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EFFECTS OF DANCE EDUCATİON ON EMOTİONAL İNTELLİGENCE RELATED OUTCOMES

Hakan Atamturk[1]

Bilgen Dincdolek[2]

Abstract: *Background and Study Aim:* Dance can be interpreted as a language that the human body speaks. Through bodily movements when performing dance, individuals can express their emotions and communicate with others. Emotional intelligence entails an individual's being aware of his own emotions, the ways he manages these emotions, self-motivation, realising other peoples' emotions and the ability to establish relationships (Goleman, 1996). Even the definitions of dance and emotional intelligence suggest an association. Hence, this study aimed to explore the potential associations between dance education and emotional intelligence abilities. *Material and Methods:* The data were collected from a total of 100 adolescents who were enrolled in five dance schools in North Cyprus and from 100 adolescents who did not dance through the Emotional Intelligence Scale which was developed by Atamturk (2011). The Mann-Whitney U-Test results indicated a significant difference between the emotional intelligence abilities of adolescents who received dance education and those of adolescents who did not. Additionally, Kruskal- Wallis test indicated that dance expertise significantly influenced the emotional intelligence development of the participants. *Results:* Adolescents who received dance education developed higher levels of emotional intelligence abilities and dance expertise affected the emotional intelligence development of the adolescents. In this respect, this study adds a novel variable to be investigated to the relevant literature. *Conclusions:* As the results of this study indicates dance can help adolescents lead a healthier life by increasing emotional intelligence development. Further

[1] Department of Recreation, Faculty of Sport Sciences, Near East University, Cyprus hakan.atamturk@neu.edu.tr https://orcid.org/0000-0002-8080-197X

[2] Studio Mod Dance School, zbdincdolek@hotmail.com, https://orcid.org/0000-0002-6069-5620. Authors' Contribution: A - Study design; B - Data collection; C - Statistical analysis; D - Manuscript preparation; E -Funds collection,

research can delve into the impact of the dance expertise on emotional intelligence.

Keywords: physical education, adolescents, movement, dance expertise, internal dynamics

1. INTRODUCTİON

Owing to their nature, human beings are emotional. Emotions play an important role in one's life, and it is not possible to sustain a healthy life without expressing them. Goleman (2000) argues that helping the child to master and manage his emotional world is more important than his IQ in his preparation for the adult world. Goleman (2000) refers to the healthy emotional life of the child as "emotional intelligence". Developing skills to be aware of emotions and managing them is associated with emotional intelligence. It is suggested that the emotions possessed affect the communication process with other individuals in positive or negative ways. Individuals with high emotional intelligence know themselves, recognize their own needs, determine their own strengths and weaknesses, manage their emotions and establish effective relationships. For all these reasons, individuals with higher emotional intelligence are more successful at work than those with lower emotional intelligence (Kilic, Dogan & Demiral, 2007).

Participation in sports activities ensures a healthy life, hence it is important for all individuals that make up the society to participate in sports activities in order to raise healthy generations. It is, therefore imperative to investigate the activities that will affect this process positively. In recent years, dance academies set up in North Cyprus attract the attention of the society as much as sports schools. In this context, it has gained importance to investigate the potential effects of dance on individuals.

In addition to being a communication tool, dance is considered an educational tool that helps to raise healthy, lively, cultured, cooperative, elegant, self-aware, sensitive, creative individuals (Overby, 1992; Lin, 2005). According to Stinson (1991), dance is "the way to know, the way to understand and communicate the world". Dance is defined as "a branch of art in which movement is a tool to feel, understand and communicate" (Paulson, 1993). Thanks to this awareness and the physical expression of emotions, dance

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affects the relaxation of the person and the development of emotional intelligence (Vancea, 2013). Dance is regarded as a useful component for human emotional development and is presented as an element that supports different aspects of Emotional Intelligence and other elements related to it (San-Juan-Ferrer & Hípola, 2020). Drawing on this, this study was designed to investigate whether dance education had an impact on the emotional intelligence abilities of adolescents aged between 11-17 as well as the variables affecting the level of emotional intelligence abilities.

