APPLICATION OF FACE TARGET RECOGNITION ALGORITHM BASED ON VISUAL COMMUNICATION IN MEDICAL IMAGE SYSTEM OF COGNITIVE IMPAIRMENT

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Background: Mild cognitive impairment is a transitional stage between normal aging and dementia, which is characterized by mild memory and intelligence damage, but the general cognitive function and living ability remain intact, which cannot meet the diagnostic criteria of dementia. Patients with mild cognitive impairment are at high risk of Alzheimer's disease, especially amnestic mild cognitive impairment dominated by memory impairment, which often turns into Alzheimer's disease. The proportion of patients with mild cognitive impairment turning into Alzheimer's disease is about 10%-15%, 50% in 3-4 years and 80% in 6 years, while that of normal elderly is only 1%-2% every year. At present, the face target recognition algorithm based on visual communication is mainly used in clinic as a screening tool for mild cognitive impairment. In recent years, with the rapid development of neuroimaging, people can functionally understand the changes of cerebral blood flow, metabolism and biochemistry in patients with mild cognitive impairment. Neuroimaging plays an increasingly important role in the diagnosis and treatment of mild cognitive impairment.

Face target recognition algorithm based on visual communication is a typical problem of image pattern analysis, understanding and classification. It involves many disciplines, such as pattern recognition, image processing, computer vision, statistical learning, cognitive science and so on. The in-depth research and final solution of automatic face recognition can greatly promote the maturity and development of cognitive impairment medicine.

Objective: Human beings seem to have "innate" face recognition ability. Giving computers the same ability is the ultimate goal of automatic face recognition research. Automatic face recognition is a typical problem of image pattern analysis, understanding and classification. It involves pattern recognition, image processing, computer vision, statistical learning, artificial intelligence, computer graphics and cognitive science. As a pattern recognition problem, it is considered to be one of the most challenging problems. Therefore, the face target recognition algorithm based on visual communication can effectively alleviate the condition of patients with cognitive impairment and improve the effect of subject medical images.

Subjects and methods: 1000 patients with mild cognitive impairment were randomly selected, including 500 female patients and 500 male patients. Through the actual acquisition of neural images of patients with mild cognitive impairment, the effect of face target recognition algorithm based on visual communication is analyzed.

Methods: Use Excel table to count the impact of face target recognition algorithm on medical images of cognitive impairment subjects, as shown in Table 1.

Results: Biometric recognition is a large type of recognition technology which has developed rapidly in recent years and is deeply concerned by the public. It is a technology that relies on the unique physiological characteristics of organisms as recognition codes. Face recognition does not need to be like fingerprint recognition and iris recognition. The identified person needs to take the initiative to detect. Just stand within the detection range of the machine, which is convenient and fast, and improves the speed of medical images. Face, as a unique physiological feature, combined with more and more perfect in vivo detection technology, can well deal with many counterfeiting attacks and ensure the accuracy of recognition. At the same time, in the practical application scenario of medical images in the discipline of cognitive impairment, multiple faces can be sorted, judged and recognized, which is in line with the visual characteristics of "recognizing people by appearance", with simple operation, intuitive results and good concealment.

Use 1-5 to represent the actual impact effect degree, 1 means no impact, 2 means slight impact degree, 3 means impact effect, 4 means strong impact effect, and 5 means profound impact effect.

Table 1. Impact of face target recognition algorithm on medical images of cognitive impairment subjects

Effect	Non-contact identification	Anti-counterfeiting ability	Concurrency
Female patients	5	4	4
Male patients	4	4	5

Conclusions: As an auxiliary means for the diagnosis of patients with cognitive impairment, neuroimaging has been gradually recognized in the prediction of the transformation of patients with cognitive impairment to Alzheimer's disease and the evaluation of the effect of early intervention and treatment. With the popularity of functional imaging, it is believed that it will play a greater role in the clinical diagnosis and treatment monitoring of patients with cognitive impairment. However, at present, neuroimaging research

on patients with cognitive impairment still has some shortcomings, such as single research means, small sample size, short follow-up time, and lack of strict unified-diagnostic and exclusion criteria in actual clinical operation. Therefore, in the future, we should carry out longer follow-up research on larger samples and combine a variety of neuroimaging or neuroimaging with apoE4 gene protein and a in CSF ß- 42. Neuropsychological tests.

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ON THE ROLE OF ADVERTISING DESIGN IN IMPROVING PEOPLE'S COGNITIVE IMPAIRMENT

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Background: Cognition is a process in which the human brain receives external information, processes it and converts it into internal psychological activities, so as to obtain knowledge or apply knowledge. It includes memory, language, visual space, execution, calculation, understanding and judgment. Cognitive impairment refers to the impairment of one or more of the above cognitive functions and affects the individual's daily or social ability, which can be diagnosed as dementia. Cognitive impairment mainly includes: (1) Perceptual impairment, such as sensory allergy, sensory retardation, internal discomfort, sensory deterioration, sensory deprivation, pathological illusion, hallucination and perceptual comprehensive disorder. (2) Memory impairment, such as strong memory, memory defect and memory error. (3) Thinking obstacles, such as abstract generalization process obstacles, association process obstacles, thinking logic obstacles, delusions, etc. The causes of the above cognitive impairment are various, most of which are caused by mental diseases, except for organic diseases. Such as neurasthenia, hysteria, hypochondriasis, climacteric syndrome, depression, obsessive-compulsive disorder, senile dementia, schizophrenia, reactive psychosis, paranoid psychosis, mania, manic depression, etc. Cognitive psychology research shows that dynamic pictures can attract more attention than static pictures. Experiments show that if a dynamic picture and a static picture are arranged in the two pictures, the result is that most people will first pay attention to the dynamic picture. The main reason is that the dynamic picture can give people a realistic visual feeling, easily attract the attention of the audience, and make the viewer interested at the moment of seeing the picture. Therefore, by using different advertising design concepts and watching advertising content, this paper discusses the improvement effect of advertising design on people with cognitive impairment.

Objective: "Vision is a kind of active exploration. It is highly selective. It not only selects the things that can attract it, but also makes a choice for any kind of things it sees." according to the research and test of Gestalt psychology, people's vision is unbalanced in the field of vision. Consumers are the object of advertising. In order to succeed in an advertisement, excellent creativity and technology are important. The psychological laws and behavior characteristics of consumers cannot be ignored. They meet the psychological needs of consumers, and then use various technologies to improve their attention and effectively promote the "memory" and "association" of the audience Therefore, this study carries out certain visual intervention on people with cognitive impairment, and discusses the improvement effect of visual impact in advertising design on people with cognitive impairment.

Subjects and methods: 80 people with cognitive impairment, aged 35-65 years, including 43 males and 37 females, were selected. Diagnostic criteria: the diagnostic criteria of American Psychiatric Association MCI (DSM-IV): a. subjective perception of memory loss. b. Decline of life and social function. c. Objective examination showed evidence of mild cognitive impairment, such as MMSE score, illiteracy 18-21, primary school education 21-24, middle school education 25-27, and GDS score 2-3. d. Excluding cognitive impairment caused by specific causes. e. The course of disease was more than 3 months. f. It does not meet the diagnostic criteria of dementia. Exclusion criteria: (1) It does not meet the diagnostic criteria of MCI. (2) Severe heart, liver and kidney dysfunction, severe infection and severe diabetes. (3) Severe visual or hearing impairment. (4) Previous history of mental illness. (5) Incomplete clinical data. A total of 80 patients met the above criteria. The patients were randomly divided into intervention group and control group.