

ARTICLE

The Impact of a Weekend Dance Program on Social-Emotional Learning Among Young Children

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ABSTRACT

Dance and movement encourages socialization promoting children's social and emotional skills. This study aimed to examine the impact on the SEL of children after a weekend dance program.

METHOD: This study employed a quasi-experimental controlled trial design with 60 children aged 5-6 in Fujian Province, China. Participants were randomly assigned to either an integrated dance program group (n=30) or control group (n=30). The weekend dance program was led by professional instructors and consisted of 12 weekly lessons, each lasting 50 minutes. Pre- and post-measurements were taken using the Social-Emotional and Character Development Scale (SECD) and the Preschooler Gross Motor Quality Scale (PGMQS) to assess changes in social-emotional learning and gross motor skills. Repeated-measures ANOVA tests were conducted to determine the impact of the integrated dance program.

RESULTS: The study found a significant difference in the changes between the two groups, indicating that the weekend dance program had a positive impact on the social-emotional behavior and motor skill quality of the children who participated compared to the control group. Specifically, the participants in the dance program group demonstrated significantly greater improvements in their social-emotional behavior and motor skill quality compared to those in the control group.

CONCLUSION: The study provides preliminary evidence that an integrated dance program can promote social-emotional development and gross motor skills in young children. After-school dance activities may help to improve children's well-being. Further research is needed to understand the underlying mechanisms and to evaluate alternative arts-based therapies.

1. Introduction

1.1 Importance of Social and Emotional Learning (SEL) in Children

Social and Emotional Learning (SEL) is an essential tool for promoting positive development in children, as

it facilitates mental well-being and influences all areas of children's growth (Jones, Barnes, Bailey, & Doolittle, 2017; Greenberg, Domitrovich, Weissberg, & Durlak, 2017). SEL encompasses the acquisition and application of knowledge, skills, and attitudes that contribute to healthy self-awareness, emotional management, and

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the achievement of individual and collective goals. Additionally, it helps refine the ability to express emotions and empathize with others, leading to healthy and supportive interpersonal relationships (Borowski, 2019). While there is a significant body of literature on the importance of SEL in promoting mental well-being, there is a paucity of research on the relationship between dance and movement engagement and SEL in children. Therefore, this study aims to investigate the impact of a weekend dance program on the social-emotional learning of young children.

1.2 The Need for SEL

Today's children are growing up in an increasingly digital world, where electronic devices are becoming an integral part of their lives (Keeley et al., 2017). While technology can supplement social interaction, excessive screen time has been linked to children's cognitive, linguistic, and social-emotional skills (Schwarzer, Grafe, Hiemisch, Kiess, & Poulain, 2022). Young children may experience inattention, aggressive behavior, obesity, lack of physical activity, and sleep disorders due to the use of electronic devices (Mustafaoglu, Zirek, Yasaci, & Özdiçinçler, 2018).

Neglecting children's social and emotional competencies can put their academic and social behaviors at significant risk (Thayer, Campa, Weeks, Buntain-Ricklefs, Low, Larson, & Cook, 2019). However, children with high social-emotional competency are more likely to achieve their academic goals because they can control their emotions and solve problems when they encounter difficulties (Wang, Yang, Zhang, Wang, Liu, & Xin, 2019). Thus, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has recognized the importance of SEL and advocated for it as the key to achieving the United Nations (UN) Sustainable Development Goals (SDGs), including building peaceful and sustainable societies through education. High social-emotional competency enables children to achieve their academic goals by allowing them to control their emotions and solve problems when they encounter difficulties (Nandini Chatterjee Singh, 2022).

1.3 Complementarity of SEL and Creative Dance

While SEL and creative dance may seem unrelated, recent research suggests that they can complement each other in enhancing children's social and emotional abilities. The 2015 Menzer study provides evidence connecting arts participation with social-emotional development, highlighting that participation in the arts, including

music, dance, and theater, can foster social connections and a sense of community, leading to improved social skills and emotional well-being. Moreover, the creative process involved in arts participation allows for self-expression and reflection, facilitating personal growth and self-awareness. Engagement in the arts can also promote problem-solving skills, critical thinking, and creativity, valuable assets for social and emotional development (Menzer, 2015).