Dance, which is a resource in human nature, contains the cultural fusion of body, emotion and brain (Ravelin et al., 2006). Dance, which is based on the principle of observing the movement in depth and associating it with the internal dynamics of the individual, reflects the movements, interpersonal, spiritual and cultural patterns of the individual. Hence, there is a direct relationship between movement and meaning. Through the movements in dance, observation, perception, awareness and movement mechanisms develop. Furthermore, dance improves body and soul integration and social communication.

As long as they have emotional intelligence, individuals can achieve success in their relationships with other individuals in their academic lives and at work. Dance is an important step in developing emotional intelligence. Dance is also claimed to reduce depression and anxiety as well as increase the quality of life of individuals and increase interpersonal relationships and cognitive skills (Vancea, 2013). In an attempt to analyze the dynamics of emotional intelligence, Vancea (2013) found that building a relationship with one's body through dance and movement in a personal development programme increased emotional intelligence abilities via establishing a relationship between an individual and his body. Meekums (2008) defines emotions as "*integrated body–mind functions*". In tune with Vancea's (2013) study, other studies on the effect of dance on the emotional intelligence development report similar results (Cañabate, Colomer & Olivera, 2018; Petrides, Niven & Mouskounti, 2006; Walter & Sat, 2013).

In terms of dance type, Walter and Sat (2013) examined the effect of certain dance types on the variables of

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emotional intelligence. Their results suggested a strong correlation between the circle dance and emotional regulation and self-control. As argued by Walter (2011), there is a direct relationship between movement and social relationships and emotional abilities. More specifically, Walter (2011) contends that through bodily movements individuals learn how to interact socially and cope with emotional abilities. Group dance activities enable learners to attain emotional regulation, control and restraint (Walter, 2011). Group dances entail all group members dance the same steps simultaneously. By doing so, a team spirit is created, which fosters a sense of belonging and responsibility. The dancer will feel that he is not alone but belongs to a group and that he should work hard just as others for the success of his team. The dancer also learns how to restrain his emotions for the success of the team and more importantly how to work and collaborate harmoniously his team. Walter (2011) found that circle dancing, which is a form of group dancing had a positive effect on children in terms of self-control and regulation. Additionally, Pereira and Marques-Pinto (2018) found that arts activities had a positive affect on emotions and that music and dance could help children cope with their emotions and manage them effectively. Erfer and Anat (2006) found similar results in terms of management of emotions with children in a psychiatry clinic. Meekums (2008) focused on the importance of dance movement therapy on the emotional literacy of children. Emotional literacy entails being aware of one's own feelings and sensing others' emotions (Meekums, 2008). Emotional literacy should be fostered since it ensures the development of "*self-esteem, emotional expression and regulation, and social function*" (Meekums, 2008).

Empirical research shows that dance education changes the premotor and sensorimotor regions of the brain structure (Hänggi, Koeneke, Bezzola, & Jäncke, 2010). Additionally, dance education enhances sensitivities to distance differences to familiar movements (Calvo-Merino, Ehrenberg, Leung, & Haggard, 2010). Moreover, dance helps to regulate and adapt neural responses to familiar actions (Calvo-Merino, Glaser, Grèzes, Passingham, & Haggard, 2005; Calvo-Merino, Grèzes, Glaser, Passingham, & Haggard, 2006; Cross, Hamilton, & Grafton, 2006; Fink, Graif, & Neubauer, 2009; Jang &

Pollick, 2011; Orgs, Dombrowski, Heil, & Jansen-Osmann, 2008). Significant differences were found between secondary school participants and non-participants of dance classes in terms of emotional intelligence stage (Bokyung 2014; González, Cayuela & López-Mora 2019; Sho & Cha 2018). Similarly, research studies conducted with adolescents (Im-Sun, 2008; Yoo, 2009) supported the correlation between dance expertise and emotional intelligence abilities.

