

The Effect of Social Dance on Psychological Distress in University Students: The Unique Mediating Role of Perceived Social Support – A Comparative Study of Three Dance Types

Jinghan Sun¹, Feifei Wang², and Prapatpong Senarith^{3*}

Rattanakosin International College of Creative Entrepreneurship,

Rajamangala University of Technology Rattanakosin, Thailand

**Corresponding author: E-mail: prapatpong.sen@rmutr.ac.th^{3*}*

Received April 27, 2026; **Revised** May 26, 2026; **Accepted** May 30, 2026

Abstract

University students' psychological distress has become a growing concern, highlighting the need for accessible and low-stigma mental health promotion approaches in higher education. This study examined the association between social dance participation and psychological distress among university students and compared three potential mediators: perceived social support, cognitive reappraisal, and basic psychological need satisfaction. A cross-sectional survey was conducted among non-dance majors from five universities in Xianyang, China. Parallel mediation analyses were performed separately for each group using PROCESS Model 4 with 5,000 bootstrap resamples. The results showed that perceived social support was the only significant mediator across all three dance types. Dance participation was associated with lower psychological distress indirectly through perceived social support in social-connection, personal-expression, and mind-body integration dance. The findings identify perceived social support as a robust, common pathway linking social dance participation to reduced psychological distress, and suggest that mind-body integration dance may provide unique psychological benefits. The study contributes to dance psychology and university mental health research by clarifying both shared and type-specific mechanisms of social dance.

Keywords: social dance; university students; psychological distress; perceived social support; parallel mediation model

Introduction

Psychological distress among university students has become an increasingly serious public health and educational concern (Roy et al., 2025). University students are exposed to multiple stressors, including academic pressure, interpersonal adjustment, uncertainty about future employment, and rapid transitions in identity and social roles (Zhang et al., 2025). In China, recent national mental health evidence has shown a high prevalence of depressive and anxiety symptoms among college students, indicating the urgent need for scalable and acceptable mental health promotion strategies within higher education settings (Ma et al., 2026). Although professional psychological counseling and clinical services are important, many students remain reluctant to seek formal help because of stigma, limited service availability, and low perceived accessibility (Patte et al., 2024). Therefore, preventive and low-stigma interventions embedded in everyday educational activities may provide an important complementary pathway for improving students' psychological well-being.

Unlike clinical interventions, dance is usually perceived as an aesthetic, recreational, and social activity rather than as a mental health treatment (Fong Yan et al., 2024). Previous studies and meta-analytic evidence suggest that dance and dance movement interventions can reduce negative psychological outcomes and enhance well-being (Mo et al., 2025). Dance may benefit mental health not only through physical movement, but also through rhythm, emotional expression, interpersonal coordination, embodied awareness, and group participation (Zafeiroudi et al., 2025).

Existing research has proposed several possible explanatory pathways. First, social support theory suggests that individuals who perceive stronger support from peers, groups, or communities are better able to cope with stress and psychological difficulties (Cohen & Wills, 1985). Second, according to emotion regulation theory, the ability to reinterpret stressful situations in a more adaptive way is associated with better mental health (Gross, 2015). Third, self-determination theory argues that the satisfaction of autonomy, competence, and relatedness is fundamental to psychological functioning and well-being (Quested et al., 2011). Dance courses may satisfy these needs by providing opportunities for self-expression, skill mastery, and social interaction.

However, these mechanisms have often been examined separately, and few studies have tested them simultaneously in a single comparative model. Another important limitation is that previous studies often treat dance as a homogeneous activity. Social-connection dance, such as

ballroom dance, Latin dance, and group dance, emphasizes partner cooperation, interpersonal coordination, and movement synchrony (Wu, Lu, et al., 2023).

It may therefore be particularly relevant to perceived social support and relatedness. Personal-expression dance, such as modern dance, jazz, and hip-hop, emphasizes individuality, improvisation, and emotional expression, suggesting a closer link with emotion regulation and cognitive reappraisal (Zhang & Wei, 2024). Psychological states are shaped not only by abstract cognition but also by bodily movement, perception, posture, rhythm, and sensorimotor experience (Wu, Wang, et al., 2023). Dance is a typical embodied activity because it integrates physical movement, emotional expression, interpersonal synchrony, and cultural symbolism (Prakash et al., 2024). It also supports the possibility that certain dance types, especially mind-body integration dance, may have psychological effects that are not fully captured by conventional cognitive or social variables (Foster Vander Elst et al., 2023).

In the context of Chinese universities, examining these mechanisms is especially meaningful. Chinese students often experience strong academic and social expectations, and interpersonal harmony remains an important component of psychological adjustment (Xu & Chai, 2025). At the same time, China's higher education system has increasingly emphasized the integration of aesthetic education and mental health education (Ye et al., 2025).

To address these gaps, this study examines the relationship between social dance participation and psychological distress among university students and compares three parallel mediating mechanisms: perceived social support, cognitive reappraisal, and basic psychological need satisfaction. This study seeks to identify whether social dance reduces psychological distress through a common pathway shared across dance types, or whether different dance forms operate through type-specific psychological mechanisms. The findings are expected to contribute to dance psychology, aesthetic education, and university mental health research by clarifying how social dance courses can serve as accessible, embodied resources for student well-being.

