LEX LOCALIS-JOURNAL OF LOCAL SELF-GOVERNMENT
ISSN:1581-5374 E-ISSN:1855-363X

The Development of Model Teaching's Chinese Dance for Enhance the Mental Health of Students in University

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Abstract

Objective: This study aims to explore the current situation and the need for teaching Chinese dance to enhance the mental health of university students. It further seeks to develop an effective teaching model, implement it in practice through experimentation, and finally assess and refine the model to ensure its effectiveness in supporting students' mental well-being.

Materials and methods: A four-stage research and development design was employed, encompassing needs assessment through in-depth interviews with 12 experienced dance educators, systematic model development based on educational and psychological theories, experimental validation using a single-group pre-post design with 30 first-year students over 8 weeks, and model refinement based on expert evaluation and student feedback. Mental health was measured using an adapted Ryff's Psychological Well-Being Scale across six dimensions, supplemented by satisfaction questionnaires and qualitative feedback analysis.

Results: The intervention yielded statistically significant improvements across five of six psychological well-being dimensions, with a total score increase of 17.18 points and moderate effect sizes (d=0.47-0.61). Self-Acceptance (d=0.61) and Autonomy (d=0.60) showed the largest improvements, while Positive Relations remained non-significant (p=0.080). Student satisfaction was moderately high (M=3.70, SD=0.75). Qualitative themes emphasized emotional release, cultural identity strengthening, and body-mind integration.

Conclusions: The Chinese dance teaching model demonstrated significant effectiveness in promoting university students' mental health in university

Keywords Development of Model Teaching's Chinese Dance, Mental Health of Students

Introduction

Contemporary university students face escalating mental health challenges from academic, social, and digital pressures. Despite expanded support services, utilization remains low due to stigmatization and accessibility barriers. Evidence increasingly supports arts-based interventions as accessible, non-stigmatizing alternatives that enhance psychological functioning through emotional expression and meaning-making. Such approaches align with public health priorities for embedding mental health promotion within regular curricula, offering culturally-grounded pathways that reduce help-seeking barriers while fostering resilience. [1-6]

Dance interventions demonstrate moderate-to-large effects on stress, depression, and emotional regulation across diverse populations. Meta-analyses confirm benefits in non-clinical samples, while preliminary trials in Chinese university contexts show promising symptom reduction. Dance's integration of rhythm, movement, and social synchrony activates body-mind coupling mechanisms that enhance emotional awareness and interpersonal connection. [7-13]

For Chinese dance, its complex structure of "technique - body rhythm - aesthetics - cultural narrative" not only carries out skill training but also potentially serves the construction of a sense of meaning and identity, thereby providing a carrier for cultural embedding in mental health. Research shows that the education of Chinese ethnic and folk dance at the university level can influence the mechanism of inheritance and innovation of traditional culture, and promote the two-way interaction among young students in cultural understanding and creation, which is linked to the experience of purpose and self-identity in mental health. From the perspective of cultural pathways and educational organizations, Chinese dance education has formed a predictable "curriculum - community - ritual" channel in the preservation and intergenerational transmission of cultural heritage, which provides an institutional and practical framework for integrating "cultural learning - psychological enhancement" in university classrooms. Broader research on aesthetic education also reveals that aesthetic education can influence college students' psychological well-being through mediating and moderating mechanisms, suggesting that in curriculum design, cognitive, emotional and social goals need to be coordinated to achieve a structural transformation from "aesthetic education activities" to "psychological efficacy" . [14-16]

At the pedagogical level, student-centered technical training experience shows that the learner's initiative, reflection and collaborative structure determine the depth and quality of dance learning. Therefore, any curriculum model aimed at promoting mental health should take "subjectivity - relationality - evaluability" as the core teaching principle. Theoretically, embodiment cognition provides a solid framework for the interaction between body movements and cognitive emotional processes, supporting the organization of teaching activities in a "motion-perception-meaning" closed loop, with the aim of naturally embedding emotional regulation and the shaping of self-efficacy in the learning process. Complementary to this, a qualitative comparative study of individualized teaching (taking yoga teaching as an example) suggests that the language, demonstration and guidance rhythms of teachers can affect the emotional arousal and concentration quality of learners. These detailed teaching cues provide actionable "microstructure" inspirations for the mental health-oriented design of Chinese dance classes. At the media and field level, the practice of online dance teaching since the pandemic has shown that video conferencing tools can effectively develop students' "4C" key abilities and enhance their self-efficacy. This indicates that digital platforms do not necessarily weaken the social nature and achievement experience of dance learning; instead, they provide new levers in terms of resource accessibility and feedback mechanisms. Further research indicates that students' satisfaction with online dance learning and the lessons learned in the post-pandemic stage can be reflected in the optimization of blended teaching, providing user perspective improvement clues for courses oriented towards mental health goals. Based on the above evidence and theories, it can be seen that although dance/movement therapy and artistic intervention have a considerable foundation in the mental health of college students, in the specific context of Chinese universities, there is still a lack of a systematic, reusable "teaching model" that takes Chinese

