



The

Effects of Dance/Movement Therapy on Positive Emotions, Emotional Self-Efficacy and Mental Health of Junior High School Students

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Abstract

The objectives of this research were to 1) study the current situation of positive emotions, emotional self-efficacy, and mental health of junior high school students, 2) evaluate the intervention effects of Dance/Movement Therapy (DMT) on positive emotions, emotional self-efficacy, and mental health of junior high school students, and 3) create a model that explains the influence of Dance/Movement Therapy on the mental health of junior high school students, with positive emotion and emotional self-efficacy as mediating variables. The sample of 226 junior high school students at Jianmenguan Tianli School was selected using the Morgan Table for the baseline survey. In the intervention phase, 61 students participated in a 6-week Dance/Movement Therapy (DMT) intervention, including 30 in the experimental group and 31 in the control group. Data were collected using the Positive and Negative Affect Schedule, the Emotional Self-Efficacy Scale, the Middle School Students' Mental Health Scale, interviews, and expert evaluation forms. The IOC values ranged from 0.80 to 1.00. The reliability coefficients were 0.862, 0.929, 0.919, and 0.966, respectively. Statistical analysis included frequency, percentage, mean, standard deviation, paired-sample t-test, independent-sample t-test, correlation, regression, path analysis, and content analysis. The results showed that: 1) positive emotions and emotional self-efficacy were at a moderate level, while mental health was at a good level, with learning anxiety, interpersonal anxiety, and loneliness tendency being relatively prominent; 2) DMT helped reduce negative emotions and improve positive emotions, emotional self-efficacy, and mental health, with the experimental group showing improvement while the control group showed no significant change; and 3) emotional self-efficacy fully mediated the relationship between positive emotion and mental health, and expert evaluation indicated the model was at a high level of usefulness, feasibility, and appropriateness

Keywords: Dance/Movement Therapy, Positive Emotions, Emotional Self-Efficacy, Mental Health

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Introduction

Adolescence, especially during the junior high school period, marks a critical developmental stage characterized by rapid physical changes, emotional volatility, and the formation of self-identity. This period also coincides with increased academic pressures, social conflicts, and family expectations, all of which may exacerbate psychological stress (Guan, 2023). The 2022 Youth Mental Health White Paper reported that approximately 29% of junior high school students in China exhibit symptoms of anxiety, depression, and social withdrawal, while less than 12% have received any form of psychological intervention. These figures highlight the limitations of existing school mental health systems, which are often dominated by theoretical instruction and under-resourced counseling services.

In response, educational psychologists have begun exploring more engaging and expressive therapeutic modalities, such as Dance/Movement Therapy (DMT), as a complementary intervention. DMT integrates psychotherapeutic techniques with body movement to facilitate emotional expression, self-awareness, and stress regulation, offering a non-verbal alternative particularly suitable for adolescents with limited emotional articulation (Grčić et al., 2014). International studies support the efficacy of DMT in improving adolescent mental health. Lin, Zhang, and Hu (2022) found that students showed marked improvement in emotional regulation and peer relationships after participating in structured DMT sessions. Ko (2023) further demonstrated that DMT delivered via smartphone applications significantly reduced anxiety among middle school students. In China, Liu, Peng, and Wang (2024) conducted a controlled intervention revealing significant reductions in anxiety and depressive symptoms following DMT participation.

DMT's effectiveness lies in its ability to transform emotional experiences through structured physical activities, forming a therapeutic pathway from bodily sensation to emotional expression and ultimately cognitive restructuring (Aubourg, 2018). Moreover, its group-based implementation enhances social engagement and emotional reciprocity. Two key theoretical frameworks underpin this research: Fredrickson's (2001) Broaden-and-Build Theory, which posits that positive emotions expand cognitive resources and build psychological resilience, and Bandura's (1997) Self-Efficacy Theory, which emphasizes that individuals' beliefs about their emotional management capabilities influence psychological outcomes.

Despite increasing attention to DMT, few studies have examined the mediating mechanisms through which DMT influences mental health, particularly the roles of positive emotions and emotional self-efficacy. This study addresses this gap by investigating: 1) the current situation of positive emotions, emotional self-efficacy, and mental health of junior high school students; 2) the intervention effects of DMT on these variables; and 3) a model explaining the influence of DMT on mental health with positive emotion and emotional self-efficacy as mediating variables.