Research has shown that creative dance has the potential to enhance children's cooperation, communication, leadership, and teamwork skills, while also promoting acceptance of individual differences (Rossberg-Gempton, Dickinson, & Poole, 1999). In addition, a systematic review by McCabe and Altamura (2011) found that dance and other social-emotional training programs can have a positive impact on social and emotional competence in preschool children in the short term (McCabe & Altamura, 2011). According to a recent meta-analysis conducted by Blewitt C et al., (2018), those favorable effects from SEL programs are more likely to be associated with facilitators, specialists, or researchers than with class teachers (Blewitt, Fuller-Tyszkiewicz, Nolan, Bergmeier, Vicary, Huang, McCabe, McKay, & Skouteris, 2018). The reason might be inadequate preparation for teachers to intervene within preschool programs. artistic activities such as dance and creative movement, which draw upon Laban's notation work, have long been recognized as effective ways to engage young children, promote their emotional growth, and foster social interaction (Hanna, Patterson, Rollins, & Sherman, 2013). Thus, creative dance can be an effective mean to promote SEL in young children.

1.4 The Role of Dance in Supporting Social-Emotional Development

Recent research has specifically focused on the role of dance in supporting social-emotional development in early childhood. Despite being an ancient art form, creative dance can still offer significant benefits to children, including enhanced social and emotional skills. Dance programs can foster social and emotional learning, creativity, responsibility, teamwork, and effective movement strategies. Through dance movements, children can benefit from improved motor ability, social interactions, sensory engagement, and cognitive flexibility (Lorenzo-Lasa, Ideishi, & Ideishi, 2007). Additionally, physical movement and expression in dance involve social interactions, which foster sensitivity to understanding, reacting, and coping with emotions (Walter & Sat, 2013). By integrating social-emotional learning into dance programs, children can explore and refine their movement, synchronize

with music and other learners, and engage with class themes, promoting social-emotional development through movement and expression.

While SEL has been shown to have a positive impact on children, there is a lack of research on the integration of SEL with dance and movement programs for children. Thus, the purpose of this study is to investigate the effects of an integrated dance program on children's social-emotional learning and motor skills compared to a choreographed dance program offered in a private culture and art center. This study aims to fill the research gap and provide insights into the potential benefits of incorporating SEL into dance programs for children. By examining the impact of an integrated dance program on social-emotional learning and motor skills, this study seeks to contribute to the development of effective interventions for promoting positive development in children.

2. Research Method

2.1 Participants

In this quasi-experimental controlled study, participants were recruited through a private culture and art center located in Putian, Fujian Province. The center works to support and strengthen local dance, music and theater organizations through partnerships and cooperation. Advertising materials were emailed to the center, the director replied and sent an official agreement. The researchers contacted the dance instructors in-person and obtained the personal agreement for joining the research project. The director recruited volunteers via an e-poster sent to parents in the WeChat group during fall 2020 and spring 2021. Oral and written informed consent and assent were obtained from parents and children before baseline data collection. Parents and children were invited to attend an orientation meeting, where the study procedures and integrated dance program were explained. All participants could communicate with the researchers via their instructors/director about the project and could withdraw at any time. The study followed ethical guidelines and all procedures were approved by the Research Committees of the University of Macau.

A total of seventy young girls, between the age of 5 and 6 years, were recruited in the study. Sixty-three girls were able to complete the study. Three participants were excluded due to personal reasons. Participants were allocated equally, they were blinded which they were unaware of the groups they were assigned to. Thirty girls were included in the intervention group and thirty girls were included in the control group for the final analysis.

2.2 Inclusion and Exclusion Criteria

The inclusion criteria of subjects included 1) all girls; 2) age between 5 to 6 years old with parental/legal guardian consent; 3) no history of major surgery; 4) children background, attendance rate and assessment information are complete and no missing. In addition, the exclusion criteria included 1) learning difficulties or physical disabilities reported by their doctors/parents.

2.3 Procedure

The integrated dance program was implemented by qualified dance instructors who received licenses and qualifications recognized by the Chinese Dance Association, based on Dance Standards s approved in Putian, Fujian Province.