Despite a plethora of studies conducted on the effect of dance on emotional intelligence abilities of infants (Jung 2010), primary school children (Bock, 2019, Jang & Sook 2012; Kang, 2010; Kim, 2005), adults (Behera & Rangaiah, 2017; Cho 2018; Lee & Chol, 2018; Lee & Seo, 2018), the elderly (Kattenstroth et al. 2013) and school age children (Cañabate, Colomer & Olivera, 2018), there is a scarcity of empirical studies conducted with adolescents on the issue. Adolescence is a transional period an individual undergoes from childhood into adulthood. Since adolescents encounter a number of changes in this period, they may be prone to affective disorders. Finding ways to increase the emotional intelligence abilities of adolescents is therefore imperative.

Purpose of the study: The aim of the study was to investigate the impact of dance education on adolescents' emotional intelligence abilities primarily. The secondary objective of the study was to test the influence of dance expertise on the emotional intelligence development of the participants.

2. MATERİAL AND METHODS

Participants: Two hundred adolescents (11-17 years old) participated in this study. A hundred of them were dancers and the remaining a hundred adolescents were nondancers who did not play any sport. Ninety five per cent of the dancers were female while 5 of them were male and 66 per cent of the nondancers were female and 35 of them were male.

Research Model: This study was designed as a quantitative research study and data were collected through survey method. General survey models are scanning arrangements made on the whole of the universe or a group, sample or sample taken from it in order to make a general judgment about the universe (Karasar, 2014). Survey models are "*research approaches that aim to*

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describe a past or present situation as it exists". The important thing in this model is to be able to observe the existing one without trying to change it (Karasar, 2014).

Procedure: There were five dance schools in North Cyprus in the spring in 2020. These schools were Studio MOD, Dancebase Art Studio, Cranberries Dance & Gym, Sergen Dance and Folkder. Altogether there were a hundred and ten adolescents enrolled in these dance schools. Participation to the study was on voluntary basis. While the questionnaire was handed out participants were informed about the nature of the study and they were told that participation was on a voluntary basis and hence only if they wanted to participate they should fill out the questionnaire and submit. Data collection was carried out following all ethical rules and procedures and an ethical consent was granted by the Ethics Committee of the Near East University. Out of one hundred and ten questionnaires distributed one hundred questionnaires were returned. We also contacted one hundred and ten adolescents who did not play any sports or dance as an activity to ask them to fill out the questionanire voluntarily. In accordance with the general and sub goal of the research, the Emotional Intelligence Scale-questionnaire, which was developed by Atamturk (2011) was utilized. The questionnaire consisted of 40 items each of which was grouped under 4 constructs, namely emotional well-being, emotionality, self-control and sociability. The Cronbach's alpha was found to be 0,871, which indicated the reliability of the questionnaire.

Statiscical Analysis: Since the collected data did not show a normal distribution, the Mann-Whitney U-Test was performed for two non-parametric independent groups. The

Mann–Whitney U-Test is used with interval data that deviate from an acceptable level of normal distribution, which is also called nonparametric data (MacFarland & Yates, 2016).

While the Mann–Whitney U-test is used for comparing only two groups, Kruskal- Wallis test, as an extension of the Mann-Whitney U-test is used to compare two or more independent samples of equal or different sample sizes (Wayne, 1990). As the participants formed had three groups by dance expertise in this study, Kruskal-Wallis test was prefered to

compare the groups in terms of dance expertise.

3. RESULTS

In line with the primary purpose of our study which was to investigate the effect of dance on the emotional intelligence abilities of adolescents, it was found that dancers developed better emotional intelligence abilities compared to nondancers. The Mann–Whitney U-Test revealed a statistically significant difference between the emotional intelligence levels of dancers and and those of nondancers (U= 4488.0, $p<0.05$) (see Table 1)

Table 1. Mann–Whitney U-Test results regarding emotional intelligence levels of dancers and nondancers

		n	Mean rank	Sum of ranks	U	p
Emotional Intelligence	Dancers	100	106.5	10763.0	4488.0	0.01
	Nondancers	100	95.3	9538.0		
	Total	200				

Table 1 showed that the emotional intelligence levels of dancers significantly differed from those of the nondancers. The results of the Mann-Whitney U- Test revealed a stastistically significant difference between the two nonparametric groups ($p <0.05$) in favor of the dancers.