Research Objectives

1. To study the current situation of positive emotions, emotional self-efficacy, and mental health of junior high school students.
2. To evaluate the intervention effects of Dance/Movement Therapy (DMT) on positive emotions, emotional self-efficacy, and mental health of junior high school students.
3. To create a model that explains the influence of dance/movement therapy on the mental health of junior high school students, with positive emotion and emotional self-efficacy as mediating variables.

Literature Review

Dance/Movement Therapy (DMT) is defined by the American Dance Therapy Association (ADTA, 2023) as the psychotherapeutic use of movement to promote emotional, social, cognitive, and physical integration. DMT theory posits that body and mind are interconnected, and that movement reflects internal emotional states while also influencing psychological processes (Chaiklin & Wengrower, 2009). Koch et al. (2019) conducted a meta-analysis demonstrating that DMT significantly reduced depression and anxiety symptoms across populations. Dunphy et al. (2020) found that DMT promoted mental well-being and social inclusion in school settings.

Fredrickson's (2001) Broaden-and-Build Theory proposes that positive emotions broaden individuals' momentary thought-action repertoires and build enduring personal resources. Positive emotions trigger upward spirals toward emotional well-being (Fredrickson & Joiner, 2002). In the context of DMT, movement-based activities generate positive emotional states through enjoyment, relaxation, and creative expression, which in turn expand students' psychological resources.

Bandura's (1997) Self-Efficacy Theory emphasizes that efficacy beliefs determine how people feel, think, and behave. Emotional self-efficacy refers specifically to individuals' confidence in their ability to manage emotional experiences. Caprara et al. (2008) developed the Emotional Self-Efficacy Scale and found that emotional self-efficacy was associated with prosocial behavior and psychological well-being. In adolescent populations, emotional self-efficacy plays a critical role in coping with academic stress and social challenges.

The mental health continuum model (Keyes, 2002) conceptualizes mental health as a state ranging from languishing to flourishing. For junior high school students in China, common mental health challenges include learning anxiety, interpersonal anxiety, and loneliness tendency (Guan, 2023). School-based mental health systems often rely heavily on theoretical instruction rather than experiential approaches, limiting their effectiveness (Guo & Huang, 2022).

Conceptual Framework

This study's conceptual framework (see Figure 1.1) illustrates the hypothesized pathways through which Dance/Movement Therapy (DMT) influences the mental health of junior high school students. The framework integrates three theoretical pillars: Dance/Movement Therapy Theory, Fredrickson's Broaden-and-Build Theory of Positive Emotions, and Bandura's Self-Efficacy Theory. Together, these frameworks explain the mediating roles of positive emotions and emotional self-efficacy in translating DMT participation into enhanced mental well-being.

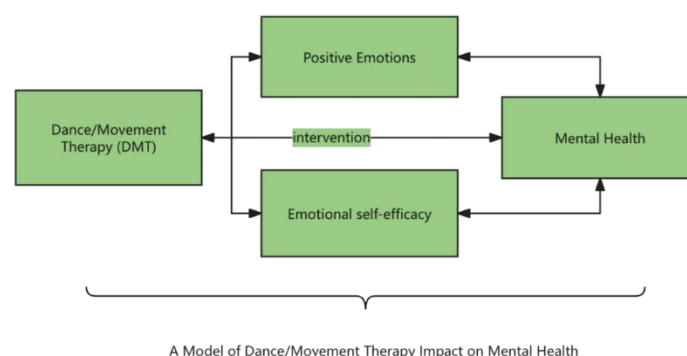


Figure 1 Conceptual Framework

1) Dance/Movement Therapy (DMT) → Positive Emotions: Participation in DMT stimulates bodily engagement, expressive freedom, and social synchrony, leading to the emergence of joy, enthusiasm, and a sense of belonging. These positive affective experiences broaden emotional awareness and enhance motivation.

2) Dance/Movement Therapy (DMT) → Emotional Self-Efficacy :Through repeated mastery of expressive movement and emotional regulation within a supportive group environment, students develop confidence in their ability to manage affective states, thus improving emotional self-efficacy.