The program structure and main contents were presented in Table 1. The 12-week integrated dance program consisted of one session per week, with a total of 3 units. Each unit had 4 sessions and each session lasted for 50 minutes. Three dances were selected from the Syllabus for Graded Examination on Chinese Dance Grade III designed by the China Dancers Association, namely "Dance in Forest", "Little Helpers" and "Happy Day". In the intervention group, students were offered movement opportunities that allowed them to create dance movements according to their personal preferences while listening to the selected music and lyrics.

Each session was structured into 5 parts: 1) greeting, 2) warm-up and stretching activities, 3) developing skills, 4) music and dance movements improvisation and 5) cool-down and stretching. The integrated dance program and all lesson plans were specifically designed for this study, based on the conceptual approach of creative dance founded by Gilbert in 1992 (Green Gilbert & Smith, 1992). Additionally, the instruction, guided exploration and tasks were adapted and integrated with Rudolf Laban's movement framework through the elements of movement like space, effort, body, and relationships.

During each session, the instructor was always visible to the students, teaching in the center of the circle or in front of them. To integrate SEL, children were divided into groups to listen to the theme song and engage in dance movement activities (ie, jogging and galloping) and SEL activities (ie, building relationships and bolstering their expression). Physical activities and games were organized according to the themes, and children were assigned to create different postures and movements with peers in each lesson routine (ie, animal moves).

During the 8-week intervention period, the control group attended regular Chinese dance instruction. The

sessions strictly adhered to Foundation Level 1 for beginning Chinese dance learners, which consists of basic locomotor skills, moves, and rhythms that are very repetitious and are taught by a licensed dance instructor appointed by the art center.

2.4 Measures

The Preschooler Gross Motor Quality Scale (PGM-QS) was used to assess body movement skill qualities of children (Sun, Zhu, Shih, Lin, & Wu, 2010). This process-oriented assessment is administered by researchers and instructors, with 17 items in three subscales. The locomotion subscale includes 8 items (down stairs, running, horizontal jumping, hopping, sliding, galloping, leaping, and jumping from side to side), the object manipulation subscale includes 5 items (overhand throwing, catching, kicking, ball bouncing, and striking a stationary ball) and the balance subscale includes 4 items (single leg standing, tandem standing, walking line forward, and walking line backward). Each young child was awarded one point if they demonstrated the required quality component and zero if they did not meet the criteria. The total score for PGMQS is 84, with 41 points for the locomotion subscale, 25 points for the object manipulation subscale, and 18

points for the balance subscale. Higher scores indicate better motor skill performance.

The Social-Emotional and Character Development Scale (SECD) was used to evaluate various aspects of social-emotional skills and character development in children aged 3 to 8 years old (Ji, DuBois, & Flay, 2013). This 28-item scale includes six subscales: prosocial behavior (six items), honesty (five items), self-development (four items), self-control (four items), respect at school (five items), and respect at home (four items). Items were assessed using a 4-point Likert scale to indicate how often the children performed each SECD-related behavior. The instructors read aloud and explained each item to ensure that the children understood the items and to improve the accuracy of the responses. Examples of items include: "I try to cheer up other kids if they are feeling sad," "I tell the truth when I have done something wrong," "I set goals for myself," "I follow the rules even when nobody is watching," "I obey my teacher and other adults at schools," and "I speak politely to my parents." Higher scores indicate higher SECD skills.

2.5 Data Analysis

The study utilized pre- and post-measurements with

Table 1. The integrated dance program

	Dance in Forest (week 1 – 4)	Little Helpers (week 5 – 8)	Happy Day (week 9 – 12)
Greeting and warm up			
Dance Movement <i>(Think different posture and routines; Create move with peers)</i>	Locomotion Animal moves (walk or jump like bird, frog, pig, horse; run through or avoid objects)	Manipulation Discover (catch and hold different objects)	Balance Waking up (jog and gallop in different direction) Sweep (hold and kick objects) Clean (circular movements with different body part and directions; throw and catch objects) In the circuit (striking)
	Animal postures (single leg stand and reach)	Big hand (with different postures in different levels)	Expressing happy feeling (hop with one leg on stilts)
	Self-development and control Touch (feel, touch and hug) Honesty Bolster own expression	Communicate and respect Get closer (build relationship) Big hand (strong helper; know how to help at home and school) Big thumb (praise each other; motivate peers expressions)	Prosocial behavior and good choice Big eyes (watch and clap; was it interesting? difficult?) Good taker (find, select, reflect and make good decision)
	Cool-down/stretches and best wishes		

the Social-Emotional and Character Development Scale (SECDS) and Preschooler Gross Motor Quality Scale (PGMQS) to assess changes in social-emotional learning and gross motor skills. The initial analysis was performed using independent t-tests and paired t-tests for continuous variables to compare means differences between the intervention group and the control group and to assess pre-post changes in both intervention and control groups. To determine the impact of the integrated dance program on children's SEL and motor skills, repeated-measures ANOVA tests were conducted.

