

Research on the Psychological Promotion Effect of Piano Group Classes on College Students from the Perspective of Positive Psychology: Taking a Class of Shenyang Conservatory of Music as an Example

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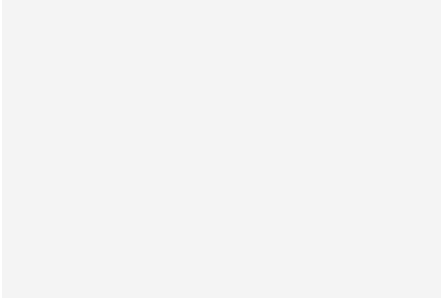
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Abstract:

With the increasing academic pressure, employment pressure and interpersonal pressure faced by college students, their mental health problems have received widespread social attention. Positive psychology, which emphasizes the development of individuals' positive emotions, superior qualities and well-being, provides a new theoretical perspective for mental health education in colleges and universities. Piano group lessons, as an important part of music education in colleges and universities, not only undertake the function of cultivating musical skills, but also have the potential value of promoting students' psychological growth and personality development.

Based on the theory of positive psychology, this study takes students of piano group classes at Shenyang Conservatory of Music as the research subjects and uses literature review, questionnaire survey, interview and classroom observation methods to explore the influence mechanism of piano group classes on positive emotions, self-efficacy, social connection and psychological resilience of college students. The study suggests that piano lessons can effectively enhance the positive psychological quality of college students, relieve psychological stress and anxiety, and increase students' self-confidence and sense of social belonging. This study helps to expand the application of positive psychology in music education and provides theoretical basis and practical reference for the reform of piano courses in colleges and universities and the practice of mental health education for college students. Based on the research results, this paper further proposes to construct a "psychologically empowered piano group class" teaching model, and puts forward optimization strategies in terms of curriculum objectives, teaching content, classroom



organization and evaluation mechanism, with the aim of achieving a deep integration of music education and mental health education and providing a new practical path for mental health education in colleges and universities.

Keywords: Positive Psychology; Piano group lessons; Mental health of college students; Psychological empowerment; Music education

1. Introduction

1.1 Research Background

In recent years, with the popularization of higher education and the intensification of social competition, the psychological stress faced by college students has shown a continuous upward trend. Large-scale tracking survey data from domestic universities shows that the detection rate of anxiety, low self-evaluation and interpersonal adaptation disorders among undergraduates has maintained a rising trend year by year, and psychological resilience deficiency has become a prominent obstacle restricting students' comprehensive growth. Therefore, exploring effective and sustainable ways to promote mental health has become an important topic in higher education. Traditional mental health education mainly relies on methods such as counseling, psychological counseling courses, and crisis intervention. These measures, although they can address some psychological problems, often focus on problem repair and negative emotion intervention, lacking long-term, universal daily intervention carriers embedded in professional teaching. With the development of positive psychology, researchers have begun to focus on the cultivation of positive qualities in individuals, hoping to improve mental health by enhancing factors such as well-being, positive emotions, self-efficacy and social support.

In regular teaching in colleges and universities, music education is not only an important part of aesthetic education, but also has potential psychological healing functions. Systematic meta-analysis research confirms that collective music participation can simultaneously regulate individual emotional experience and interpersonal perception, producing dual psychological intervention effects on intrapersonal and interpersonal levels. Compared with individual musical practice, group ensemble learning relies on synchronous cooperation, mutual feedback and shared performance goals to build secure social connection chan-

nels, which is more conducive to relieving students' sense of isolation and learning pressure. However, current domestic research on piano group lessons mainly focuses on teaching model innovation, teaching effect evaluation, and curriculum reform, with relatively insufficient attention paid to its psychological promoting function. Especially from the perspective of positive psychology, there is still a lack of systematic empirical research on how piano lessons affect psychological qualities such as positive emotions, self-efficacy, social connection and psychological resilience of college students.

1.2 Implications of the Study

This study selects positive psychology as the entry point and has significant theoretical and practical implications.

At the theoretical level, this study, based on the framework of positive psychology, explores the intrinsic logic between piano classes and the psychological development of college students. Previous studies have focused more on the development of musical skills, while ignoring the role of music education in psychological development. This study examines the psychological facilitation mechanisms of piano group lessons from dimensions such as positive emotions, self-efficacy, social connection, and psychological resilience, providing a new theoretical perspective for related research. Not only does it fill the gap in conventional music classroom research on psychological empowerment mechanisms, but it also provides a fresh perspective and empirical support for interdisciplinary research on music education and mental health. Existing international systematic reviews mostly take group singing as the main research object, while rarely carrying out targeted discussion on keyboard group teaching represented by piano group classes, this study can enrich the research category of group music psychological intervention [6].