Research Objectives

1. To test the parallel mediating roles of perceived social support, cognitive reappraisal, and basic psychological need satisfaction in social-connection dance;
2. To compare these mediating mechanisms across the three dance types;
3. To explore whether dance type moderates direct effects.

Literature Review

Psychological distress generally refers to a negative psychological state characterized by symptoms of depression, anxiety, stress, emotional tension, and reduced psychological functioning (Belay et al., 2021). University students are particularly vulnerable to psychological distress because they are situated in a transitional life stage involving academic pressure, identity exploration, interpersonal adaptation, and uncertainty about future employment (Majerová & Sokolová, 2025). Although professional psychological services are essential, their effectiveness in university settings may be limited by stigma, insufficient resources, and students' reluctance to seek formal help (Li et al., 2025).

Dance participation has been increasingly recognized as a potentially effective approach for improving psychological well-being (Cheng et al., 2024). Unlike conventional psychological interventions, dance integrates physical movement, rhythm, emotional expression, social interaction, and aesthetic experience (Al Schameri et al., 2026). Previous meta-analytic and empirical studies have shown that dance and dance movement interventions are associated with reductions in anxiety, depression, stress, and other negative psychological outcomes (Zhang & Ma, 2025).

The positive effect of dance on psychological distress can be understood through embodied cognition theory. This perspective argues that cognition and emotion are not detached from the body but are grounded in bodily movement, posture, sensory experience, and action (Foglia & Wilson, 2013). Dance is a typical embodied activity because it transforms psychological experience through movement, rhythm, coordination, and body awareness (Urra-López et al., 2026). In this sense, dance may not only distract students from stress but may also reshape emotional and social experience through bodily practice. However, the pathway through which dance participation reduces psychological distress remains underexplored. Existing studies have often focused on whether dance is effective, while less attention has been given to why and under what psychological mechanisms dance produces mental health benefits (Klaperski-van der Wal et al., 2025).

Perceived social support refers to an individual's subjective belief that care, assistance, understanding, and emotional support are available from others. Social support theory suggests that perceived support can buffer the harmful effects of stress and protect individuals from psychological distress (Cohen & Wills, 1985). Compared with objective support, perceived support

may be more closely related to mental health because it reflects whether individuals feel emotionally connected, valued, and accompanied in stressful situations.

Many dance activities require students to interact with peers, coordinate movements, adjust to group rhythm, and perform together (Narikbayeva et al., 2025). These embodied forms of interaction may strengthen interpersonal connections in ways that differ from verbal communication. In partner dance and group dance, students must respond to others' movements, maintain rhythm, and develop mutual trust (Foster Vander Elst et al., 2023). When individuals move in rhythm with others, they may experience stronger affiliation, empathy, and interpersonal closeness. Prior research on dance and social interaction suggests that movement synchrony can strengthen emotional resonance and social bonding (Wu et al., 2025).

Accordingly, this study proposes the following hypothesis:

H1. Perceived social support mediates the relationship between dance participation and psychological distress in all three dance types.

According to emotion regulation theory, individuals who are better able to reinterpret stressful or negative experiences tend to experience lower levels of psychological distress (Gross, 2015). In dance, emotions are not only verbally described but are embodied through movement qualities such as speed, direction, tension, rhythm, and spatial expansion (Bläsing & Zimmermann, 2021). Personal-expression dance, including modern dance, jazz, and hip-hop, places greater emphasis on individuality, improvisation, emotional expression, and creative movement (Dou et al., 2021). Previous research has suggested that movement-based expression can influence emotional processing and regulation (Shafir, 2016). In expressive dance contexts, students may be encouraged to convert emotional experiences into movement sequences, explore alternative meanings of emotions, and develop more flexible emotional responses (Klaperski-van der Wal et al., 2025). These processes are conceptually consistent with cognitive reappraisal because both involve transforming the meaning and impact of emotional events. Based on this reasoning, the following hypothesis is proposed:

H2. The mediating effect of cognitive reappraisal on the relationship between dance participation and psychological distress is stronger in personal-expression dance.

Self-determination theory proposes that psychological well-being depends on the satisfaction of three basic psychological needs: autonomy, competence, and relatedness (Ryan & Deci, 2023). First, dance may support autonomy by allowing students to explore movement

styles, express personal preferences, and participate actively in aesthetic creation (Borowski, 2021). Second, dance may enhance competence by enabling students to acquire bodily skills, improve movement control, and experience progress through repeated practice (Narikbayeva et al., 2025). Third, dance may satisfy relatedness by creating opportunities for peer interaction, cooperation, and group performance (Fong Yan et al., 2024). Mind–body integration dance, including folk dance, tai chi, and classical dance, may be particularly relevant to competence need satisfaction (Podolski et al., 2023).

