

## Study on the effect of community legal consciousness health management on cognitive function of senile patients

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**Background.** Senile asthenia is an old-age syndrome. Patients have increased vulnerability due to degenerative changes in the body and a variety of chronic diseases. Senile asthenia involves multiple bodily system functions of patients and is a pre-disease state. Its incidence shows an upward trend with the increase in the age. This study takes community health service as the breakthrough point to explore the role of community legal awareness health management in improving the cognitive function of elderly frail patients, hoping to provide references for improving the health level of elderly frail patients.

**Subjects and Methods.** 660 elderly patients who were hospitalized at our hospital from June to December 2021 were selected as the study objects and were randomly divided into the management intervention group and the general group, with 30 cases each. Both groups of patients were given basic disease treatment and in-hospital rehabilitation guidance, while the management intervention group increased community legal awareness of health management services at community health service stations. The cognitive function of patients was evaluated by Mini Mental State Examination (MMSE). The senile weakness, cognitive function score, and quality of life of the two groups of patients were compared and analyzed.

**Results.** It can be seen from the comparison of the cognitive function scores of the two groups of patients that the cognitive function level of the management intervention group is significantly higher than that of the conventional group. The cognitive function score of the management intervention group after treatment is  $26.46 \pm 2.39$  points, and that of the conventional group after treatment is  $23.58 \pm 2.41$  points. The difference between the two groups is statistically significant ( $P < 0.05$ ). As shown in Table 1.

**Conclusions.** Carrying out community legal awareness health management services can effectively improve the cognitive function level of the elderly and weak patients, and promote the improvement of the quality of life of the elderly and weak patients. Publicizing legal awareness to the elderly and weak patients and carrying out community health and health management services can help the elderly and weak patients solve their life problems in time. Legal awareness management education with disease prevention and health education can promote cognitive function training and improvement of the elderly and weak patients.

**Table 1.** MMSE scores of two groups of patients before and after treatment

Mode	Management intervention group	General group	<i>t</i>	<i>P</i>
Before treatment	22.54±2.37	22.56±2.29	1.305	>0.05
After treatment	26.46±2.39	23.58±2.41	6.398	<0.05
<i>t</i>	6.454	2.743	-	-
<i>P</i>	<0.05	>0.05	-	-

## Effects of special sports training on autonomic nervous regulation

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**Background.** Sports is one of the most traditional health rehabilitation programs in China. With wide applicability and low side effects, it plays a very good role in strengthening the body. In sports theory and practice, professional physical fitness training content can effectively inhibit the occurrence of corresponding diseases and has a good preventive effect on some diseases. Therefore, the regulating effect of physical training on human autonomic nervous function is evaluated through special sports training. The relationship between physical training and the human body and mind is verified through the sports professional training test, which provides effective support for the promotion and application of sports health therapy in the medical field.

**Subjects and Method.** 160 students majoring in physical education in a sports college were selected as the research objects of this experiment. The physical functions of the experimental subjects were healthy, and the purpose and method of the experiment were clarified. The students were divided into an experimental group and a control group, with 80 students each. The autonomic nervous function of the experimental subjects was tested by the Japanese postural blood pressure reflex method, and the test was evaluated by the Japanese physiologist pig feeder's neuromodulation method. The students in the experimental group had more than 8 hours of physical training every week, while the students in the control group were not allowed to do any physical training during the test time. The experimental period is half a year, and the parameters such as blood pressure, heart rate, lying-sitting blood pressure, heart rate, and other parameters of the experimental subjects are tested and recorded. All data in the experiment were statistically analyzed by Excel2016, and the data chi-square test value was calculated.

**Results.** The data in Table 1 are the detection results of the autonomic nerve function characteristics of the two groups of people during exercise. The autonomic nervous system is the basic motor nerve unit of the human viscera. Its function is to regulate the secretion of internal organs and effectively maintain

the blood pressure, heart rate, and respiration of the human body. The experimental group participating in the special sports training was significantly shorter than the control group in the recovery time of exercise center rate, respiration stabilization time, and blood pressure stabilization time ( $P < 0.05$ ).

**Conclusions.** Physical exercise is of great significance to the healthy development of people's physical and mental health. Long-term professional sports training can effectively improve people's various physical functions and ensure that people have a strong mental state. In the experimental test, the autonomic nerves of the students in the professionally trained experimental group were effectively regulated, and the recovery time of each functional test was shorter than that of the control group.

**Table 1.** Shows the detection results of autonomic nerve function characteristics during exercise in the two groups

Group type	Exercise heart rate recovery time	Exercise breathing recovery time	Exercise blood pressure recovery time
Experimental group (80)	4.56 ± 1.25	5.23 ± 1.35	5.56 ± 1.12
Control group (80)	6.25 ± 1.35	8.26 ± 1.75	7.25 ± 1.48
<i>t</i>	8.215	12.261	8.144
<i>P</i>	<0.05	<0.05	<0.05

## A study of positive intervention of music therapy and neurofeedback on negative emotions and attention in college students

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**Background.** Anxiety, tension, sadness, anger, and other emotions are collectively referred to as negative emotions, which can bring negative emotional experiences, make the body feel uncomfortable, and even affect normal work and life. At present, the proportion of college students suffering from negative emotions is relatively high, which has become a focus of the society. Negative emotions can lead to problems such as memory deterioration and attention impairment. Based on the characteristics of (Electro-EncephaloGram) EEG signals, the study analyzed the

improvement effect of music neurofeedback training on college students' negative emotion and attention state.

**Subjects and Methods.** This research reaches a cooperation with a well-known university in China, and randomly selects 250 students from the School of Electrical Engineering of the university. Then, the Positive and Negative Affect Scale (PANAS) was used for evaluation, and 60 students with PANAS scores of more than 20 were selected as experimental subjects. Then 50 students were divided into two groups, namely, the test group and the control group, with 40 students in the experimental group and 10 students in the control group. Among them, the experimental group includes 20 people in the music stimulation group and 20 people in the nerve feedback group. The music stimulation group and nerve feedback training group were stimulated for 5 minutes each time, and then took a rest for 2 minutes. After resting twice, EEG signals were collected for 2 minutes. The test period was 2 weeks. The control group did not receive any stimulation or training, and the EEG signal acquisition method and time were consistent with the experimental group. At the end of the test cycle, the PANAS scale is used again for evaluation.

**Results.** Table 1 shows the change of PANAS (negative) scores of the two groups of college students before and after the test. The results showed that the PANAS scores of students in the experimental group under nerve feedback and music stimulation decreased significantly after the experiment, and the difference before and after the experiment was statistically significant ( $P < 0.05$ ). The PANAS score of the control group decreased, but the change was not statistically significant ( $P > 0.05$ ).

**Conclusions.** On the basis of analyzing the resting EEG signals of nerve feedback training and music stimulation, it is combined with the relative power and continuous coherence analysis method. The intervention effect of music neurofeedback training on college students' negative emotion and attention state was studied from the aspects of EEG signal and scale evaluation with the help of self-measurement scale. The results showed that the negative emotions of college students under the stimulation of nerve feedback and music were significantly relieved compared with those before the intervention, indicating that this method is an effective tool to regulate negative emotions and cognitive attention, and has certain clinical application value.

**Table 1.** The change of PANAS (negative) scores of the two groups of college students before and after the experiment

Classification	Test group		Control group
	Neurofeedback	Music stimulation	No stimulation
Before experiment	23.53±4.87	23.37±4.01	23.45±3.59
After experiment	14.67±3.28	15.03±3.61	21.86±3.70
<i>t</i>	5.89	5.60	1.04
<i>P</i>	0.00	0.00	0.32