At the practical level, this study helps to promote the reform of piano teaching in colleges and universities and provides a new practical path for mental health education

in colleges and universities. Compared with the traditional counseling model, piano group classes have the advantages of wide coverage, high participation and strong sustainability, and can become an important vehicle for promoting the daily mental health of college students. Different from professional music therapy which needs professional psychological counselors to participate, piano group lessons rely on existing art curriculum systems, with lower promotion threshold and wider application scope. The psychology-empowered piano class teaching model proposed in this study can provide a reference for the construction of art courses in colleges and universities, promote the coordinated development of mental health education and art education, and improve the level of comprehensive quality cultivation of college students.

1.3 Current research status at home and abroad

Research on the relationship between music education and mental health started earlier abroad. Seligman, the founder of positive psychology, points out that positive emotions, individual strengths, and social support are important factors in promoting mental health [1,2]. Relevant research shows that musical activity can effectively improve an individual's emotional state and enhance well-being and social belonging. Hallam (2010) argues that music learning can promote intellectual development, social ability improvement and personality growth of individuals [3]. MacDonald et al. (2012) further pointed out that collective music activities have positive effects on stress relief, emotion regulation and social connection [4,5]. Recent follow-up research supplemented the physiological mechanism of group music intervention: synchronized ensemble behavior can stimulate the secretion of oxytocin among participants, reduce cortisol stress level, and consolidate long-term interpersonal trust and psychological security [7]. Besides, group music creation and performance can provide non-verbal emotional expression channels for students who are not good at verbal communication, realizing implicit psychological repair that traditional psychological counseling is difficult to achieve [8].

Research on the relationship between music education and mental health of college students has been increasing in China in recent years [9-11], mainly focusing on areas such as music therapy and the relationship between music education and mental health. It is generally believed that music activities can relieve anxiety, improve mental state, and enhance the well-being and social adaptability of college students. In the study of piano group lessons, domestic scholars have focused on the innovation of teaching models and curriculum reform, such as the introduction of

Orff music teaching methods, flipped classrooms, blended online and offline teaching, and stratified teaching, etc. [9,10]. These discussions provide valuable references for the optimization of classroom practice in this study. However, existing research focuses more on teaching effectiveness and professional competence development, and there is a lack of in-depth exploration of the mechanisms by which piano lessons promote psychological development among college students, especially in the specific mechanisms by which piano lessons influence students' emotional regulation, self-identity and social connection through specific scenarios such as classroom interaction and ensemble collaboration. A localized empirical research paradigm centered on positive psychology has not yet been formed [11].

1.4 Research Content and Research Approach

This study, guided by the theory of positive psychology, focuses on analyzing the impact of piano group classes on positive emotions, self-efficacy, social connection, and psychological resilience of college students.

The study employed a combination of literature analysis, questionnaire survey, classroom observation and interviews, and through a combination of quantitative and qualitative research, comprehensively analyzed the mechanism by which piano group classes promote psychological development among college students. Based on this, summarize the key teaching factors that affect the effect of psychological empowerment and construct a psychological empowerment-oriented piano group class teaching model to provide a reference for the integrated development of music education and mental health education in colleges and universities.

2. Theoretical basis and research design

2.1 The theoretical foundation of positive psychology

2.1.1 Theoretical Foundations of Positive Psychology

Positive Psychology is an important psychological theory proposed by the American psychologist Martin Seligman in the late 1990s. Unlike traditional psychology, which mainly focuses on mental illness and negative issues, positive psychology emphasizes the exploration and development of individuals' positive qualities and potential, and focuses on how people can gain happiness, achieve self-growth, and improve the quality of life. Seligman believes

that positive psychology mainly consists of three dimensions: positive emotions, positive personality traits, and positive social environment. Among them, positive emotions are an important source of happiness for individuals; Positive personality traits manifest as psychological qualities such as self-confidence, self-discipline, optimism, tenacity, etc. A positive social environment emphasizes the growth and development of individuals through group interaction and social support.

In higher education, positive psychology emphasizes creating positive learning experiences and growth environments to help students enhance psychological resilience, improve self-efficacy, and develop healthy and positive personality traits. Therefore, positive psychology provides an important theoretical basis for studying the mechanism by which piano lessons promote the psychological development of college students.