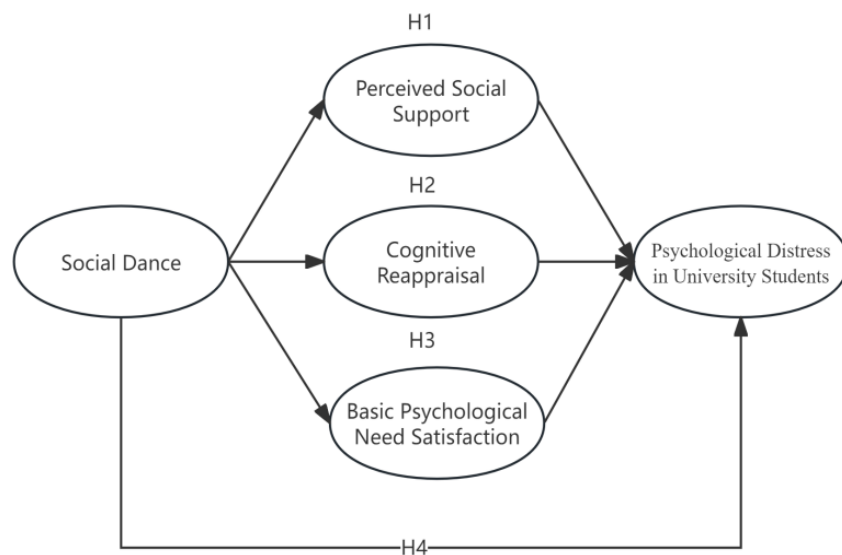
In addition, mind–body integration dance may also satisfy relatedness and autonomy in a culturally embedded way (Gomes et al., 2021). Folk and classical dance often carry symbolic meanings, collective memory, and cultural identity. Tai chi and similar forms also emphasize internal balance, self–regulation, and unity between body and mind (Yang & Wang, 2025). Compared with personal–expression dance, which emphasizes emotional freedom, and social–connection dance, which emphasizes interpersonal coordination, mind–body integration dance may produce a more stable sense of competence through repeated embodied training (Zhang & Wei, 2024). Thus, the following hypothesis is proposed:

H3. The mediating effect of basic psychological need satisfaction on the relationship between dance participation and psychological distress is stronger in mind–body integration dance.

From the perspective of embodied cognition, dance may influence psychological distress not only through social or cognitive pathways, but also through direct bodily and sensorimotor processes (Chai et al., 2026). Mind–body integration dance differs from other dance types in several important ways. It emphasizes slow or controlled movement, bodily discipline, breath coordination, posture regulation, internal awareness, and cultural symbolism (Zafeiroudi et al., 2025). Interoceptive awareness may be one such direct pathway. Mind–body practices encourage students to attend to internal bodily sensations, breathing rhythm, muscle tension, and bodily balance (Lazzarelli et al., 2024). Through repeated training, students may experience increased control over their bodies, which may reduce helplessness and enhance psychological stability (Frausing et al., 2025). Cultural embodiment may also be important. Therefore, the following hypothesis is proposed:

H4. Mind–body integration dance has a direct effect on psychological distress independent of perceived social support, cognitive reappraisal, and basic psychological need satisfaction.

Theoretical framework



Research Methodology

This study adopted a quantitative cross-sectional design to examine the association between social dance participation and psychological distress among university students and to test the parallel mediating roles of perceived social support, cognitive reappraisal, and basic psychological need satisfaction. Participants were non-dance majors who had completed at least one semester of structured dance courses at five universities in Xianyang, China. Using cluster sampling, 582 valid responses were obtained and classified into three dance-type groups: social-connection dance, including ballroom, Latin, and group dance (N = 246); personal-expression dance, including modern, jazz, and hip-hop dance (N = 153); and mind-body integration dance, including folk dance, tai chi, and classical dance (N = 183).

Psychological distress was measured using the Chinese version of the DASS-21; perceived social support, the PSSS-3; cognitive reappraisal, the cognitive reappraisal subscale of the ERQ-S; and basic psychological need satisfaction, the BPNS. Gender, grade, and participation duration were included as control variables. Data were analyzed using SPSS 28.0 and PROCESS Model 4. Indirect effects were tested using 5,000 bootstrap resamples with 95% bias-corrected confidence intervals. Harman's single-factor test showed that the first unrotated factor explained 28.6% of the variance, suggesting that common method bias was not a serious concern.

Research Results

Tables 1, 2, and 3 present the descriptive statistics and correlation matrices for the three dance-type groups. The results show consistent negative associations between dance participation and psychological distress across social-connection dance, personal-expression dance, and mind-body integration dance. Specifically, dance participation was negatively correlated with psychological distress in the social-connection group ($r = -0.35$, $p < 0.01$), personal-expression group ($r = -0.34$, $p < 0.01$), and mind-body integration group ($r = -0.51$, $p < 0.01$), suggesting that higher levels of dance participation were associated with lower psychological distress. Among the three groups, the mind-body integration group showed the strongest negative correlation between dance participation and psychological distress, whereas perceived social support was consistently and negatively associated with psychological distress across all dance types. These preliminary findings provide initial support for further mediation analyses examining whether perceived social support, cognitive reappraisal, and basic psychological need satisfaction explain the relationship between dance participation and psychological distress.