3) Positive Emotions → Emotional Self-Efficacy: The experience of positive emotions fosters an upward spiral of self-belief, encouraging students to approach emotional challenges with greater optimism and control.

4) Positive Emotions and Emotional Self-Efficacy → Mental Health: Both mediating variables are expected to positively predict mental health outcomes. Positive emotions contribute to resilience and adaptive coping, while emotional self-efficacy enhances emotional regulation and reduces susceptibility to anxiety or depression.

5) Dance/Movement Therapy (DMT) → Mental Health (Direct Path): Although the relationship is largely mediated by emotional variables, DMT may also exert a direct impact on mental health through mechanisms such as embodied awareness, physiological relaxation, and social connectedness.

Overall, the model suggests that DMT enhances mental health both directly and indirectly through the cultivation of positive emotional states and the strengthening of emotional self-efficacy. These mediating processes form a dynamic feedback system in which improved mental health further reinforces positive emotions and emotional confidence, creating a sustainable cycle of psychological well-being.

Research Methodology

Research Design

This study employed a mixed-methods research design combining quantitative and qualitative approaches. The quantitative component used a quasi-experimental pretest-posttest control group design. The qualitative component included semi-structured interviews and expert evaluation using focus group discussion.

Population and Sample

The population consisted of junior high school students at Jianmenguan Tianli School. For the baseline survey, 226 students were selected using the Morgan Table. In the intervention phase, 61 students participated, with 30 assigned to the experimental group receiving the 6-week DMT intervention and 31 assigned to the control group.

Research Instruments

Data were collected using four instruments: 1) the Positive and Negative Affect Schedule (PANAS) measuring positive and negative emotions; 2) the Emotional Self-Efficacy Scale (ESES) assessing four dimensions of emotional management confidence; 3) the Middle School Students' Mental Health Scale (MHT) evaluating eight dimensions of mental health; and 4) semi-structured interview questions and expert evaluation forms. The IOC values ranged from 0.80 to 1.00, and reliability coefficients were 0.862, 0.929, 0.919, and 0.966, respectively.

DMT Intervention Program

The 6-week DMT intervention program consisted of 12 sessions (twice per week, 60 minutes each). Sessions were structured in four phases: warm-up, theme exploration, creative movement, and sharing/reflection. Activities included action mirroring, body awareness exercises, improvisational dance, group choreography, and music-based relaxation. The program was designed based on theoretical principles from Chaiklin and Wengrower (2009) and aligned with developmental needs of junior high school students.

Data Analysis

Statistical analyses included frequency, percentage, mean, standard deviation, paired-sample t-test, independent-sample t-test, correlation analysis, regression analysis, and path analysis. Qualitative data from interviews were analyzed using content analysis. Expert evaluation data were analyzed using descriptive statistics and thematic analysis.

Results

1. Current Situation of Positive Emotions, Emotional Self-Efficacy, and Mental Health

The baseline survey of 226 students revealed that positive emotions were at a moderate level ($\bar{x}$ = 2.63, S.D. = 0.42), emotional self-efficacy was at a moderate level ($\bar{x}$ = 3.39, S.D. = 0.76), and mental health was at a good level ($\bar{x}$ = 2.84, S.D. = 0.87). However, learning anxiety ($\bar{x}$ = 3.36, S.D. = 1.08), interpersonal anxiety ($\bar{x}$ = 3.25, S.D. = 1.11), and loneliness tendency ($\bar{x}$ = 3.19, S.D. = 1.06) were relatively prominent concerns among students.

2. Intervention Effects of DMT

The within-group comparison of the experimental group showed that DMT produced a statistically significant reduction in negative affect from pre-test ($\bar{x}$ = 1.96) to post-test ($\bar{x}$ = 1.73), with t = -2.24 and p = 0.033. Positive affect increased from 2.82 to 2.93, and mental health improved from 2.27 to 2.52, though these changes did not reach statistical significance. The control group showed no significant changes across all variables, as presented in Table 1

Table 1 Paired-Sample t-Test Results for Experimental Group (Pre-test vs. Post-test)