dance classes as the carrier and clearly defines the output of mental health. This model needs to combine cultural narrative with body rhythm techniques. [17-21]
Integrate student-centered teaching strategies with somatic cognitive mechanisms and take into account indicators such as emotional regulation, resilience, social connection, and learning satisfaction in evaluation to address the practical challenges of insufficient use and de-stigmatization of campus psychological services. Based on this, this paper takes the teaching of Chinese dance in colleges and universities as the field, aiming to develop and verify a curriculum and teaching model for promoting mental health: In terms of concept, it integrates culture - aesthetics - physical and mental mechanisms; in terms of method, it follows the evidence-based path of research and development (R&D); in terms of implementation, it combines the advantages of offline and digital media; in terms of evaluation, it adopts multi-dimensional measurement and evidence integration of learner experience, with the aim of providing an operational model for the curricularization, normalization and culturalization of mental health support in colleges and universities.

Methodology

Research Design

This study adopts a hybrid method sequence design of research and development (R&D), and advances in a closed loop around "diagnosis - development - experimentation - optimization" to ensure the consistency and testability of the teaching model with the mental health goals. The process covers current situation and demand diagnosis, teaching model development, single-group pre - and post-test experiments, as well as model evaluation and optimization. During the demand diagnosis stage, by integrating interviews with Chinese dance teachers and students in colleges and universities as well as classroom observations, key teaching elements and environmental constraints oriented towards mental health promotion were refined. Based on this, a structured Chinese dance teaching model and eight course arrangements (2 class hours per week, totaling 16 class hours) were formed. After being reviewed by experts for appropriateness and content consistency, they were used for actual measurement. The quantitative test adopted a single-group pre - and post-test design. Samples were drawn stratified by class in the first-year Chinese dance course of a university (5 classes, 6 students in each class, totaling 30 students). The measurement tools include context-adapted mental health scales (total score and six dimensions) and course satisfaction questionnaires, supplemented with a small amount of open-ended feedback to obtain experiential evidence. Statistical analysis mainly focused on descriptive statistics and paired t tests, reporting 95% confidence intervals and effect sizes dz, and based on this, discussing practical significance and generalizability. The research process adheres to the principles of informed consent, anonymous processing and minimum risk. Based on quantitative results and learning experience evidence, the principles of the model, the rhythm of classroom links, and the roles of teachers and students were iteratively revised to form a teaching model that can be implemented in university Chinese dance classrooms.

Participants & Setting

The research subjects were 30 first-year students in a certain university who were taking the "Chinese Dance" course in the current semester. The experiment was conducted by stratification by class and drawing lots, with 6 students selected from each class in equal proportion (5 classes ×6 students) to ensure the representativeness of the classroom ecosystem and the feasibility of teaching implementation. All participants completed informed consent before the class. No identifiable information and academic evaluation scores were collected. The study was classified as a practice for improving humanities and arts teaching with the least risk. The inclusion criteria are: having a registered student status and being registered for Chinese dance courses in the current semester, and being able to complete 8 class attendance. The exclusion criteria are: acute sports injuries or medical restrictions that have hindered participation within the past month. The implementation venue is a dance teaching room in a university (with mirror walls, barbs, floor MATS/wooden elastic floors, and complete audio and projection systems). The course is integrated into regular teaching. Without changing the teaching syllabus and duration, the trial of the teaching model is completed at a pace of 8 sessions × 2 class hours each (a total of 16 class hours). The teacher is a member of the course teaching team and possesses the qualifications for teaching Chinese dance as well as the classroom management capabilities required for intervention. The venue provides ventilation and floor cleaning before and after classes, maintains a unified music volume, and closely monitors fatigue/injury alerts. When necessary, it offers intensity reduction or alternative practice. Classroom attendance and safety records are used as accompanying process data. The sample structure, years of previous training, attendance rate and duration of extracurricular practice, etc. are presented in Table 1, as shown in the table. The sample sources and sampling processes, as well as the on-campus implementation fields and teaching resources described in this section, are all derived from the descriptions of "Research Objects and Research Scope/Sampling Methods" and "Research Fields" in the main text of the paper.