Table 1 Descriptive statistics and correlation matrix for social-connection dance (N=246)

Variable	M	SD	1	2	3	4	5
1. Dance participation	24.51	5.42	—				
2. Perceived social support	16.46	3.26	0.62	—			
3. Cognitive reappraisal	14.81	3.26	0.49	0.47	—		
4. Basic psychological need satisfaction	98.00	23.06	0.81	0.65	0.54	—	
5. Psychological distress	8.81	10.02	-0.35	-0.36	-0.15	-0.36	—

Note: All correlation coefficients $p < 0.01$.

Table 2 Descriptive statistics and correlation matrix for personal-expression dance (N=153)

Variable	M	SD	1	2	3	4	5
1. Dance participation	24.69	6.28	—				
2. Perceived social support	16.01	3.28	0.61	—			
3. Cognitive reappraisal	14.56	3.34	0.78	0.63	—		
4. Basic psychological need satisfaction	97.84	25.12	0.84	0.59	0.73	—	
5. Psychological distress	10.28	11.08	-0.34	-0.45	-0.36	-0.40	—

Note: All correlation coefficients $p < 0.01$.

Table 3 Descriptive statistics and correlation matrix for mind–body integration dance (N=183)

Variable	M	SD	1	2	3	4	5
1. Dance participation	24.92	6.06	—				
2. Perceived social support	16.12	3.56	0.73	—			
3. Cognitive reappraisal	14.56	3.23	0.72	0.59	—		
4. Basic psychological need satisfaction	96.68	25.50	0.74	0.59	0.64	—	
5. Psychological distress	8.61	9.52	-0.51	-0.50	-0.40	-0.43	—

Note: All correlation coefficients $p < 0.01$.

Table 4 shows the results of the parallel multiple mediation model for the social–connection dance group. Dance participation significantly and positively predicted perceived social support, cognitive reappraisal, and basic psychological need satisfaction, indicating that students with higher participation in social–connection dance reported higher levels of all three psychological resources. However, when the three mediators were entered simultaneously, only perceived social support significantly predicted lower psychological distress ($\beta = -0.22$, $p = 0.012$), whereas cognitive reappraisal and basic psychological need satisfaction were not significant predictors. In contrast, the indirect effects through cognitive reappraisal and basic psychological need satisfaction were not significant. The total indirect effect was significant, whereas the direct effect of dance participation on psychological distress was no longer significant after accounting for the mediators.

Table 4 Path coefficients and indirect effects of the parallel multiple mediation model for social-connection dance (N=246)

Path	Standardized coefficient	SE	95% CI	p
Dance participation → Psychological distress (c')	-0.14	0.11	[-0.36, 0.06]	0.20
Dance participation → Perceived social support	0.62*	0.04	[0.53, 0.70]	<0.001
Dance participation → Cognitive reappraisal	0.49	0.07	[0.34, 0.62]	<0.001
Dance participation → Basic psychological need satisfaction	0.81	0.03	[0.74, 0.86]	<0.001
Perceived social support → Psychological distress	-0.22*	0.09	[-0.39, -0.05]	0.012
Cognitive reappraisal → Psychological distress	0.11	0.07	[-0.02, 0.24]	0.11
Basic psychological need satisfaction → Psychological distress	-0.16	0.11	[-0.38, 0.06]	0.15
Indirect effects (unstandardized)	Effect	SE	95% CI	p
Dance participation → Perceived social support → Psychological distress	-0.14*	0.06	[-0.27, -0.03]	0.013
Dance participation → Cognitive reappraisal → Psychological distress	0.05	0.04	[-0.01, 0.13]	0.17
Dance participation → Basic psychological need satisfaction → Psychological distress	-0.13	0.09	[-0.31, 0.05]	0.14
Total indirect effect	-0.21*	0.10	[-0.41, -0.01]	0.036
Total effect	-0.35*	0.05	[-0.45, -0.25]	<0.001

Note: In this table, coefficients a, b, and c' are standardized; indirect effects are unstandardized. Significance levels: * p < 0.05, ** p < 0.01, *** p < 0.001. Bracketed values are 95% bias-corrected bootstrap confidence intervals.

Table 5 reports the parallel multiple mediation results for the personal-expression dance group. Dance participation significantly and positively predicted perceived social support, cognitive reappraisal, and basic psychological need satisfaction, suggesting that students with greater participation in personal-expression dance reported higher levels of these psychological resources. However, when all three mediators were included in the model simultaneously, only perceived social support significantly predicted lower psychological distress ($\beta = -0.33$, $p = 0.001$), whereas cognitive reappraisal and basic psychological need satisfaction were not significant predictors. The indirect effects through cognitive reappraisal and basic psychological need satisfaction were not significant. The total indirect effect and total effect were both significant, but the direct effect of dance participation on psychological distress was not significant after accounting for the mediators.