2.1.2 PERMA's Theory of Happiness

The PERMA theory is an important component of positive psychology and mainly consists of five dimensions:

(1) Positive Emotion

Positive emotions are an important foundation for an individual's well-being, including emotional experiences such as happiness, satisfaction, hope, and interest. In piano group lessons, music appreciation, performance experience and classroom interaction can stimulate students' positive emotions and relieve the psychological stress caused by negative emotions.

(2) Engagement

Engagement refers to the experience of concentration that occurs when an individual is fully engaged in an activity. The piano learning process requires students to be highly concentrated, and it is easy to form immersive experiences during practice and performance, thereby increasing learning interest and psychological satisfaction.

(3) Positive relationships (Relationship)

Positive relationships emphasize good social connections between people. Cooperative performance, group communication and classroom presentation in piano group lessons can promote communication and cooperation among students, and enhance a sense of belonging and social support.

(4) Sense of Meaning

Meaning refers to an individual's recognition that their actions have value and meaning. Through music learning and artistic expression, students can gain spiritual satisfaction, thereby enhancing their motivation to learn and their sense of value in life.

(5) Achievement

A sense of achievement comes from the positive experience

of achieving a goal. The improvement of piano skills, the recognition of classroom performance, and the achievement of phased learning outcomes contribute to enhancing students' self-confidence and self-efficacy.

Therefore, the PERMA theory can well explain the internal logic of how piano group lessons promote the mental health development of college students [2].

2.2 Educational Characteristics of Piano Group lessons

2.2.1 The Basic Connotation of Piano Group lessons

Piano group lessons refer to piano teaching activities carried out in the form of classes or groups. Compared with the traditional "one-on-one" piano teaching, piano group lessons place more emphasis on classroom interaction, cooperative learning and resource sharing.

In college music education, piano classes not only undertake the task of imparting music knowledge and developing performance skills, but also serve as an important platform for students to engage in emotional communication, cooperative learning and comprehensive quality development.

2.2.2 Psychological educational advantages of piano group lessons

First of all, piano lessons are highly interactive. Students can form positive interpersonal relationships in class through cooperative playing, experience sharing and achievement presentation. Secondly, piano group lessons are highly participatory. Students are not only recipients of knowledge, but also participants and creators of classroom activities, which helps to increase learning interest and classroom engagement. Again, piano group lessons have the function of emotional expression. Music itself is rich in emotional content, and students can relieve stress, express emotions and gain psychological satisfaction in the process of playing and appreciating. Finally, piano group lessons have a social support function. Teacher encouragement, peer cooperation and collective atmosphere in the classroom can enhance students' sense of belonging and security [6] and provide a good supportive environment for mental health development.

2.3 Subjects and methods of study

2.3.1 Research Subjects

This study focused on college students who participated in piano group lessons at Shenyang Conservatory of Music. The subjects included students of different grades and different levels of piano foundation to ensure that the sample

was representative.

The study focused on the changes in students' psychological states before and after the lessons, and examined the impact of piano group lessons on their positive emotions, self-efficacy, social connection, and psychological resilience.

2.3.2 Research methods

(1) Literature review method

By reviewing relevant literature in the fields of positive psychology, music education, music psychology, and mental health of college students at home and abroad, the research results and theoretical basis were sorted out to provide theoretical support for this study.

(2) Questionnaire survey method

The Positive Emotion Scale, the General Self-Efficacy Scale, the Perceived Stress Scale, and the Resilience Scale were used to conduct pre - and post-course tests on students, and the effects of piano group lessons on the psychological qualities of college students were analyzed through data comparison.

(3) Classroom observation method

By observing the classroom and recording teaching activities, teacher-student interactions, cooperative performances, and classroom atmosphere, analyze the relationship between classroom practice and psychological facilitation effects.

2.4 Research Framework and Technical Route

This study is based on positive psychology theory and uses piano group class teaching activities as the research

vehicle to focus on the mental health development of college students.

First, a theoretical framework was constructed through literature research to identify four core research dimensions: positive emotions, self-efficacy, social connection, and psychological resilience. Secondly, questionnaires were used to obtain data on students' psychological states before and after the course, and statistical analysis was conducted to verify the psychological facilitation effect of piano group lessons. Again, based on interview data and classroom observations, conduct an in-depth analysis of the specific mechanisms by which piano lessons affect the psychological development of college students. Finally, based on the research results, construct the "psychologically empowered piano group class" teaching model and propose course optimization strategies and implementation suggestions.

