

The positive impact of music education on students' mental health in colleges and universities

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ABSTRACT

With the intensification of social competition, the academic pressure and psychological burden faced by college students are increasing, and mental health problems have gradually become an important social issue. In this context, the traditional mental health education model is facing some limitations. How to effectively promote students' mental health has become an urgent problem to be solved. Music education, as a form of emotional expression and cognitive training, has been widely discussed in recent years. Studies have shown that music education can not only improve students' artistic quality but also play an active role in emotional regulation and stress release. By participating in music activities, students can effectively reduce psychological stress, regulate emotions, and enhance self-awareness and social skills. Therefore, this paper will explore the positive impact of college music education on students' mental health, aiming to provide new perspectives and strategies for college education, to promote the all-round development of students' mental health.

KEYWORDS

College music education; Mental health; Emotional expression; Emotion regulation; Pressure release

In modern higher education, students' mental health problems have become increasingly apparent, especially due to academic pressure, employment competition, and other factors, many college students are facing greater psychological challenges. Traditional mental health education mainly focuses on theoretical study and psychological counseling, but these methods often can not fundamentally solve the needs of students' emotional expression and stress regulation. Music education, as an emotional and practical way of education, has been gradually applied to students' mental health education in recent years. Studies have shown that music not only helps students to express their emotions, but also has significant positive effects on emotion regulation, stress release, and self-cognition improvement. This paper will discuss the application of music education in colleges and universities, analyze its multiple effects on students' mental health, and put forward constructive suggestions for further optimization of mental health education in colleges and universities.

1 The status and significance of music education in colleges and universities

1.1 Characteristics of music education in colleges and universities

With popularization and practice as its core, music education in colleges and universities has formed a unique teaching mode different from that of professional music colleges. The curriculum covers music appreciation, choral rehearsal, musical instrument foundation, and other modules.

Through the cross-penetration of theoretical teaching and artistic practice, a closed-loop learning of "Perception-experience-creation" is constructed. For example, in the course of appreciation of Chinese and foreign folk songs, students not only analyze the music style but also restore the expression logic of different cultures through dialect learning and body rhythm.

The educational carrier breaks through the boundaries of the traditional classroom: campus grass concerts, inter-college musical theater creation, AI composition software workshops, and other diversified forms, and integrates music education into students' daily lives^[1]. Colleges and universities pay more attention to the cultivation of musical thinking than to the training of skills. By analyzing the emotional contrast techniques in film scores, students learn to deconstruct emotional logic with musical language. In the creation of electronic music, the combination of sound sampling and programming techniques stimulates interdisciplinary innovation. This kind of education mode enables non-professional students to participate deeply and complete self-expression and cognitive reconstruction in art practice.

1.2 The Potential impact of College Music Education on students' mental health

1.2.1 The role of music education in promoting emotional expression

Music, as a non-verbal communication medium, provides a safe channel for students to express their feelings. In the

improvisation workshop, students tap freely into the rhythm of percussion instruments to transform emotions such as anxiety and joy into sound waves. This embodied expression bypasses the language defense mechanism and reaches the subconscious^[2]. Group music activities have healing value: in choral rehearsal, the harmony resonance between the parts creates a collective emotional magnetic field, and the individual is accepted and tolerated in the process of integration into harmony; Role-playing in musicals releases pent-up emotions through “Borrowing expression”——inward students sing inner monologues through characters, completing emotional output and avoiding the pressure of self-exposure. This expression training reshapes the emotional processing mode, and when students encounter emotional difficulties in life, they can more freely channel their emotions through artistic ways instead of suppressing them.

1.2.2 The function of music education on emotion regulation and stress release

Music plays an important role in emotion regulation through physiological and psychological mechanisms. Repetitive movements during instrumental practice, such as guitar rotation and piano scale training, have a meditative effect. Focused body movements combined with regular breathing can lower cortisol levels and increase alpha brain wave activity. Improvisation activates the prefrontal and limbic systems to work together: when students use electronic music software to mix ambient and vocal sounds, the brain's reward circuitry is activated and dopamine production increases to produce pleasurable experiences.

