis for accurate localization diagnosis, directional interventional therapy and resection of medical images.

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The Standard of English Translation of the Name of Spleen and Stomach Qi Deficiency Syndrome in Internal Medicine of Traditional Chinese Medicine

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Over the past 30 years of reform and opening up, the external exchanges and cooperation of Chinese medicine have been developing deeply. Traditional Chinese medicine has spread to 183 countries and regions in the world. The standardization of TCM terminology and standardized research has been paid more and more attention. However, due to the great differences in Chinese and western languages, culture and medical science, many terms lack of direct corresponding words in English, the English translation names are often not uniform. English translation methods are mainly translated, translated and transliterated. The Chinese medicine and the western medicine have the same name, the same meaning, the name is the same, then the “natural correspondence”, the direct use of the western medicine term, without the word for literal translation, 2, no corresponding western medicine disease name, literal translation to understand, does not cause the ambiguity, and also maintains the traditional Chinese medicine characteristic. Some of the disease names do not correspond in English, and if the translation is difficult to understand, or cause the ambiguity, the translation is taken. Some of the concepts have typical Chinese cultural characteristics, which can not accurately reproduce the original concept. If the interpretation method is used, it is too long to be used as the term, here under the circumstances, transliteration can be used, which also enriches the English language while accurately spreading the traditional Chinese medicine culture. In summary, the author believes that from the normative point of view, English translation can solve the problems of traditional Chinese medicine in the international development. This approach not only has a long-term historical and practical basis, but also solves the problem of disunity of translation strategies caused by the complexity of naming traditional Chinese medicine prescriptions. The fact that this study represents an absolute majority also shows the dominant position of this trend. It is of great significance to unify and standardize the translation of the name of the spleen and stomach qi deficiency of the internal medicine of the Chinese medicine, to promote the foreign exchange and cooperation of the Chinese medicine culture, to promote the modernization and the internationalization of the traditional Chinese medicine, and to promote the mutual learning and communication of the traditional Chinese medicine and the western medicine.

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The Effect of Network Ideological and Political Education on the Auxiliary Therapy of Students with Mania

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In recent years, the number of students with mania has increased year by year, and the upward trend has attracted wide attention from the society and the media. The influence of more and more students on mania has led to the need for ideological and political educators. China has built a large number of ideological and political education platform of university network, and has made a series of important achievements in the history of education, but with the high-speed development of the network science and technology, the clear personality and the ideological character of the college students after the 95 years, the traditional network ideological and political platform construction is confronted with the bottleneck, The need for contemporary youth could not be adapted. The work of the ideological and political education of the university's network needs to be made in a proactive manner, it should be responded positively, and it is well-established. The perfect network ideological and political education platform, find the development of the university network ideological and political education work first. Fifty students with mania were divided into observation group and routine group. The students in the observation group underwent normal treatment after a period of network ideological and political education. Finally, the development of mania in the two groups was observed. The auxiliary treatment method of strengthening network ideological and political education on students with mania has achieved good results, and the improvement of the condition of students in the routine group is relatively small. In the observation group, the condition of mania was obviously relieved, and auxiliary treatment played a key role. Nowadays, many counselors and ideological and political professionals begin to open work accounts on Kaixin and Renren to interact with college students, pay attention to, understand and influence the thoughts of young students. This paper adopts the active method to strengthen the construction of red website, moves the content of offline ideological and political education to the internet, realizes the informatization of network ideological and political education, and provides a targeted basis for the ideological and political education in schools.

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Retrieval Platform of Cancer Disease English Database Based on Cloud Computing

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Due to the late start of tumor English database in cloud computing in China, a preliminary attempt has been made since 2008, so a retrieval platform of tumor disease English database based on cloud computing is proposed, which provides guidance for the research of tumor disease English database retrieval platform based on cloud computing in China. The related literatures of Ovid-MEDLINE, Springer link, EBSCOhost and Wiley Online Library from January 1995 to December 2011 were searched by computer, and the references of these articles were manually searched. Search, select the literature according to the pre-established inclusion and exclusion criteria, and extract and analyse the relevant data. Finally, 1244 articles come from computer retrieval of the above database, and 19 articles come from references to the above articles. In the above literature, 31 articles meet the inclusion exclusion criteria and carry on the evidence extraction and evaluation. The analysis of the evidence shows that the number of tumor disease English databases in cloud computing ranks first in the United States, accounting for 26 % of the total, 39 % of the databases are the comprehensive database of tumor diseases, prostate cancer and breast cancer account for 10 % of the single disease database. 32 % of the tumor databases contain data on gene research. In the known application of technology, MySQL and PHP technology are the most widely used, accounting for about 23%. From the results of the system evaluation, it can be seen that on a global scale, the United States has done the best research on the retrieval platform of tumor disease English database in cloud computing, and has tried to study it as early as 1977. It also has the most related databases and covers a

comprehensive range of cancer types. It can be considered that the United States leads the development trend of global cloud computing clinical tumor disease English database, which is very worthy of our study and reference. This paper makes a comprehensive evaluation of the foreign cloud computing tumor disease English database platform by using the method of system evaluation, which provides the basis and reference for the development theory and method choice of the tumor disease English database of cloud computing in China.