3. Results & Discussion

3.1 Results

The results for the change in motor skill quality and social-emotional learning in the pre- and post- intervention are presented in Table 2. No significant differences ($p > 0.05$) were found at pre and post- measures among those observed variables.

After twelve weeks of the integrated dance program intervention, locomotion in the intervention group increased significantly ($+19.6$, $p < 0.001$), moreover, manipulation in the intervention group increased significantly ($+10.1$, $p < 0.001$) and the balance in the intervention group also increased significantly ($+15.1$, $p < 0.001$). Overall, the PGMQS total scores of the intervention group increased significantly ($+37.6$, $p < 0.001$).

There were tendencies of improvement of the intervention in SCEDS. Prosocial behavior in the intervention group increased significantly ($+2.66$, $p < 0.001$), and honesty in the intervention group increased significantly ($+3.7$, $p < 0.001$). A significant increase in self-development was found in the intervention group ($+4.03$, $p < 0.001$), as well as self-control ($+3.7$, $p < 0.001$). Respect at school increased significantly ($+2.5$, $p < 0.001$) while respect at home also increased significantly ($+3.73$, $p < 0.001$). Overall, the SECDS total scores of the intervention group increased significantly ($+20.3$, $p < 0.001$).

There were significant increases in all variables of PGMQS in the control group; locomotion in the control group increased significantly ($+2.93$, $p < 0.001$), manipulation in the control group increased significantly ($+2.03$, $p < 0.001$) and balance also increased significantly ($+1.5$, $p < 0.001$). While there were only 2 variables of the SECDS increased significantly in the control group. Respect at school in the control group increased significantly ($+0.35$, $p < 0.001$) and the total scores of SECDS in the control group increased significantly ($+1.12$, $p < 0.001$) as well.

To conclude, the PGMQS total scores of the intervention group ($+37.6$, $p < 0.001$) and control group

($+6.46$, $p < 0.001$) increased significantly, with a significant increase in the SECDS total scores of the intervention group ($+20.3$, $p < 0.001$) and control group ($+1.12$, $p < 0.001$). The changes between the intervention group and the control group were significantly different before and after the study. There were significant changes in all the variables and total scores of PGMQS and SECDS in the intervention group compared to the control group.

3.2 Discussion

To the authors' knowledge, this is the first preliminary study to examine whether an intervention-integrated dance program can provide immediate improvements in social-emotional and motor skills of young children.

The findings of our study highlight the potential benefits of integrating creative dance activities into early childhood education programs for promoting both social-emotional learning and motor skill development. Our intervention demonstrated significant improvements in children's prosocial behavior, honesty, self-development, self-control, and respect, indicating the value of increasing dance experiences in young children. These findings are in line with previous studies that have found positive effects of dance programs on children's self-esteem, social competence, and behavior (Lai Keun & Hunt, 2006); (Lobo & Winsler, 2006).

One potential reason for the positive outcomes of our intervention is the use of experienced instructors who employed a conceptual approach of movement exploration and recreated regular movements based on children's social interaction and emotional expression. This approach may have provided a conducive atmosphere for children to express their natural curiosity, make decisions, resolve conflicts, and practice nonverbal communication with peers and groups. The importance of experienced instructors is also supported by Blewitt et al.'s (2018) meta-analysis, which found that favorable effects of social-emotional training programs are more likely to be associated with facilitators, specialists, or researchers than with class teachers (Blewitt et al., 2018).

Our study also found that both integrated and Chinese dance program children showed improvements in gross motor abilities in locomotion, manipulation, and balance, as compared to their baseline evaluation. This is consistent with Gallahue's (1982) theory of motor skill developmental model, the improvements could be attributed to various dancing activities, voluntary movements, and movements that occurred as part of normal development since they were 5–6 years old and still dealing with physical development and the gradual enhancement of the fundamental movements (Gallahue, 1982).