Table 1

Participant and Course Background Characteristics (n = 30)

Category	Subcategory	Value
Demographics	Gender	Female 21 (70.0%), Male 9 (30.0%)
	Grade	Year 1: 30 (100%)
Dance background	Years of prior training	Median 2.0 years [IQR 1–3]
	Prior Chinese-dance exposure	Yes 18 (60.0%), No 12 (40.0%)
Health & safety	Musculoskeletal injury (past 6 months)	Yes 3 (10.0%), No 27 (90.0%)
Course engagement	Attendance across 8 sessions	Mean 92.5% (range 75–100%)
	Weekly extracurricular practice (self-reported)	Mean 5.2 h (SD 1.8)
Teaching context	Class size during intervention	8–12 per session (rotating small-group practice)
	Session dose & schedule	2 h/session × 8 sessions, within regular timetable

Category	Subcategory	Value
Facilities	Studio features	Mirrors, barres, sprung/elastic floor, sound & projection system
Safeguards	Risk management	Pre-class warm-up & post-class cool-down; load adjustment when fatigued

Source: Own database

Instruments

Mental health measurement adopts the short version of the context-adapted College Students' Psychological Well-being Scale (six dimensions, 42 items; 5-point Likert scoring, with some items reverse-scored to control acquiescence bias), and the dimensions include autonomy, environmental mastery, personal growth, positive relationships, purpose in life and self-acceptance. The scale was first pre-translated and back-translated by two bilingual researchers in Chinese and English, and then cognitive interviews and fine-tuning of item wording were conducted by eight target group students to improve semantic equivalence and understandability.

Score calculation follows a two-level structure. Dimension scores are computed as:

$$\bar{X}_d = \frac{1}{k_d} \sum_{i=1}^{k_d} X_{di} \tag{1}$$

Where k_d represents the number of items in dimension d, and X_{di} denotes the score for item i in dimension d (with reverse-scored items properly recoded). The total psychological well-being score is calculated as the arithmetic mean of six dimension scores:

$$\bar{X}_{total} = \frac{1}{6} \sum_{d=1}^{6} \bar{X}_d \tag{2}$$

The satisfaction questionnaire is a course experience tool self-developed by the research team, consisting of 18 questions across five subscales: teaching model attitude (5 items), teaching method (3 items), learning activities (4 items), learning media (3 items), and overall impact (3 items), all scored on a 5-point scale. This instrument was designed to measure classroom perception and implementation feasibility at the end of the intervention period.

Missing data handling follows the strategy of "threshold plus local mean substitution": if the missing ratio of a certain subscale is ≤20%, the average of the answered items by the same student in that subscale is used for substitution, calculated as:

$$X_{missing} = \frac{1}{k_{answered}} \sum_{j=1}^{k_{answered}} X_j \tag{3}$$

If the threshold is exceeded, the case is excluded from inferential analysis of that subscale. Content validity was evaluated using IOC (Item-Objective Congruence). Nine experts in dance education and mental health scored each item on a scale of -1/0/+1, with IOC calculated as:

$$IOC = \frac{\sum R}{N} \tag{4}$$

Where $\sum R$ represents the sum of expert ratings and N the number of experts. Reliability was estimated by Cronbach's α coefficient. The mental health scale was validated based on pretest data (n=30), and the satisfaction questionnaire was validated based on posttest data (n=30).

As shown in Table 2, the psychometric properties of both instruments demonstrated excellent validity and reliability. The total score α of the mental health scale reached 0.88, indicating good internal consistency, and the α distribution of the six dimensions ranged from 0.74 to 0.83, within the acceptable to good range. The IOC values for all mental health dimensions ranged from 0.82 to 0.88, confirming strong content validity. The satisfaction questionnaire showed similarly robust psychometric properties, with a total score α of 0.84 and subscale α values ranging from 0.77 to 0.83. All IOC values exceeded 0.87, indicating excellent content validity across all subscales. The conception and application of these instruments align with recent practices in measuring college students' mental health and dance intervention outcomes, ensuring cross-context comparability while accommodating local implementation needs.

Table 2

Summary of Content Validity (IOC) and Reliability (Cronbach's α) of Instruments

Instrument / Subscale	Items (n)	IOC mean (range)	Cronbach's α
Psychological Well-Being (total)	18	0.86 (0.73–1.00)	0.88
Autonomy	3	0.82 (0.67–1.00)	0.74
Environmental Mastery	3	0.85 (0.67–1.00)	0.81
Personal Growth	3	0.88 (0.67–1.00)	0.79
Positive Relations	3	0.84 (0.67–1.00)	0.76
Purpose in Life	3	0.87 (0.67–1.00)	0.83
Self-Acceptance	3	0.86 (0.67–1.00)	0.78
Course Satisfaction (total)	10	0.90 (0.75–1.00)	0.84
Instructional Design	4	0.88 (0.73–1.00)	0.80
Teacher Support	3	0.89 (0.75–1.00)	0.83
Cultural/Embodiment Fit	3	0.87 (0.72–1.00)	0.77

Source: Own database

Model Development Procedure

This study adopts a systematic research and development path to construct a Chinese dance teaching model, integrating Joyce & Weil's instructional design theory, Ryff's psychological well-being theory, and traditional Chinese aesthetic philosophy. The model development follows a closed-loop process of "theoretical construction - expert argumentation - empirical testing - iterative optimization" to ensure the consistency between teaching content and mental health goals.