Group music interaction is more effective in regulation. In African drum circle activities, participants improvise to follow the rhythm of the leader. The higher the synchronization of collective beats, the more significant the increase in oxytocin levels among members, this biochemical change directly alleviates social anxiety^[3]. Music Education thus constructs a toolbox for stress management: students master practical psychological adjustment skills such as calming test anxiety through music meditation and improving interpersonal tension with rhythm games.

2 The influence of music education on students' emotions and self-cognition

2.1 Music education promotes emotional expression and emotion management

Music Education constructs a safe channel for students to release their emotions through artistic expression. In the improvisational music composition course, students use digital audio workstations to translate abstract emotions into perceptible sound forms, such as anxiety that may manifest as a rapid electronic drumbeat, and loneliness conveyed through slow clarinet melodies. The transformation itself has a healing function——when students simulate stress by adjusting the pitch and rhythm of their synthesizers, the physiological stress response is externalized as controllable vocal parameters and chaotic emotions are expressed and sorted out. Group music activities regulate the intensity of emotions through the collective resonance mechanism: in the choral rehearsal, the individual voice needs to be actively integrated into the voice balance, and excessive individual emotions (such as anger or sadness) are naturally dissolved in the collective harmony. For example, when singing a polyphonic folk song, the bright melody of the high voice is balanced by the steady timbre of the low voice. In this process, participants learn to adjust the intensity and manner of emotional expression. This ability is transferred to daily life, this enables students to control their emotions more rationally in the face of interpersonal conflict.

2.2 The promotion of students' self-cognition and self-worth by music education

Music practice reconstructs students' self-evaluation system through breakthrough achievements. Zero-based students' experience of playing a piece of music through systematic training is essentially an enhanced experiment in self-efficacy——from initial stiff fingers to smooth playing, every step along the way has been a validation of the “I can do it” belief. For example, a student who has never played a musical instrument successfully plays a simplified version of canon at the end of the semester, not only improving his musical skills but also realizing the power of persistence and practice, this knowledge is transferred to the academic field, making them more confident when faced with complex topics. Musical Theater projects push students out of their comfort zones: the science student in charge of lighting discovers his sensitivity to color combinations, and the engineering student in charge of the lead singer unearths unwitting expressiveness, this kind of boundary-spanning practice breaks down fixed beliefs about individual abilities. In music aesthetic education, students gradually establish independent aesthetic standards by analyzing the emotional tension of blues and the order aesthetic feeling of classical music. For example, in contrasting the dramatic conflicts of Beethoven's symphonies with the nebulous atmosphere of Debussy's impressionist music, students understand the diversity of artistic expression and reflect on the limitations of the social evaluation system, like the uniqueness of musical styles, individual values need not cater to a single standard^[4].

2.3 Effects of music education on interpersonal communication and social competence

Music activities construct a unique non-verbal social training field and reshape students' relational connection mode. The collaborative mechanisms in band rehearsals force members to develop communication skills beyond words: drummers hint at rhythm changes through physical movements, and guitarists respond to emotional tones with note lengths, this tacit cultivation increases students' sensitivity to non-verbal signals. In a jazz riff, for example, the saxophonist signals the end of a solo passage with a look or breath, and the other players immediately adjust their accompaniment patterns, this kind of real-time interactive training significantly enhances resilience in social situations. The choir's voice-balancing exercises deepened empathy: when the high voice lowered its volume to highlight the melody of the middle voice, students experienced firsthand the value of "Moderate concession" to collective harmony, this cognition migrated to the team-working scenario, making them better at reconciling different opinions. Interdisciplinary music programs further break down social barriers: on-campus original music festivals, mechanics students debug sound equipment, art schools design stage lighting, and arts schools write song lyrics and scripts, the multi-collaborative model teaches students to solve common problems with a differentiated perspective. For example, when engineers and poets collaborate to create multimedia musicals, the former uses algorithms to generate dynamic sound effects, the latter transforms poetry into lyrics, and the collision between technical logic and artistic thinking leads to innovative forms of expression.