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Design of Asthma Acute Attack Prediction System Based on Convolution Neural Network

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The purpose of this study is to study the chronic airway inflammation of the bronchi, the onset stage of the thoracic expansion, the percussion and the percussion, most of which have the extensive exhale phase as the main sound and the exhale to be prolonged. Severe asthma attacks often have the signs of breathing and labour, hyperhidrosis, hair loss, abnormal movement of the chest and abdomen, rapid rate of heart rate, and qi pulse. As a result of the acute attack of the asthma, the onset of the attack is often manifested as loss of consciousness, which is often accompanied by an increase in the responsiveness of the airway, which leads to repeated episodes of wheezing, shortness of breath, chest distress, and or cough. if an acute onset of asthma can be predicted prior to an acute onset of asthma, so that the burden of the patients and the medical personnel can be reduced to a certain extent, and the research on the pathogenesis, diagnosis and treatment of the acute asthma of the asthma is also facilitated. The design of the predictive system of the acute episode of asthma with the convolution neural network can find that the characteristics of the acute episode of asthma can be different in different periods. Chest X-ray processing, convolution neural network and post-processing. In which, the original lung signal is segmented by using the mobile technology in the pre-processing stage, and then the lung data of different frequency bands is obtained by using the wavelet transform on the divided signal segment signals. in the convolution neural network part. The convolution neural network structure is mainly built, and the lung signal is trained and tested by using the powerful feature automatic extraction performance of convolution neural network. In the post-processing stage, logical operation and smoothing are used to further analyse the results of training and testing. The experimental data of the algorithm were obtained from the Asthma Acute Research Center of Freiburg Medical College in Germany. Six leads recorded by EEG in 21 patients were analysed. The results showed that after 21 acute episodes of asthma were eliminated for training, 66 of them were found to be correct, of which 58 were correct. The sensitivity of the algorithm is 87.88 %. The experimental results show that the acute lung automatic identification system based on the convolution neural network can obtain the ideal recognition performance for the lung data. It can be seen from the experimental results that the acute episode prediction system based on the convolution neural network can obtain more off-line sensitivity, but there is a significant improvement in the error rate.

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Investigation on Rural Sports Health Service in Eastern Sichuan Province

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The acceleration of modernization process also makes the residents' life style less and less meet the "health standard". Obesity, cardiovascular and cerebrovascular diseases, all kinds of civilized diseases have brought hidden dangers to people's high quality of life. In this context, sports and health services, as a "convenient", "low-carbon" and "healthy" way, have been favoured by people in today's society, and the concept of "spending money to buy health" has gradually gained popularity. The rural sports health service has become

the focus of people's attention. This paper uses China HowNet database to search the literature related to public sports and rural sports from 2006 to 2017. The present situation and existing problems of sports health service in rural areas were investigated. The survey found that local rural residents do not have a strong sense of participation in sports and health, and teenagers and middle-aged people have a relatively low sense of fitness. Among those aged 31-40, only 18 % were more likely to participate, while 60 % were less likely. More than 80 % of local leisure time is mainly spent on mobile phones and watching TV. Playing cards and mah-jongg is an important leisure activity in the local countryside. With the development of society and the influence of cultural diversity, the traditional sports culture in many rural areas is declining, and the modern sports health culture has not been established among the local people. In terms of organization and management, rural sports centers are mainly composed of rural administrative organizations and individual organizations. Seventy percent of residents are dissatisfied with the existing sports and health venues and facilities, while 18 percent are dissatisfied. Against the background of "great health" development, the service guarantee system should be established to promote the physical and mental health of rural residents in eastern Sichuan and enrich their sports cultural life, so as to improve the quality of rural sports health services in eastern Sichuan. We should make full use of modern information systems, such as television and the Internet, to understand the current sports culture information, at the same time, we should allow ourselves to fully participate in sports and health activities. It is an important breakthrough to establish a new management mode of rural sports and health organization and promote the modernization of health organization management. While investing, the government should also fully introduce social resources and sponsor rural sports and health services to meet residents' needs for fitness venues and equipment. Fully tap rural sports enthusiasts, through the opportunity to go out to study, master more sports fitness methods and related management experience, to achieve their sustainable development. Acknowledgements: This research is supported by Southwest Petroleum University Humanities Project Funding (NO. 2017RW008).

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Image Classification of Brain Tumours Based on Sparse Representation of Correlation Entropy

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The sparse representation method of the image is to represent the original image in the sparse form through the linear combination of a few basic functions, to display the key feature information in the original image, and to reveal the internal structure and essential attributes of the image. In this paper, the restoration of brain tumor image based on sparse representation and the detection and extraction of tumor region are studied. The methods used in this paper are as follows: first of all, this paper describes the MRI technology and the characteristics of MRI brain tissue images, and introduces the background and significance of brain tumor image processing, as well as the present stage. The characteristics and difficulties of image processing of brain tumors are described, and the research status of image restoration and tumor detection at home and abroad is briefly described. Secondly, the background and basic theory of the model are described, then two algorithms for solving sparse representation model are analyzed, and the application of sparse representation model in image processing is briefly introduced. On the basis of sparse representation model, this paper proposes a brain tumor image restoration and tumor region detection algorithm based on norm principal component analysis (PCA). The algorithm can detect the tumor region while restoring the brain feature image. Comparison with the effect recovered by traditional principal component analysis. The effectiveness of the algorithm is illustrated. At the same time, the extracted tumor image overcomes the defect that the edge of the tumor region is vulnerable to noise damage in the traditional segmentation algorithm, and has stronger robustness to the noise in the image. A brain tumor detection and extraction algorithm based on robust principal component analysis (PCA) was proposed in this paper. The anti-rotation performance of the algorithm in sparse representation was fully utilized to realize the batch detection and extraction of brain tumor concentrated tumor region. The experimental results show that the algorithm is

not affected by the middle rotation translation and overcome the problem that some traditional segmentation algorithms cannot segment some tumors correctly. Compared with the traditional segmentation algorithm, this algorithm has higher accuracy.

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