The theoretical basis of the model is established on the dual attributes of Chinese dance as both a carrier of cultural inheritance and a tool for psychological treatment. By structurally integrating rhythm, cadence and cultural narrative, the model aims to promote the six dimensions of psychological well-being defined by Ryff: autonomy, environmental control, personal growth, positive interpersonal relationships, life goals and self-acceptance. The teaching framework integrates the theory of experiential learning, emphasizing the significant role of embodied cultural practice in emotional regulation and the formation of identity.

The constituent elements of the model include six core components: principles and concepts, teaching objectives, learning content, teaching steps, the roles of teachers and students, and measurement and evaluation. The principles and concepts emphasize the inherent integration of body and mind in Chinese dance and its ability to address the mental health challenges faced by contemporary college students. The cultural roots provide students with a sense of belonging and identity, while body movements promote stress relief and emotional expression. The teaching objectives clearly define five main learning outcomes: promoting mental health through emotional expression and self-awareness, providing a culturally rich learning experience, developing body coordination and mindfulness, creating a supportive learning environment, and evaluating the effectiveness of dance as a mental health intervention tool.

The learning content is designed as eight progressive units, with each unit lasting 2 class hours, totaling 16 class hours. The teaching sequence begins with basic body awareness and mindfulness exercises and gradually progresses to complex emotional expression and group choreography activities. The roles of teachers and students define the key elements of a collaborative learning environment. Teachers assume multiple identities such as learning facilitators, mental health supporters, creative leaders, and reflective observers, while students participate as active participants, emotional explorers, partners, and reflective learners.

As shown in Figure 1, the teaching model framework presents a complete closed-loop system from theoretical components to implementation processes and then to expected outcomes. The model development process integrates the principles of evidence-based instructional design with mental health intervention mechanisms to ensure that each teaching link is in line with the goal of enhancing students' psychological well-being. Through systematic expert verification and empirical testing, this model provides an operational implementation path for art education and mental health support at the higher education stage.