As far the constructs of the instrument were concerned, emotionality came first and sociality last for both dancers and nondancers (see Table 2).

Table 2. Emotional intelligence scores of dancers by construct

Constructs	Dancers		
	Mean	Std	r
Emotionality	4.59	1.12	0.87
Self- control	4.58	1.24	0.73
Emotional Wellbeing	4.50	0.64	0.61

Sociality	2.33	1.24	0.91

As seen in Table 2, being a construct, emotionality influenced the total emotional intelligence levels of the participants more than the other constructs did (M=4.59). The second influential construct was identified as self- control (M=4.58), the third as emotional well-being (M=4.50) and the fourth as sociality (M=2.33).

The secondary aim of the study was to determine to what extent the dance expertise of the dancers influenced the emotional intelligence abilities. Regarding this secondary aim, the Kruskal-Wallis test results revealed that the more the years of dance expertise the higher the emotional intelligence development (see Table 3)

Table 3. Kruskal-Wallis test results regarding emotional intelligence development of dancers by dance expertise

	Years of Expertise	n	Mean Rank	df	x^2	p
Emotional Intelligence	1-5	29	31.43	2	24.040	0.02
	5-10	54	55.60			
	10-13	17	58.38			
	Total	100				

As it was illustrated in Table 3, the participants were grouped into three depending on the years of dance expertise. The findings indicated that the participants who had 1-5 years of dance expertise had lower levels of emotional intelligence abilities than those of 5-10 and 10-13 years of dance expertise. Similarly, the dancers who had 5-10 years of dance expertise had higher levels of than those of 1-5 years of dance expertise. Among the three groups the participants who had 10-13 years of dance expertise had the highest levels of emotional intelligence. Due to the lack of studies investigating the influence of dance expertise on the emotional intelligence development, this finding

could not be endorsed by the findings of relevant literature.

4. Discussion

The results of this study indicated that dance had a positive effect on the adolescents in terms of emotional intelligence development. It was found that dancers had developed significantly higher levels of emotional intelligence abilities than their nondancer counterparts. This finding went in line with that of Kapur and Rawat's (2016) small scale study conducted with 50 dancers and 50 people who did not dance. This finding corroborated those of Petrides et al. (2006), Cañabate et al. (2018), Marais and Kruger (2014), Vancea (2013) and Walter and Sat (2013) as well in general and in particular it was endorsed with the findings of Im-Sun (2008) and Yoo (2009) whose participants were adolescents as in this study.

The four constructs of emotional intelligence were determined as emotionality, self-control, emotional well-being and sociality in the instrument. It was found that among these four constructs, emotionality was the most influential in developing emotional intelligence abilities, which suggested that dance as an activity fostered emotionality most.The results also showed that dancers who had more than ten years of expertise exhibited the highest levels of emotional intelligence abilities. In this respect, this study added a novel independent variable to the literature, which called a need for future studies investigating the impact of dance expertise on the emotional intelligence abilities. Due to the lack of studies investigating the influence of dance expertise on emotional intelligence, this result cannot be endorsed.

5. Conclusions

Emotional intelligence plays an important role in an individual's life. Emotionally intelligent individuals have better chances in life in terms of social relationships. In this respect, increasing one's emotional intelligence ensures the betterment of life quality and succcess. Emotional intelligence can be developed when attended. Attending this issue in earlier ages is better; however, it is also possible to develop emotional intelligence abilities of adolescents and adults. In the light of the results of this empirical study, dance should be regarded as a great opportunity to increase adolescents' emotional

intelligence so that they can undergo the transitional period of adolescence in a healthier way.

Conflict of interests

The authors declare that there is no conflict of interests.

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