The overall logic of the research follows the research path of "theoretical analysis - empirical investigation - mechanism explanation - model construction" to achieve a systematic study on the psychological promoting effect of piano group classes.

3. An empirical analysis of the psychological facilitation effect of piano group lessons on college students

3.1 Basic information analysis of the respondents

Table 3-1 Basic Information Statistics Table of Respondents (N=66)

Items	Categories	Number of people	Percentage (%)
Gender	male	30	45.45
	female	36	54.55
Grade	Freshman	61	92.42
	Sophomore	2	3.03
	Junior	1	1.52
	Senior	2	3.03
"Piano Basics"	No foundation	39	59.09
	Within 1 year	14	21.21
	1-3 years	8	12.12
	More than 3 years	5	7.58

Table 3-1 shows that the majority of the respondents were freshmen (92.42%), and more than half of them had no prior piano learning background (59.09%), indicating that the research subjects were mainly ordinary piano begin-

ners, which can well reflect the actual impact of piano group lessons on the psychological development of college students.

3.2 The role of piano group lessons in promoting positive emotions among college students

Table 3-2 Survey Results on the dimension of Positive Emotions among College Students (%)

Survey items	Satisfied	Very satisfied	Total (%)
Frequently experience pleasant moods and happy emotions	31	19	75.76
It's easy to get a sense of satisfaction and happiness	29	22	77.27
Be able to face problems with a positive attitude	30	17	71.21
Recover quickly after a setback	28	16	66.67

As shown in Table 3-2, the proportion of positive evaluations in all positive emotion indicators exceeds 65%, indicating that piano group classes can effectively promote students' positive emotion experiences. Among them, the

dimension of "satisfaction and happiness" was the most prominent, accounting for 77.27%.

3.3 The promoting effect of piano group lessons on self-efficacy

Table 3-3 Results of the self-efficacy Dimension Survey

Survey items	Satisfied	Very satisfied	Total (%)
Be confident of completing new learning tasks	32	16	72.73
Take the initiative to seek solutions when encountering difficulties	33	16	74.24
Be confident when presenting in class.	29	12	62.12
Still recognize your abilities when learning setbacks	31	13	66.67
Recognize your own value in group work	32	13	68.18

Table 3-3 shows that the proportion of students giving positive evaluations in each dimension of self-efficacy exceeds 60%. Especially in terms of problem-solving skills, 74.24% of students gave positive evaluations, indicating

that piano group lessons help cultivate students' confidence and initiative in the face of challenges.

3.4 The promoting effect of piano group lessons on psychological resilience of college students

Table 3-4 Psychological Resilience Dimension Survey Results

Survey items	Satisfied	Very satisfied	Total (%)
Be able to readjust after failure.	27	13	60.61
Actively seek solutions in the midst of difficulties	29	13	63.63
Hard experiences contribute to growth	31	17	72.73
Better psychological resilience in the face of unexpected problems	28	28	60.61

Table 3-4 shows that piano lessons play a positive role in developing the stress resistance and adaptability of college students. Among them, the "Difficult experiences promote growth" indicator scored the highest at 72.73%, reflecting that challenging experiences during the music learning

process contribute to enhancing students' psychological resilience [8].

3.5 Analysis of Psychological Facilitation Mech-

anisms in Piano Group Lessons

Table 3-5 Statistical Table of Psychological Facilitation Factors for Piano Group Lessons

Classroom factors	Approved number of students	Percentage (%)
Ensemble collaboration enhances a sense of belonging	47	71.22
Positive feedback from teachers boosts confidence	50	75.76
Playing the piano helps relieve anxiety	45	68.18
Group activities enhance communication skills	50	75.76
Overall stress relief after learning	49	74.25

Table 3-5 shows that teacher positive feedback and group cooperative activities are the psychological facilitators with the highest student recognition, both reaching over 75%. This suggests that classroom interaction and positive evaluation mechanisms are important ways for piano group classes to exert psychological empowerment functions [7].

4. Construction of a psychologically empowering piano group class teaching model

4.1 Construction Principles

Based on positive psychology theory and findings, this study proposes to construct a "psychologically empowered piano group class" teaching model. The model adheres to the principle of positive experience; Adhere to the student-centered principle; Adhere to the principle of cooperation and interaction; Adhere to the principle of growth evaluation; Adhere to the principle of integrating mental health with professional teaching.

4.2 Strategies for optimizing teaching content

Firstly, incorporate popular music, film and television music, and improvisational accompaniment that students love in the design of teaching content to enhance students' interest in learning. Secondly, the difficulty of technical training should be appropriately reduced, and stratified teaching should be carried out based on students' foundations to avoid frustration due to excessive learning pressure.