3 The role of music education in students' stress management and psychological adjustment

3.1 The mechanism of music education to alleviate academic stress

Music activities alleviate academic stress through the dual path of attention transfer and physiological regulation. When students are engaged in instrumental music practice, the complex fingering memory and rhythm control require high concentration. This immersive experience can temporarily cut off repeated thinking about schoolwork load, similar to the "Flow state" in psychology. For example, when practicing guitar finger music, students must synchronize left and right-hand movements, monitor pitch, and memorize music scores. This multi-dimensional task occupies cognitive resources and takes the brain away from stressors. On the physiological level, regular musical activity modulates the autonomic nervous system—soothing harp playing induces deep breath reflexes through low-frequency sound vibrations, lowering heart rate and blood pressure; Percussion improvisation stimulates the release of endorphins through high-intensity rhythms, producing a stress-relieving effect similar to exercise^[5]. Even more noteworthy is the healing mechanism of music composition: students translate anxiety about paper deadlines into urgent rhythms in electronic music, through repeated editing and adjustment of digital sound effects, and through the creation of digital music, symbolically gaining a sense of control over stress, this artistic reconstruction process itself has the value of psychological counseling.

3.2 The alleviating effect of music education on anxiety and depression

Music education alleviates emotional disorders through the dual channels of emotional resonance and social support. In the music therapy workshop, students listen to music that corresponds to their emotional state (such as calm baroque music for the anxious or lyrical ballads for the depressed), eliciting physiological resonance through the vibration of sound waves, the disturbed emotional frequency is gradually adjusted to a steady rhythm. Group music intervention has deeper value: when participating in drum circle activities, the individual percussion rhythm is wrapped by the collective sound field, and loneliness is dissolved in sound wave resonance; synchronous breathing and harmonic collaboration in choral rehearsal, the sense of belonging is activated through the mirror neuron mechanism. Creative music practice was particularly effective—a socially anxious student used compositional software to turn fear sources such as elevator cues and footsteps into experimental music, and desensitization of fearful objects was achieved through repeated editing. This artistic expression breaks through the limitations of speech therapy and allows unspeakable emotions to have non-critical outlets, such as the use of discordant chords to simulate psychological conflict and the completion of symbolic solutions through melodic development, subtly reconstituting patterns of positive emotions.

3.3 The strengthening effect of music education on psychological resilience

Music education fosters resilience through challenging training and creative adaptation. The process of learning a musical instrument is essentially a miniature anti-frustration training: the repeated failure and final success of a phrase in piano practice enables students to experience the complete closed loop of "Failure-adjustment-success" when this kind of experience is transferred to the academic dilemma, students will more naturally adopt the step-by-step dismantling

strategy rather than escape. Improvisation, on the other hand, develops the ability to cope with uncertainty—in jazz improvisation, students respond in real-time to their peers' melodic variations, a highly dynamic environment that trains the brain to adapt quickly to change and respond creatively. The more far-reaching impact comes from the psychological breakthrough of the musical performance: A stuttering student plays a role in a musical, overcoming the language barrier with the help of lyrics and rhymes, and the positive feedback from the success of the public performance significantly increased his expressive confidence in real-life scenarios. Group music projects also shape collaborative stress management: Pre-concert tension is relieved by eye contact and breathing synchronization among band members, and this group support experience prepares students for future group task pressures, students are better at mobilizing collaborative resources than working alone. Together, these exercises build a psychological immune system that allows students to remain resilient in setbacks and develop creative solutions under pressure.

4 Conclusion

As an implicit psychological health intervention, music education in colleges and universities shows its unique value of emotion regulation and personality shaping. The research shows that music activities provide students with a safe channel for emotional catharsis through non-verbal expression mechanism, and achieve stress release and emotional reconstruction in improvisation and collective performance. Through skill breakthrough and cross-border practice, the self-cognition system is reshaped to enable students to establish an "Imperfect but unique" individual value identity, it cultivates the non-verbal communication sensitivity and the ability of team cooperation under pressure.

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