Table 5 Path coefficients and indirect effects of the parallel multiple mediation model for personal-expression dance (N=153)

Path	Standardized coefficient	SE	95% CI	p
Dance participation → Psychological distress (c')	0.14	0.19	[-0.23, 0.53]	0.47
a paths				
Dance participation → Perceived social support	0.61*	0.07	[0.47, 0.73]	<0.001
Dance participation → Cognitive reappraisal	0.78	0.05	[0.66, 0.86]	<0.001
Dance participation → Basic psychological need satisfaction	0.84	0.04	[0.76, 0.90]	<0.001
Perceived social support → Psychological distress	-0.33*	0.10	[-0.52, -0.14]	0.001
Cognitive reappraisal → Psychological distress	-0.07	0.12	[-0.33, 0.14]	0.55
Basic psychological need satisfaction → Psychological distress	-0.27	0.20	[-0.71, 0.07]	0.18
Indirect effects (unstandardized)	Effect	SE	95% CI	p
Dance participation → Perceived social support → Psychological distress	-0.35*	0.13	[-0.65, -0.14]	0.002
Dance participation → Cognitive reappraisal → Psychological distress	-0.10	0.16	[-0.45, 0.19]	0.51
Dance participation → Basic psychological need satisfaction → Psychological distress	-0.40	0.32	[-1.17, 0.09]	0.22
Total indirect effect	-0.85*	0.32	[-1.52, -0.26]	0.006
Total effect	-0.60*	0.13	[-0.87, -0.34]	<0.001

Note: In this table, coefficients a, b, and c' are standardized; indirect effects are unstandardized. Significance levels:

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Bracketed values are 95% bias-corrected bootstrap confidence intervals.

Table 6 shows the parallel multiple mediation results for the mind-body integration dance group. Dance participation significantly and positively predicted perceived social support, cognitive reappraisal, and basic psychological need satisfaction, indicating that students with greater participation in mind-body integration dance reported higher levels of these psychological resources. When the three mediators were entered simultaneously, only perceived social support significantly predicted lower psychological distress ($\beta = -0.26$, $p = 0.010$), whereas cognitive reappraisal and basic psychological need satisfaction were not significant predictors.

Table 6 Path coefficients and indirect effects of the parallel multiple mediation model for mind–body integration dance (N=183)

Path	Standardized coefficient	SE	95% CI	p
Dance participation → Psychological distress (c')	-0.25	0.12	[-0.49, -0.002]	0.047
Dance participation → Perceived social support	0.73*	0.04	[0.64, 0.81]	<0.001
Dance participation → Cognitive reappraisal	0.72	0.05	[0.61, 0.80]	<0.001
Dance participation → Basic psychological need satisfaction	0.74	0.07	[0.58, 0.86]	<0.001
Perceived social support → Psychological distress	-0.26*	0.10	[-0.46, -0.06]	0.010
Cognitive reappraisal → Psychological distress	-0.01	0.09	[-0.18, 0.17]	0.91
Basic psychological need satisfaction → Psychological distress	-0.09	0.10	[-0.28, 0.11]	0.38
Indirect effects (unstandardized)	Effect	SE	95% CI	p
Dance participation → Perceived social support → Psychological distress	-0.30	0.12	[-0.55, -0.07]	0.010
Dance participation → Cognitive reappraisal → Psychological distress	-0.01	0.10	[-0.19, 0.20]	0.94
Dance participation → Basic psychological need satisfaction → Psychological distress	-0.10	0.12	[-0.36, 0.12]	0.41
Total indirect effect	-0.41*	0.18	[-0.75, -0.03]	0.034
Total effect	-0.80*	0.14	[-1.08, -0.52]	<0.001

Note: In this table, coefficients a, b, and c' are standardized; indirect effects are unstandardized. Significance levels:

*p < 0.05, ** p < 0.01, *** p < 0.001. Bracketed values are 95% bias–corrected bootstrap confidence intervals.

Table 7 summarizes the direct effects and mediation patterns across the three dance types. The results indicate that perceived social support was the only significant mediator in all three groups, suggesting that it represents a common psychological pathway linking dance participation to reduced psychological distress. For social–connection dance and personal–expression dance, the direct effects were not significant after perceived social support, and the other mediators were included, indicating full mediation. The mediation proportion was 40% for social–connection dance and 58% for personal–expression dance, showing that perceived social support explained a substantial part of the total effect in both groups.

Table 7 Comparison of direct effects and mediation patterns across the three dance types

Dance type	Direct effect c' (standardized)	Significance	Only significant mediator	Mediation proportion	Total effect (standardized)
Social–connection	–0.14	non–significant (p = 0.20)	PSSS	40%	–0.35
Personal–expression	0.14	non–significant (p = 0.47)	PSSS	58%	–0.60
Mind–body integration	–0.25*	significant (p = 0.047)	PSSS	37%	–0.80

Note: PSSS = Perceived social support; mediation proportion = $| \text{indirect effect} | / | \text{total effect} | \times 100\%$.

Discussion

This study examined how social dance participation is associated with psychological distress among university students by comparing three dance types and three potential mediating mechanisms. This result supports the view that dance is not only a physical or aesthetic activity but also a socially embedded form of embodied interaction. This finding is consistent with social support theory and suggests that perceived support may be a particularly important protective factor in university contexts, where students often face academic, interpersonal, and developmental pressures (Cohen & Wills, 1985).