Again, music emotional expression training should be strengthened to guide students to express their personal emotions and thoughts through music and fully exert the psychological adjustment function of music [3,7].

4.3 Strategies for optimizing classroom activities

The survey shows that group ensemble and classroom presentation are the teaching segments that students consider most conducive to psychological growth. As a result, the organization of the classroom should incorporate duet playing, group ensemble activities, classroom outcome presentations, music games and interactive activities, and improvisation activities.

By enriching the forms of classroom activities, enhance students' sense of participation and belonging, and promote the development of their positive psychological qualities [4,7].

4.4 Teaching Evaluation and optimization strategies

Traditional piano teaching evaluation focuses mainly on technical proficiency and neglects the psychological growth process of students. Therefore, this study suggests establishing a diversified evaluation system. On the one hand, pay attention to students' learning attitudes, cooperative awareness and participation levels; On the other hand, strengthen formative assessment and reduce mere outcome assessment. Teachers should use more encouraging language and positive feedback to help students build confidence in learning and enhance self-efficacy. At the same time, peer review mechanisms can be introduced to allow students to gain growth experiences through mutual appreciation and support [8].

4.5 Psychological Empowerment Model for Piano Group Lessons

Based on the research results, this paper constructs a teaching model of "positive psychology - piano group class - psychological growth". It is manifested as: music experience → positive emotion enhancement; Skill acquisition

sition → Enhanced self-efficacy; Cooperative ensemble → Strengthened social connection; Classroom presentation → Self-identity enhancement; Teacher feedback → Psychological resilience development. Ultimately achieve a comprehensive improvement in mental health and overall quality of college students.

This model can not only meet the piano teaching needs of colleges and universities, but also provide a new practical path for mental health education in colleges and universities, and has strong promotion value and application prospects [6-8].

5. Conclusion

5.1 Research Conclusions

With the increasing demand for mental health education in colleges and universities, exploring the path of integrated development of classroom teaching and mental health education has become an important direction of higher education reform. This paper, guided by the theory of positive psychology, takes students of piano group classes at Shenyang Conservatory of Music as the research subjects and explores the promoting effect of piano group classes on the mental health development of college students and its realization mechanism through literature research, questionnaire survey, classroom observation and interview.

The research results show that piano classes not only have the function of cultivating musical skills, but also have significant psychological promotion value. First of all, piano lessons can effectively enhance the level of positive emotions of college students. Students gain pleasure, satisfaction and happiness in the process of music experience, classroom interaction and performance practice, thereby alleviating negative emotions in study and life and enhancing mental health. Secondly, piano group lessons can enhance college students' self-efficacy. Through skill acquisition, classroom presentation, and teacher's encouraging evaluation, students gradually build up confidence in learning, increase recognition of their own abilities, and form positive self-awareness. Again, piano lessons can promote the development of social connections among college students. Cooperative performance, group practice and classroom communication create a good communication environment for students, which helps to enhance interaction and cooperation among peers and increase a sense of belonging and collective identity. Finally, piano lessons can enhance the psychological resilience of college students. Students gradually improve their resilience and psychological adaptability through continuous practice and positive adjustment when facing learning difficulties, performance challenges, and classroom presentation

pressure.

Further analysis reveals that music experience, classroom interaction, cooperative learning, classroom presentation, and teacher feedback are important influencing factors for the psychological growth of college students in piano group classes. Among them, positive evaluations from teachers and peer support play a key role in psychological facilitation. Based on the research results, this paper constructs a "psychologically empowered piano group class" teaching model, achieving the organic integration of music education and mental health education through optimizing teaching content, classroom activity design and evaluation mechanism, providing new ideas and practical references for the reform of music courses in colleges and universities.

5.2 Insufficient Research

Although this study has achieved some results, there are still some shortcomings.

First of all, the study sample was mainly from students of piano group classes at Shenyang Conservatory of Music, and the sample size was relatively limited. The universality of the study results still needs to be further verified.

Secondly, this study mainly used a combination of questionnaire surveys and interviews. Although it could better reflect the subjective experience of students, it lacked long-term follow-up data and was unable to fully examine the continuous impact of piano group classes on students' psychological development.

Again, due to the limitations of time and conditions in the study, a more in-depth classification and comparative analysis of students with different professional backgrounds and grades was not conducted, nor was a more complex statistical test conducted on the specific relationships among the influencing factors.

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