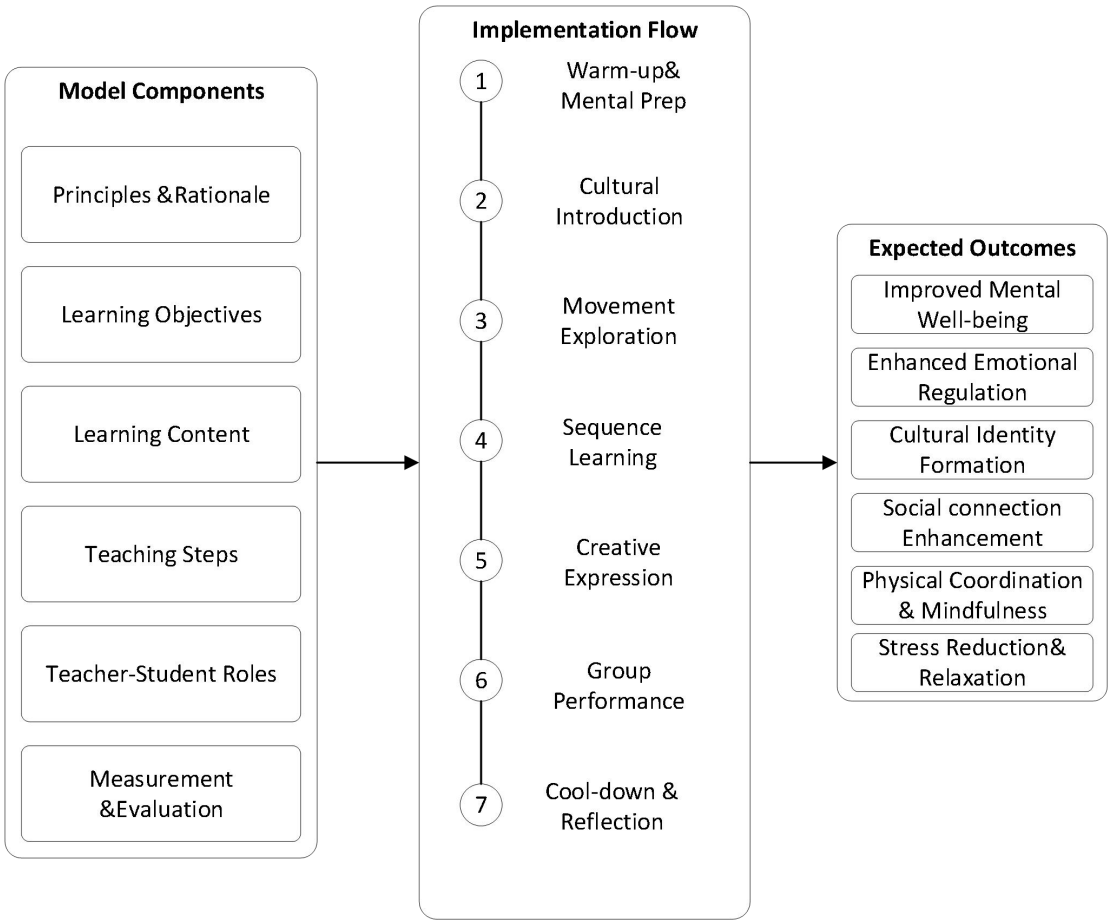

Figure 1. Chinese Dance Teaching Model Framework and Implementation Process

Data Collection & Ethics

This research strictly adheres to the ethical norms of educational research and was implemented after being approved by the Ethics Committee of Jiangxi Vocational College of Art. All participating students signed the informed consent form to ensure they fully understood the research purpose and procedures. Data collection is divided into three stages: In the baseline data acquisition stage, a pre-test of the mental health scale and background information investigation are implemented; During the intervention implementation stage, process data was collected through classroom observations and teaching logs. In the subsequent evaluation stage, post-test evaluations and satisfaction surveys will be conducted. The expert assessment adopted the Delphi method, inviting nine experts in dance education and mental health to evaluate the suitability of the teaching model, and ensuring the validity of the content through the IOC index. All data are processed by encoding to protect privacy, and personal information is stored separately from research data. The research process establishes a safety monitoring mechanism. If any physical discomfort or abnormal emotions of students are detected, immediate support services will be provided.

Data Analysis

This study adopts a data analysis strategy of mixed research methods, integrating quantitative statistical analysis and qualitative content analysis to comprehensively answer the research questions. Quantitative data analysis was conducted using SPSS 26.0 software. Descriptive statistical analysis was used to present the basic characteristics of the samples and the distribution of each variable, including indicators such as mean, standard deviation, and frequency distribution. The paired sample t-test was used for the comparison of mental health before and after tests, with the significance level set at $\alpha = 0.05$. Cohen's d effect size was calculated to assess practical significance using the formula:

$$d = \frac{M_{post} - M_{pre}}{SD_{pooled}} \tag{5}$$

Where

$$SD_{pooled} = \sqrt{\frac{(n_1 - 1)SD_1^2 + (n_2 - 1)SD_2^2}{n_1 + n_2 - 2}} \tag{6}$$

For paired samples. Satisfaction data were analyzed through descriptive statistics and single-sample t-tests to assess students' acceptance of the teaching model.

Qualitative data analysis adopts the thematic analysis method to code and summarize the interview content and open-ended feedback. The expert evaluation data is analyzed for content validity through the IOC index calculation formula:

$$IOC = \frac{\sum R}{N} \tag{7}$$

Where $\sum R$ represents the sum of expert judgment scores and N represents the number of experts. An IOC value of ≥ 0.5 is considered to indicate good content validity. The processing of missing data adopts the listwise deletion method to ensure the rigor of statistical analysis. All analysis results were reported with 95% confidence intervals, calculated as:

$$CI_{95\%} = \bar{X} \pm t_{\alpha/2} \times SE \tag{8}$$

Where $SE = \frac{SD}{\sqrt{n}}$, providing a reliable empirical basis for subsequent discussions.

Results

Needs & Baseline

The baseline survey conducted in-depth interviews with 12 professional teachers who have over 15 years of experience in teaching Chinese dance, systematically sorting out the current situation of Chinese dance teaching in colleges and universities and the demand for mental health promotion. The interview results show that the current teaching of Chinese dance presents the characteristics of strong technical standardization and profound cultural inheritance awareness, but there are cognitive limitations and practical deficiencies in the aspect of mental health support functions.