Table 2 Effect of Motor Skill Quality and Social-Emotional Learning

Scales	Variables	Integrated Dance group (n=30)			Chinese Dance group (n=30)		
		Pre	Post	Δ	Pre	Post	Δ
PGMQS	Locomotion	19.9±5.28	39.5±2.75**	19.6±4.97 [#]	22.2±4.05	25.1±3.00**	2.93±2.09
	Manipulation	12.7±3.78	22.9±2.46**	10.1±3.07 [#]	12.1±2.11	14.1±1.93**	2.03±1.32
	Balance	7.26±3.54	15.1±4.58**	7.83±4.61 [#]	11.6±3.76	13.1±2.64**	1.5±1.47
	Total score	39.9±10.7	77.5±8.82**	37.6±9.63 [#]	45.9±7.08	52.4±5.22**	6.46±3.24
SECDs	Prosocial Behavior	19.0±3.92	21.7±1.96**	2.66±2.42 [#]	17.9±3.91	18.2±3.53	0.22±0.99
	Honesty	12.5±4.09	16.2±2.69**	3.7±2.75 [#]	15.3±4.45	15.1±4.02	-0.2±0.80
	Self-Development	8.6±3.45	12.6±2.20**	4.03±2.23 [#]	10.1±4.29	10.4±3.83	0.25±0.77
	Self-Control	8.53±3.86	12.2±2.48**	3.7±2.69 [#]	10.6±3.83	10.9±3.46	0.29±0.86
SECDs	Respect at School	14.8±3.88	17.3±1.84**	2.5±2.68 [#]	15.4±3.93	15.8±3.41*	0.35±0.91
	Respect at Home	10±2.62	13.7±1.48**	3.73±2.21 [#]	11±3.10	11.2±2.69	0.22±0.76
	Total Score	73.5±17.5	93.9±10.4**	20.3±11.2 [#]	80.5±17.1	81.7±15.4*	1.12±2.44

Note: Data are means \pm SD.

Δ denotes the change in the pre-test and post-test.

* denotes p value ($p<0.05$) of the integrated dance group was statistically significant from that of the Chinese dance group.

** denotes p value ($p<0.01$) of the integrated dance group was statistically significant from that of the Chinese dance group.

[#] denotes p value ($p<0.01$) of Δ in the integrated dance group was statistically significant from that of the Δ in the Chinese dance group.

However, the largest increases in gross motor skills were observed in the integrated dance program group, indicating the potential benefits of incorporating dance activities into early childhood education programs. The results of our study expand upon the findings of previous research that has also found significant improvements in basic kinaesthetic skills and gross motor skills among children who received carefully designed and organized dance programs (Lykesas, Tsapakidou, & Tsopmanaki, 2014; Georgios, Ioannis, Olga, Dimitris, & Maria, 2018; Theocharidou, 2017). The playful and engaging nature of dance may provide an opportunity for young children to develop motor skills through the effortless acquisition of movement abilities.

It is worth noting that the duration of our intervention was just a weekly session for twelve weeks, which is shorter than previous interventions that have shown similar results. This suggests that even brief interventions can strengthen young children's motor skill quality and social-emotional learning, while remaining feasible in terms of time and frequency. However, further research is needed to examine the long-term effects of creative dance interventions on young children's development.

4. Conclusion

In conclusion, our study provides strong evidence that an integrated dance program can have significant positive effects on young children's social and emotional learning and motor quality. The findings suggest that even a moderate-duration program can offer many advantages

and benefits that extend beyond simply learning dance skills.

However, it is important to acknowledge that there is no one definitive approach to using dance as an intervention to increase social emotional competence. More research is needed in different contexts and with varying durations to fully understand the extent of the impact that performing arts can have on promoting children's social-emotional development. It is essential that future studies utilize reliable subjective and objective measures to collect data, which will strengthen our understanding of the benefits of dance interventions.

