

## Cognitive behavioral therapy and applied mathematics education reform on students' cognitive impairment

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**Background.** With more attention to students' mental health, cognitive behavioral therapy and applied mathematics education reform are combined to study the impact of cognitive disorders on students' psychological problems caused by depression, anxiety disorder, and irrational cognition.

**Subjects and Methods.** Data processing was conducted using SPSS26.0 and Excel software to analyze the overall situation of students' cognitive impairment in applied mathematics before and after the educational reform under cognitive behavioral therapy. The research explores the correlation between applied mathematics scores and cognitive impairment, and analyzes the impact of cognitive behavioral therapy combined with applied mathematics education reform on students' cognitive impairment.

**Results.** In the process of learning applied mathematics, students in the same grade have moderate cognitive impairment. Students who did not receive intervention treatment had a significant degree of cognitive impairment, and the correlation coefficient between applied mathematics scores and cognitive impairment was 0.991. Students who undergo cognitive behavioral therapy but do not consider the application of mathematical teaching reform have moderate cognitive impairment. Students who combine cognitive behavioral therapy with applied mathematics education reform have mild cognitive impairment. At this time, the correlation coefficient between applied mathematics scores and cognitive impairment is 0.893, with a significance level of  $0.00 < 0.01$ , indicating a strong correlation.

**Conclusions.** Cognitive behavioral therapy and applied mathematics education reform have a positive impact on students' cognitive impairment, which has good practical value for the treatment of cognitive impairment.

## Innovation and entrepreneurship education practice curriculum reform on college students with anxiety

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**Background.** Psychological construction has always been a key challenge in guiding innovation and entrepreneurship among college students. The reform of practical courses for innovation and entrepreneurship education for college students aims to improve their recognition and satisfaction with innovation and entrepreneurship courses, thereby alleviating the impact of anxiety.

**Subjects and Methods.** Taking senior college students as the research object, this study aims to involve them in the reform of practical courses for innovation and entrepreneurship education for college students. A symptom self-evaluation scale was used to conduct a follow-up survey to explore the impact of the reform of practical courses for innovation and entrepreneurship education for college students on their anxiety psychology.

**Results.** The reform of the innovation and entrepreneurship education practice course for college students has a positive impact on their anxiety psychology in all aspects, and there is a positive correlation between this course reform and alleviating their mental health. The anxiety rate of students participating in the reform of innovation and entrepreneurship education practical courses for college students is only 6.3%, and the distribution trend of these students' innovation ability scores is  $5.79 \pm 1.78$ . The anxiety level of students who did not participate was 55.4%.

**Conclusions.** Through the reform of practical courses for innovation and entrepreneurship education for college students, we guide them to actively start businesses, regulate tense emotions, alleviate psychological pressure, reduce anxiety factors, and alleviate anxiety symptoms, thereby achieving psychological balance and forming a stable psychological state.

## Innovation and entrepreneurship education development on employment anxiety of college students

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**Background.** With the rapid development of higher education in China and the continuous expansion of enrollment in

universities, the number of college graduates is rapidly increasing, and the employment situation is severe. Employment anxiety among college students not only affects their physical and mental health but also leads to difficulties in finding employment and social problems. In response to this situation, we aim to alleviate the employment anxiety of college students from the perspective of the development of innovation and entrepreneurship education.

**Subjects and Methods.** Taking college students as the research object, a cross-sectional questionnaire survey method was used to explore the impact and mechanism of innovation and entrepreneurship education development on employment anxiety. The development of innovation and entrepreneurship education intervenes with high employment anxiety among college students and tests its effectiveness.

**Results.** The overall employment anxiety of college students is at a moderate to high level, with a mean of 2.66 and a standard deviation of 0.63. The employment anxiety of students after innovation and entrepreneurship education was significantly lower than before intervention,  $P < 0.001$ . The employment anxiety value of the post-test intervention group was significantly lower than that of the control group, with  $F = 12.046$ ,  $P < 0.001$ .

**Conclusions.** Interventions in innovation and entrepreneurship education have a significant effect on alleviating employment anxiety among college students, and this effect can be maintained within a month.

## The impact of the development of smart libraries on readers' social anxiety disorders

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**Background.** Social anxiety disorder, as a psychological disorder, is often related to the patient's growth experience. Smart libraries utilize the Internet and artificial intelligence to provide readers with a platform for knowledge and spatial exchange, breaking traditional interpersonal communication and providing personalized services and communication for readers with social anxiety disorders.

**Subjects and Methods.** To study the digital management method based on smart libraries, data were collected from 150 readers with social anxiety disorder in a university's smart library from July 2020 to July 2021, and they were divided into a control group and an experimental group for experimental analysis. We conducted tests using the Communication Anxiety Scale and the Eysenck Emotional Stability Test and analyzed the data using SPSS23.0.

**Results.** After completing the collection and analysis of data related to readers with social anxiety disorder, compared to the control group, the experimental group had lower anxiety scores on the communication scale ( $P < 0.05$ ) and lower scores on the anxiety level self-evaluation were all below 6 points ( $P < 0.001$ ).

The results indicate that smart libraries can alleviate readers' social anxiety disorders.

**Conclusions.** Smart libraries reduce communication between patients, managers, and other readers through digital services, creating a more comfortable and relaxed reading space for readers with social anxiety disorders. Therefore, the development of smart libraries can effectively reduce the level of communication among readers with social anxiety disorders and build a more comfortable reading platform for them.

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## Study of online business English teaching combined with music therapy to alleviate the bidirectional disorder

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**Background.** Bipolar disorder challenges bilingual students' oral and written communication skills. Traditional teaching methods may need to be more effective in meeting their needs. Therefore, this study aimed to investigate the effect of online interactive business English teaching combined with English music therapy on alleviating bipolar disorder in bilingual students.

**Subjects and Methods.** This study recruited 50 students with bipolar disorder as research subjects, and the subjects were randomly divided into an experimental group and a control group. The experimental group received online interactive business English teaching combined with English music therapy for 12 weeks, while the control group only received online interactive business English teaching. A standardized communication disorder assessment scale was used to evaluate the status of the subjects before and after the intervention, and SPSS23.0 software was used for statistical analysis.

**Results.** The communication ability of the experimental group was significantly improved compared with that of the control group ( $P < 0.05$ ). The experimental group showed enhanced verbal and written communication skills, increased knowledge of vocabulary and grammar, and improved understanding and expression of ideas. The control group also improved somewhat, but less than the experimental group.

**Conclusions.** Combining online interactive business English teaching and English music therapy can effectively alleviate bidirectional disorder in bilingual students. The inclusion of music therapy in the teaching program positively impacts oral and written communication skills, vocabulary acquisition, and overall thinking skills.