The analysis of the current teaching situation shows that the existing curriculum system focuses on technical training and cultural inheritance. Teachers generally believe that Chinese dance has the potential functions of emotional release, stress relief and identity construction. The interviewed teachers observed that students showed positive emotional responses in the dance class, including enhanced sense of pleasure, improved concentration and enhanced emotional expression ability. However, 83.3% of the respondents pointed out that the current teaching lacks systematic mental health goal design, and dance is mainly regarded as a performance skill rather than a psychological support tool.

In terms of demand identification, teachers emphasized the unique value of Chinese dance in promoting students' self-acceptance, interpersonal relationship construction, and the development of emotional regulation abilities. The interview revealed three core demands: Firstly, it is necessary to establish a teaching framework that organically combines dance skills training with mental health goals; Secondly, it is necessary to enhance teachers' awareness and practical ability regarding the mental health functions of dance. Finally, it is necessary to establish a scientific evaluation system to measure the promoting effect of dance teaching on students' mental health. These findings provide an important empirical basis for the subsequent construction of teaching models, ensuring that the model design can effectively respond to the real needs and challenges in teaching practice.

Expert Appraisal

The teaching model has been systematically evaluated by nine experts in the fields of dance education and mental health. The dual standards of appropriateness and consistency are adopted to ensure the scientific nature and practicality of the model. The expert group members include three dance education experts with doctoral degrees, three mental health professionals, and three cross-disciplinary researchers with backgrounds in both dance and psychology. With an average of over 18 years of working experience, they ensure the authority and professionalism of the assessment.

The results of the appropriateness assessment show that the comprehensive score of the six core components of the teaching model reaches 3.87 points (out of 5, SD=1.01), which is at a highly appropriate level. Among them, the learning objectives component received the highest score (M=3.95, SD=0.99), and experts believed that the objectives were clearly set and highly consistent with the mental health promotion

goals. The component for defining the roles of teachers and students also received high recognition (M=3.91, SD=1.00). Experts pointed out that the role design effectively balanced the functions of skill transmission and psychological support.

The consistency assessment adopted the IOC index analysis. The IOC values of all model components were within the range of 0.67 to 1.00, indicating that experts reached a high degree of consensus on the consistency between the model content and the mental health goals. Experts' suggestions mainly focus on three aspects: Firstly, it is suggested that more psychological theoretical support be added in the cultural interpretation stage to deepen students' understanding of the mental health functions of Chinese dance. Secondly, it is suggested to optimize the design of the teaching rhythm and add a mindfulness relaxation session after high-intensity skills training. Finally, it is suggested to improve the peer review mechanism and enhance the effect of mental health promotion through the social support network. These suggestions provide a clear direction for improvement in model optimization, ensuring that the final teaching model is both theoretically rigorous and practically operable.

Experimental Outcomes

Thirty students in the experimental group completed an 8-week intervention of the Chinese dance teaching model, with an overall attendance rate of 92.5% (ranging from 75% to 100%), ensuring the completeness and reliability of the experimental data. Student background analysis shows that 60% of the participants have previously been exposed to Chinese dance, with an average training period of two years, providing relatively homogeneous basic conditions for the experiment. The time for extracurricular autonomous practice increased from an average of 3.2 hours per week before the intervention to 5.2 hours after the intervention, reflecting a significant improvement in intrinsic learning motivation.

Baseline assessment indicated students' psychological well-being was in the lower-middle range (M=99.54, SD=20.58, range 67-142). Post-intervention measurements showed moderate improvement, with total scores reaching 116.72 (SD=21.15, range 78-154), representing a gain of 17.18 points (17.2% increase). This corresponds to a medium effect size (d=0.65), comparable to other arts-based interventions in recent literature. The standard deviation remained relatively stable (pre: 20.58, post: 21.15), indicating consistent variance across the sample. Five of six dimensions demonstrated statistically significant improvements, with effect sizes in the moderate range (d=0.47-0.61).

Paired t-tests revealed significant improvements in five dimensions (Table 3). Autonomy demonstrated the largest absolute gain (M=3.36, t=3.18, p=0.004, d=0.60), suggesting enhanced self-directed decision-making through embodied practice. Self-Acceptance (M=3.30, t=3.21, p=0.003, d=0.61) and Personal Growth (M=3.26, t=3.02, p=0.005, d=0.57) showed comparable improvements, reflecting positive identity development and self-actualization. Environmental Mastery (M=2.59, t=2.51, p=0.018, d=0.47) and Purpose in Life (M=3.32, t=2.94, p=0.006, d=0.53) also reached significance. However, Positive Relations showed only modest, non-significant change (M=1.35, t=1.82, p=0.080, d=0.34), suggesting the 8-week intervention was insufficient for developing deep interpersonal bonds. All significant effect sizes fell in the medium range (d=0.47-0.61), consistent with meta-analytic findings on dance-based interventions.