Cognitive reappraisal and basic psychological need satisfaction did not significantly mediate the relationship between dance participation and psychological distress in any of the three dance types. Although dance participation was positively associated with both variables, their effects became non–significant when perceived social support was included in the same model. One possible explanation is that dance may regulate emotions more through bodily expression, emotional release, rhythm, and social sharing than through conscious cognitive reinterpretation.

The findings also reveal a distinct pattern for mind–body integration dance. Unlike social–connection and personal–expression dance, mind–body integration dance retained a significant direct effect on psychological distress after the three mediators were controlled. Folk dance, tai chi, and classical dance emphasize posture regulation, breath coordination, bodily discipline, movement precision, and cultural symbolism (Jiang et al., 2024). From the perspective of embodied cognition, such practices may influence psychological states directly through bodily experience rather than only through social or cognitive pathways. The results suggest that university dance courses should be designed not only to improve movement skills but also to strengthen peer interaction, group belonging, and supportive classroom climates (Narikbayeva et al., 2025).

New Knowledge from Research

This study generates new knowledge by showing that the psychological benefits of social dance among university students are not mainly explained by general emotion regulation or broad psychological need satisfaction, but by perceived social support. Across three different dance types, perceived social support was the only significant mediator between dance participation and psychological distress. This finding suggests that the core mental health value of university dance courses lies in their capacity to create social connection, belonging, and interpersonal support through embodied group interaction. The study also provides new comparative evidence that different dance types may share a common pathway while retaining type-specific effects. This indicates that mind-body integration dance may involve additional embodied mechanisms, such as breath regulation, body awareness, movement discipline, body mastery, and cultural identification. This study contributes to dance psychology and university mental health research by identifying perceived social support as a common mechanism and mind-body integration in dance as a distinctive form with potential embodied psychological benefits.

Conclusion

This study examined the relationship between social dance participation and psychological distress among university students and compared three potential mediating mechanisms across three dance types. This finding suggests that the psychological benefit of social dance primarily stems from its ability to strengthen students' perceived interpersonal support, sense of belonging, and emotional connection.

The study also found that mind-body integration dance had a significant direct effect on psychological distress after accounting for the three mediators, suggesting that this dance type may provide additional benefits through embodied mechanisms such as body awareness, movement control, breath regulation, and cultural identification. These findings contribute to dance psychology and university mental health research by identifying perceived social support as a common pathway while highlighting the distinctive value of mind-body integration dance. In practice, universities should design dance courses not only as aesthetic or physical education activities but also as accessible mental health resources that promote peer connection, embodied regulation, and student well-being.

Suggestions

Based on the findings, universities should strengthen the mental health function of social dance courses by designing them as socially supportive and psychologically inclusive learning spaces. In social-connection dance courses, activities such as partner rotation, group synchronization, and cooperative performance can enhance students' sense of belonging. In personal-expression dance courses, teachers should encourage individual creativity while also creating a safe group atmosphere where students can share emotions, observe peers, and receive constructive feedback.

For mind-body integration dance, universities should further develop their unique embodied value by incorporating breath awareness, posture training, body control, and cultural interpretation into teaching. Since this type of dance showed a direct effect beyond the three mediators, future course design should emphasize the connection between bodily practice and psychological regulation. Teachers may guide students to notice bodily sensations, regulate breathing, and understand the cultural meanings behind movement patterns. In addition, future research should adopt longitudinal or experimental designs to verify causal relationships and should include additional embodied mediators, such as interoceptive awareness, body mastery, mindfulness, body esteem, and cultural identity.

References

- Al Schameri, S., Plattner, B., Rainer, L., Gampe, H., Salcher, B., Grebosz-Haring, K., Klettner, M. C., & Winds, K. (2026). Effects of a dance-based intervention on affective states and Self-esteem in adolescents receiving psychiatric care: Differences between youth with and without problematic internet use—a pilot study. *Behavioral Sciences*, 16(2),170. <https://doi.org/10.3390/bs16020170>
- Belay, A. S., Guangul, M. M., Asmare, W. N., & Mesafint, G. (2021). Prevalence and associated Factors of psychological distress among nurses in public hospitals, southwest, Ethiopia: A cross-sectional study. *Ethiopian Journal of Health Sciences*, 31(6), 1247–1256. <https://doi.org/10.4314/ejhs.v31i6.21>
- Bläsing, B., & Zimmermann, E. (2021). Dance is more than meets the eye—how can dance performance be made accessible for a non-sighted audience?. *Frontiers Psychology*, 12, 643848. <https://doi.org/10.3389/fpsyg.2021.643848>