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Appendices:

Appendix 1: Analysis of paired t-test of pre- and post- test between the integrated dance group and the Chinese dance group

Variables	Integrated dance group (n=30)				Chinese dance group (n=30)			
	Pre	Post	t	p	Pre	Post	t	p
PGMQS								
Locomotion	19.9±5.28	39.5±2.75**	-21.59	0.000	22.2±4.05	25.1±3.00**	-7.651	0.000
Manipulation	12.7±3.78	22.9±2.46**	-18.07	0.000	12.1±2.11	14.1±1.93**	-8.401	0.000
Balance	7.26±3.54	15.1±4.58**	-9.293	0.000	11.6±3.76	13.1±2.64**	-5.552	0.000
Total score	39.9±10.7	77.5±8.82**	-21.37	0.000	45.9±7.08	52.4±5.22**	-10.91	0.000
SECDS								
Prosocial Behavior	19.0±3.92	21.7±1.96**	-6.021	0.000	17.9±3.91	18.2±3.53	-1.270	0.214
Honesty	12.5±4.09	16.2±2.69**	-7.353	0.000	15.3±4.45	15.1±4.02	1.564	0.129
Self-Development	8.6±3.45	12.6±2.20**	-9.881	0.000	10.1±4.29	10.4±3.83	-1.861	0.073
Self-Control	8.53±3.86	12.2±2.48**	-7.526	0.000	10.6±3.83	10.9±3.46	-1.874	0.071
Respect at School	14.8±3.88	17.3±1.84**	-5.095	0.000	15.4±3.93	15.8±3.41*	-2.164	0.039
Respect at Home	10±2.62	13.7±1.48**	-9.245	0.000	11±3.10	11.2±2.69	-1.651	0.109
Total score	73.5±17.5	93.9±10.4**	-9.872	0.000	80.5±17.1	81.7±15.4*	-2.578	0.015

Note: Data are means \pm SD.

Δ denotes the change in the pre-test and post-test.

* denotes p value ($p<0.05$) of the integrated dance group was statistically significant from that of the Chinese dance group.

** denotes p value ($p<0.01$) of the integrated dance group was statistically significant from that of the Chinese dance group.

Appendix 2: Analysis of sample t-test of the changes in motor skill quality and social-emotional learning of pre- and post- test for the integrated dance group compared to the Chinese dance group

Variables	Changes of the integrated dance group (n=30)	Changes of the Chinese dance group (n=30)	t	p
PGMQS				
Locomotion	19.6±4.97**	2.93±2.09	16.927	0.000
Manipulation	10.1±3.07**	2.03±1.32	13.264	0.000
Balance	7.83±4.61**	1.5±1.47	7.155	0.000
Total score	37.6±9.63**	6.46±3.24	16.775	0.000
SECDS				
Prosocial Behavior	2.66±2.42**	0.22±0.99	5.152	0.000
Honesty	3.7±2.75**	-0.2±0.80	7.439	0.000
Self-Development	4.03±2.23**	0.25±0.77	8.797	0.000
Self-Control	3.7±2.69**	0.29±0.86	6.576	0.000
Respect at School	2.5±2.68**	0.35±0.91	4.176	0.000
Respect at Home	3.73±2.21**	0.22±0.76	8.181	0.000
Total score	20.3±11.2**	1.12±2.44	9.120	0.000

Note: Data are means \pm SD.

Δ denotes the change in the pre-test and post-test.

** denotes p value ($p<0.01$) of intervention group was statistically significant from that of the Chinese dance group.

Appendix 3: Checks for regularity for scoring variables

	Group		Kolmogorov-Smirnov			Shapiro-Wilk		
			Statistics	df	Sig.	Statistics	df	Sig.
Experimental	Pre test	PGMQS_total	0.114	30	.200*	0.983	30	0.908
	Pre test	SECDS_total	0.169	30	0.029	0.893	30	0.006
Control	Pre test	PGMQS_total	0.137	30	0.157	0.974	30	0.645
	Pre test	SECDS_total	0.132	30	0.190	0.957	30	0.252
Experimental	Post test	PGMQS_total	0.232	30	0.000	0.743	30	0.000
	Post test	SECDS_total	0.112	30	.200*	0.966	30	0.430
Control	Post test	PGMQS_total	0.112	30	.200*	0.971	30	0.569
	Post test	SECDS_total	0.160	30	0.049	0.958	30	0.278

* denotes p value ($p < 0.05$) of integrated dance group was statistically significant from that of the Chinese dance group.