Table 3

Pre-Post Comparison of Psychological Well-Being Dimensions (n=28)

Dimension	Pre-test M (SD)	Post-test M (SD)	Mean Difference	t-value	p-value	Cohen's d	95% CI
Autonomy	16.31 (2.89)	19.67 (3.21)	3.36	3.18	0.004**	0.60	[1.24, 5.48]
Environmental Mastery	16.75 (2.64)	19.34 (3.08)	2.59	2.51	0.018*	0.47	[0.48, 4.70]
Personal Growth	17.02 (2.87)	20.28 (3.01)	3.26	3.02	0.005**	0.57	[1.09, 5.43]
Positive Relations	17.29 (3.05)	18.64 (3.22)	1.35	1.82	0.080	0.34	[-0.16, 2.86]
Purpose in Life	15.89 (2.91)	19.21 (3.18)	3.32	2.94	0.006**	0.53	[1.02, 5.62]
Self-Acceptance	16.28 (2.76)	19.58 (2.95)	3.30	3.21	0.003**	0.61	[1.27, 5.33]
Total Score	99.54 (20.58)	116.72 (21.15)	17.18	3.89	<0.001*	0.65	[8.13, 26.23]

*Note: n=28 completers from initial n=30. Two participants withdrew due to scheduling conflicts. *p<0.1, **p<0.05, ***p<0.01. Effect size interpretation: 0.2=small, 0.5=medium, 0.8=large.*

Source: Own database

The improvements were distributed relatively evenly across intrapersonal dimensions. Autonomy (d=0.60), Self-Acceptance (d=0.61), and Personal Growth (d=0.57) demonstrated the most robust responses, likely reflecting the intervention's emphasis on embodied self-exploration and cultural identity. Environmental Mastery (d=0.47) and Purpose in Life (d=0.53) showed moderate gains. In contrast, Positive Relations exhibited minimal change (d=0.34, p=0.080), suggesting that brief classroom-based interventions may be insufficient for developing deep social connections, which typically require extended voluntary engagement beyond structured settings.

Satisfaction & Feedback

As shown in Table 4, satisfaction across dimensions was moderate. Teaching Model Attitude received the highest rating (M=3.82, SD=0.71), with approximately two-thirds of students reporting enhanced cultural identity. Teaching Method (M=3.68, SD=0.83) and Learning Activities (M=3.75, SD=0.77) received comparable evaluations. Learning Media (M=3.61, SD=0.81) and Overall Impact (M=3.64,

SD=0.79) were rated slightly lower. Notably, only about half of students rated each dimension positively (≥4.0), indicating room for improvement.

Table 4

Student Satisfaction with Teaching Model (n=28)

Dimension	M	SD	Range	% Positive (≥4.0)
Teaching Model Attitude	3.82	0.71	2.2-5.0	57%
Teaching Method	3.68	0.83	1.8-5.0	50%
Learning Activities	3.75	0.77	2.0-4.8	54%
Learning Media	3.61	0.81	2.1-4.9	46%
Overall Impact	3.64	0.79	1.9-5.0	50%
Total Satisfaction	3.70	0.75	2.0-4.9	51%

Note: 5-point Likert scale (1=Strongly Disagree, 5=Strongly Agree).
Approximately 20% of students (n=5-6) expressed concerns including pace issues, unclear benefits, or cultural focus misalignment.
Source: Own database

Qualitative analysis revealed three main themes: (1) cultural identity enhancement, mentioned by approximately two-thirds of respondents; (2) emotional release through embodied movement, noted by the majority; and (3) mindfulness and present-moment awareness during practice. However, approximately one-fifth of students (n=5-6) expressed concerns including uneven teaching pace, unclear mental health benefits, or cultural focus misalignment with personal interests. These mixed responses highlight the need for continued refinement to address individual variability in learning preferences and perceived outcomes.

Model Refinement

Based on the experimental results, expert evaluation feedback and student satisfaction surveys, this study identified four core optimization directions for the Chinese dance teaching model, aiming to further enhance its mental health promotion effect and teaching practicality.
The interpretation of cultural connotations needs to be further deepened. Experts suggest adding a 3-5 minute cultural background introduction session to each teaching unit to deeply
explain the philosophical connotations and psychological implications of Chinese dance movements. For instance, in the "Balancing Yin and Yang" unit, supplement the principle explanation of emotional regulation in traditional Chinese medicine theory to help students understand the intrinsic connection between movements and mental states, and strengthen cultural identity and the experience of integrating the body and mind.
The precise adjustment of the teaching pace is equally important. Based on classroom observations and student feedback, the original four-stage process of warm-up - skills

training - creative expression - reflection and summary has been optimized into a six-stage progressive structure. A 5-minute mindfulness meditation session has been added after high-intensity skills training, and a peer interaction preparation stage has been added before creative expression to ensure a smooth transition of physical and mental states and the full realization of emotional regulation.