Variable	Pre-test $\bar{x}$	S.D.	Post-test $\bar{x}$	S.D.	t	p
Positive Affect	2.82	0.58	2.93	0.74	1.15	.260
Negative Affect	1.96	0.61	1.73	0.64	-2.24	.033*
Emotional Self-Efficacy	3.43	0.69	3.27	0.73	-1.25	.220
Mental Health	2.27	0.69	2.52	0.63	1.71	.098

* $p < .05$

3. Model of DMT's Influence on Mental Health

Correlation analysis showed that positive emotion was positively correlated with emotional self-efficacy (r = 0.477), and emotional self-efficacy was strongly negatively correlated with mental health scores (r = -0.759), indicating better mental health. Regression analysis confirmed that positive emotion significantly predicted emotional self-efficacy (β = 0.679, p = 0.000). Path analysis revealed that when emotional self-efficacy was included, the direct effect of positive emotion on mental health became non-significant (β = -0.127, p = 0.280), while emotional self-efficacy remained a strong predictor (β = -0.779, p = 0.000). This confirmed that emotional self-efficacy fully mediated the relationship between positive emotion and mental health, as shown in Table 2.

Table 2 Regression of Mental Health on Positive Emotion and Emotional Self-Efficacy

Model	Predictor	B	β	t	p	R ²
Model 1	Positive Emotion	-0.311	-0.314	-2.07	.048*	0.099
Model 2	Positive Emotion	-0.126	-0.127	-1.10	.280	0.607
	Emotional Self-Efficacy	-0.758	-0.779	-4.96	.000***	

* $p < .05$, *** $p < .001$

Expert evaluation confirmed the model's quality with high to very high ratings: Utility (Mean = 4.52), Feasibility (Mean = 4.28), Propriety (Mean = 4.60), Accuracy (Mean = 4.47), and Evaluation Accountability (Mean = 4.35).

Discussion

The finding that positive emotions and emotional self-efficacy were at moderate levels is consistent with developmental psychology literature. According to the Broaden-and-Build Theory, positive emotions in school environments may be constrained by academic demands and social pressures (Fredrickson, 2001). The uneven development of emotional self-efficacy, where students were more confident in expressing positive emotions than managing negative ones, aligns with Self-Efficacy Theory, which suggests that efficacy beliefs develop through repeated experience and vary across domains (Bandura, 1997; Caprara et al., 2008).

The significant reduction in negative emotions through DMT supports the theoretical assumption that movement-based interventions facilitate emotional release and regulation (Koch et al., 2019). The non-significant but positive trends in other variables can be explained by the short duration of the intervention. According to Fredrickson (2001), positive emotions accumulate gradually, and Bandura (1997) notes that self-efficacy develops through repeated mastery experiences. Six weeks may not be sufficient for statistically significant changes in these domains, a pattern also observed in previous school-based DMT studies (Dunphy et al., 2020; Moula et al., 2022).

The full mediation of emotional self-efficacy in the relationship between positive emotion and mental health represents a key contribution of this study. This finding indicates that positive emotions alone are insufficient to improve mental health directly; they must first be transformed into internal psychological capabilities through emotional self-efficacy (Gross, 1998). The dual pathway model proposed in this study, comprising an affective pathway and a cognitive regulatory pathway, provides a more comprehensive explanation of DMT's mechanism of action compared to traditional models that focus solely on emotional change (Keyes, 2002; Durlak et al., 2011).

Conclusion and Recommendations

Conclusion

This study confirmed that Dance/Movement Therapy is an effective intervention for reducing negative emotions among junior high school students and showed positive trends in improving positive emotions, emotional self-efficacy, and mental health. The study also established that emotional self-efficacy fully mediates the relationship between positive emotion and mental health, providing a clear theoretical model of how DMT influences adolescent psychological well-being through both affective and cognitive pathways. Expert evaluation confirmed the model's usefulness, feasibility, and appropriateness for school-based application.

Recommendations

For practice, schools should integrate DMT into mental health education programs as a structured component, develop standardized implementation guidelines, strengthen professional training for facilitators, create supportive environments for emotional expression, and extend intervention duration for sustained effects. For future research, studies should extend intervention duration, expand sample sizes to diverse contexts, further test the mediating model with additional variables, strengthen mixed-methods integration, investigate cultural factors in DMT application, and explore integration with emerging technologies for broader accessibility.

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