- Borowski, T. (2021). How dance promotes the development of social and emotional competence. *Arts Education Policy Review*, 124, 1–14. <https://doi.org/10.1080/10632913.2021.1961109>
- Chai, X., Nugraheni, T., Masunah, J., & Sunaryo, A. (2026). Embodied cognition and somaesthetic approaches in dance education: A systematic review of behavioral and psychological outcomes. *ShodhKosh: Journal of Visual and Performing Arts*, 7(1), 7224. <https://doi.org/10.29121/shodhkosh.v7.i1.2026.7224>
- Cheng, W.-H., Quan, Y., & Thompson, W. F. (2024). The effect of dance on mental health and quality of life of people with Parkinson's disease: A systematic review and three-level meta-analysis. *Archives of gerontology and geriatrics*, 120, 105326. <https://doi.org/10.1016/j.archger.2024.105326>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychol Bull*, 98(2), 310–357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Dou, X., Jia, L., & Ge, J. (2021). Improvisational dance-based psychological training of college students' dance improvement. *Frontiers Psychology*, 12, 663223. <https://doi.org/10.3389/fpsyg.2021.663223>
- Foglia, L., & Wilson, R. A. (2013). Embodied cognition. *Wiley Interdisciplinary Reviews: Cognitive Science*, 4(3), 319–325. <https://doi.org/10.1002/wcs.1226>
- Fong Yan, A., Nicholson, L. L., Ward, R. E., Hiller, C. E., Dovey, K., Parker, H. M., Low, L. F., Moyle, G., & Chan, C. (2024). The effectiveness of dance interventions on psychological and cognitive health outcomes compared with other forms of physical activity: A systematic review with meta-analysis. *Sports Medicine*, 54(5), 1179–1205. <https://doi.org/10.1007/s40279-023-01990-2>
- Foster Vander Elst, O., Foster, N. H. D., Vuust, P., Keller, P. E., & Kringelbach, M. L. (2023). The neuroscience of dance: A conceptual framework and systematic review. *Neuroscience & Biobehavioral Reviews*, 150, 105197. <https://doi.org/10.1016/j.neubiorev.2023.105197>
- Frausing, K. P., Flammild, M. H., & Dahlgaard, J. (2025). Mind-body practices for mental health in higher education: Breathing, grounding, and consistency are essential for stress and anxiety management. *Healthcare*, 13(16), 2049. <https://doi.org/10.3390/healthcare13162049>
- Gomes, N., Cochet, S., & Guyon, A. (2021). Dance and embodiment: therapeutic benefits on body-mind health. *Journal of Interdisciplinary Methodologies and Issues in Science*, 9, 22. <https://doi.org/10.1018713/JIM IS-02072021-9-4>

- Gross, J. J. (2015). The extended process model of emotion regulation: elaborations, applications, and future directions. *Psychological Inquiry*, 26(1), 130–137.
<https://doi.org/10.1080/1047840X.2015.989751>
- Jiang, Y., Abdullah, N., & Nordin, N. (2024). Tai Chi training: An effective method to enhance the oneness of mind and body in dance performance. *Environment and Social Psychology*, 9(10), 3124. <https://doi.org/10.59429/esp.v9i10.3124>
- Klaperski–van der Wal, S., Skinner, J., Opacka–Juffry, J., & Pfeffer, K. (2025). Dance and stress regulation: A multidisciplinary narrative review. *Psychology of Sport and Exercise*, 78, 102823. <https://doi.org/10.1016/j.psychsport.2025.102823>
- Lazzarelli, A., Scafuto, F., Crescentini, C., Matiz, A., Orrù, G., Ciacchini, R., Alfì, G., Gemignani, A., & Conversano, C. (2024). Interoceptive ability and emotion regulation in mind–body interventions: An integrative review. *Behavioral Sciences*, 14(11), 1107.
<https://doi.org/10.3390/bs14111107>
- Li, X., Su, Y., Gan, Y., & Zuo, C. (2025). Association between attitude toward seeking professional psychological help and mental health service need in college students: A cross–sectional study. *BMC Public Health*, 25(1), 4371. <https://doi.org/10.1186/s12889-025-25674-w>
- Ma, Z., Chen, Y., Deng, Y., & Zhao, J. (2026). Mental health symptoms among Chinese college students following the lifting of COVID–19 restrictions: A serial cross–sectional study in Guangdong Province, China. *Healthcare*, 14(3), 339.
<https://doi.org/10.3390/healthcare14030339>
- Majerová, N., & Sokolová, L. (2025). Well–being and academic stress in higher education students: Interview and diary study. *International journal of qualitative studies on health and well–being*, 20(1), 2602369. <https://doi.org/10.1080/17482631.2025.2602369>
- Mo, L., Liao, D., She, J., Yan, B., & Chen, M. (2025). Effects of dance intervention on health–related outcomes in patients with depression in Mainland China: A network meta–analysis. *Complementary therapies in medicine*, 94, 103253.
<https://doi.org/10.1016/j.ctim.2025.103253>
- Narikbayeva, L., Klyshbayev, T., Kalimullin, D., & Mochalov, D. (2025). The impact of dance on enhancing social skills and emotional intelligence through creativity. *Acta Psychologica*, 253, 104736. <https://doi.org/10.1016/j.actpsy.2025.104736>