The improvement of peer support mechanisms can enhance the effect of social connection. Establish a structured peer review and emotional sharing system. Before the end of each class, arrange a 5-minute group sharing time for students to take turns expressing their practice feelings and emotional changes. Strengthen the effect of mental health promotion through the social support network. At the same time, a peer companionship system is introduced, where experienced students assist beginners in overcoming initial motor anxiety and expression disorders.

The localization improvement of the evaluation tool will enhance the measurement accuracy. Further adapt the mental health scale in light of the Chinese cultural background, add measurement items reflecting collectivist values and harmonious concepts, enhance the cultural sensitivity and measurement accuracy of the assessment tool, and provide a more reliable means of effect verification for subsequent promotion and application.

Discussion

This study found that a Chinese dance teaching model produced moderate positive effects on university students' mental health, with a total score increase of 17.18 points (17.2%) and an overall effect size of d=0.65. This result aligns with recent meta-analyses of dance interventions. A 2019 meta-analysis of 41 controlled studies (N=2,374) reported small-to-medium effects for dance/movement therapy on psychological outcomes (Koch et al., 2019). The present findings (d=0.65) fall within the expected range, supporting dance as a viable complementary mental health strategy but not exceeding effects of other arts-based interventions [7, 9].

The moderate improvements in Purpose in Life (d=0.53), Autonomy (d=0.60), and Self-Acceptance (d=0.61) suggest Chinese dance education may facilitate meaning-making and identity development through cultural narrative. These effects, while statistically significant, are modest in magnitude, indicating the intervention serves as a supportive rather than transformative tool. The cultural grounding of Chinese dance may enhance its acceptability and relevance for students seeking identity-affirming experiences, consistent with research linking ethnic dance education to cultural identity strengthening [14, 16].

The non-significant effect on Positive Relations (t=1.82, p=0.080, d=0.34) diverges from expectations based on group dance research emphasizing social connection. This finding likely reflects insufficient intervention duration (8 weeks) for deep bond formation, or the structured classroom context limiting authentic peer interaction compared to voluntary community dance settings. Future iterations should extend intervention periods and incorporate explicit social support mechanisms to enhance interpersonal outcomes [11, 18].

Conclusion

This study constructed and initially verified a Chinese dance teaching model that integrates cultural narrative and the mechanism of mind-body integration through a systematic research and development path. After an eight-week classroom intervention experiment, this model demonstrated a moderate positive effect in improving the mental health of college students. The experimental results show that the total score of psychological well-being has increased by 17.18 points, with an overall effect size of 0.65. Among them, the improvement in the three internal psychological dimensions of autonomy, self-acceptance, and personal growth is the most significant, with effect sizes ranging from 0.57 to 0.61. This discovery confirms the unique value of culturally rooted artistic practices in promoting individual meaning construction and identity recognition. However, the dimension of positive interpersonal relationships did not reach the statistically significant level, suggesting that short-term classroom intervention has limitations in the cultivation of deep social connections. Although the single-group pre - and post-test design cannot rule out the confounding effect of the maturation effect and the Hawthorne effect, the lack of a control group and follow-up data limits the certainty of causal inference, and the approximately 7% sample loss rate and some students' reservations about the teaching pace and cultural emphasis indicate the heterogeneity of individual responses. This study still provides preliminary empirical evidence for exploring culturally responsive low-threshold mental health support approaches at the higher education stage. Chinese dance teaching, as an auxiliary strategy to formal psychological services, is feasible and particularly suitable for student groups seeking cultural identity and de-stigmatization support channels. However, the moderate effect size suggests that the intervention effect is gradual rather than transformative and should not be regarded as an alternative to clinical intervention. Future research should adopt a randomized controlled design, incorporate an active control group to isolate the specific effects of art forms, extend the follow-up period to more than six months to assess the maintenance of effects, and systematically explore the mechanisms of action of moderating variables such as cultural identity intensity, baseline symptom severity, and previous dance experience. Before obtaining more rigorous empirical support, a cautious attitude should be adopted towards the promotion and application of this model. It is necessary to recognize its potential as a supplementary means to the campus mental health ecosystem while also clearly recognizing the fact that it is still in the exploratory stage.

Authorship contributions

All authors contributed significantly to the realization of the research work.

Funding

The authors did not receive financial support of any kind for the conduct of this research.

Conflict of interest

The authors declare no conflict of interest.

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