- Patte, K. A., Battista, K., Goddard, J., Ferro, J., & Leatherdale, S. T. (2024). Students' reasons for being reluctant to seek help for mental health concerns in secondary schools. *Cogent Mental Health*, 3(1), 2298918. <https://doi.org/10.1080/28324765.2023.2298918>
- Podolski, O. S., Whitfield, T., Schaaf, L., Cornaro, C., Köbe, T., Koch, S., & Wirth, M. (2023). The impact of dance movement interventions on psychological health in older adults without dementia: A systematic review and meta-analysis. *Brain Sciences*, 13(7),981. <https://doi.org/10.3390/brainsci13070981>
- Prakash, N., Goodill, S., Sood, S., Vader, D. T., Moore, R. H., Beardall, N., & Shim, M. (2024). Examining the impact of dance/movement therapy on empathy, peer relationships, and cultural self-efficacy in middle school: A mixed methods study. *Social Sciences & Humanities Open*, 10, 100998. <https://doi.org/10.1016/j.ssaho.2024.100998>
- Quested, E., Bosch, J., Burns, V., Cumming, J., Ntoumanis, N., & Duda, J. (2011). Basic psychological need satisfaction, stress-related appraisals, and dancers' cortisol and anxiety responses. *Journal of Sport & Exercise Psychology*, 33, 828–846. <https://doi.org/10.1123/jsep.33.6.828>
- Roy, S., Biswas, A. K., & Sharma, M. (2025). Stress, anxiety, and depression as psychological distress among college and undergraduate students: A scoping review of reviews guided by the socio-ecological model. *Healthcare*, 13(16),1948. <https://doi.org/10.3390/healthcare13161948>
- Ryan, R. M., & Deci, E. L. (2023). Self-determination theory. *Encyclopedia of Quality of Life and Well-Being Research*, 6229–6235. https://doi.org/10.1007/978-3-031-17299-1_2630
- Shafir, T. (2016). Using movement to regulate emotion: neurophysiological findings and their application in psychotherapy. *Frontiers Psychology*, 7, 1451. <https://doi.org/10.3389/fpsyg.2016.01451>
- Urra-López, K., Coronado-Reyno, C., & Reyno-Freundt, A. (2026). Between steps and emotions: Folk dance as a promoter of youth well-being. *Children*, 13(2),211. <https://doi.org/10.3390/children13020211>
- Wu, X., Lu, X., Zhang, H., Wang, X., Kong, Y., & Hu, L. (2023). The association between ballroom dance training and empathic concern: Behavioral and brain evidence. *Human Brain Mapping*, 44(2), 315–326. <https://doi.org/10.1002/hbm.26042>

- Wu, X., Wang, X., Lu, X. J., Kong, Y. Z., & Hu, L. (2023). Enhanced neural synchrony associated with long-term ballroom dance training. *NeuroImage*, 278, 120301. <https://doi.org/10.1016/j.neuroimage.2023.120301>
- Wu, Y., Tang, J., Du, Z., Chen, K., Wang, F., Sun, X., Zhang, G., & Wu, Y. (2025). Development of a short version of the perceived social support scale: based on classical test theory and ant colony optimization. *BMC Public Health*, 25(1), 232. <https://doi.org/10.1186/s12889-025-21399-y>
- Xu, J., & Chai, W. (2025). Navigating academic expectations and social integration: A moderated mediation analysis of cultural adaptation, peer support, and well-being among Chinese international students. *Frontiers Psychology*, 16, 1633773. <https://doi.org/10.3389/fpsyg.2025.1633773>
- Yang, D., & Wang, X. (2025). The influence and mechanism of Taichi Chuan on improving mental health in adolescents: The chained mediating effect of meaning in life and psychological resilience. *Acta Psychologica*, 255, 104932. <https://doi.org/10.1016/j.actpsy.2025.104932>
- Ye, L., Li, Y., & Zhang, N. (2025). The impact of aesthetic education on university students' psychological wellbeing: exploring mediating and moderating effects. *Frontiers Psychology*, 16, 1515671. <https://doi.org/10.3389/fpsyg.2025.1515671>
- Yu, H., Teo, E. W., Tan, C. C., Chang, J., & Liu, S. (2025). Exploring the factors associated with professional and non-professional dancer well-being: A comprehensive systematic review. *Frontiers Psychology*, 16, 1644253. <https://doi.org/10.3389/fpsyg.2025.1644253>
- Zafeiroudi, A. (2023). Dance and psychological health: effect of dance participation on social development. *Journal of Social Science Studies*, 10, 90. <https://doi.org/10.5296/jsss.v10i2.21414>
- Zafeiroudi, A., Tsartsapakis, I., Trigonis, I., Kouli, O., Goulmaris, D., & Kouthouris, C. (2025). Embodied mindfulness through movement: A scoping review of dance-based interventions for mental well-being in recreational populations. *Healthcare (Basel)*, 13(17). <https://doi.org/10.3390/healthcare13172230>
- Zhang, J., Meng, J., & Wen, X. (2025). The relationship between stress and academic burnout in college students: Evidence from longitudinal data on indirect effects. *Frontiers Psychology*, 16, 1517920. <https://doi.org/10.3389/fpsyg.2025.1517920>

Zhang, X., & Wei, Y. (2024). The role of dance movement therapy in enhancing emotional regulation: A literature review. *Heliyon*, 10(15), e35733.

<https://doi.org/10.1016/j.heliyon.2024.e35733>

Zhang, Y., & Ma, H. (2025). The impact of dance on the mental health of older adults: A network meta-analysis of anxiety, depression, and well-being. *Frontiers Psychology*, 16, 1733911.

<https://doi.org/10.3389/fpsyg.2025.1733911>