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Using Dance Therapy Among High School Students and its Effects on Motivational Persistence in Students 14-18 Aged

Vari Hanna[1], Grosu Emilia Florina[2], Grosu Vlad Teodor[3], Boancă Virgil[4], Toader Florian[5]
[1,2]"Babes-Bolyai" University, Faculty of Physical Education and Sport, Cluj-Napoca, Romania
[3]Technical University of Cluj-Napoca, Romania
[4] Professor 1st grade, Școala Gimnazială "Ioan Bob" Cluj-Napoca, Romania
[5] Professor 1st grade, Școala Gimnazială Jilava, Ilfov, Romania

Corespondence: Grosu Emilia Florina (e-mail: emiliaflorina.grosu@gmail.com)

Abstract:
Purpose: We live in a world where not only adults but also children and adolescents are subjected to stressful factors surrounding them such as demanding school responsibilities, a familiar environment that is difficult to bear, negative feelings or self-confidence, biological changes. **Methods:** the research took place over a period of 6 months, 2016 Sept.-2017 Feb., at "George Barițiu" High School, Cluj-Napoca. Scale of Motivational Persistence (SPM), this test evaluates motivational persistence, a person's ability to resist motivationally in the sense of achieving the assumed goal. **Results:** statistically significant differences between the two groups were not observed in the statistical analysis of the subjects' age values for non-paired samples in either of the two time periods studied. In contrast, statistically significant differences between the two time points were observed in the statistical analysis

for pairs, due to the proposed and applied intervention program. The statistically significant difference between the two lots ($p<0.05$) at time T1 and statistically significant differences between the two groups was observed in statistical analysis of unattained goals (RUP) $p <0.001$) at time T2. **Conclusion:** The data showed that the practice of dancing allows pupils to develop their potential and overcome their personal difficulties. In conclusion our hypothesis was confirmed, and dance – therapy can be used to increase effects of motivational perception.

Keywords: stress, dance-therapy, motivational persistence

Introduction

This paper aims to analyze stress levels in pupils aged 14-18. In daily life, stress and anxiety can come as a hindrance to the physical and mental health of man, seeking ways to reduce them through various methods and techniques. Applying artistic techniques improves student performance and optimizes their behavior by applying specific means systems, improves behavior and aims to modify dysfunctional emotions before and after dance therapy: stress, anxiety, sadness, blame. Increases positive emotions such as self-esteem.

Problem Situation: for this work to be feasible, research has been done on what dance-therapy and music therapy are represent and how it helps both the physically and mentally. It is well known that dance, among many others, is part of the social life of a people, or rather, dance is an important act of social life. Dance is a continuous rhythmic movement belonging to the body from a human soul's beginning. The movement of this rhythm is borne by the music. So, dance and music form a whole where one without the other would not be as spectacular for the viewer and just as beneficial to the practitioner. (Terry, W., 1956).

The term stress was introduced in science by Hans Selye (1974), who considered it to be related to the stress adaptation that an individual is making through the hardships of the environment. They are called to a high level both physically and mentally, which

leads to stress and fatigue, so a mental and emotional approach is also needed in their relaxation. It is not known exactly whether the origin of conscious sensation of fatigue is associated with localized brain structures or whether it is a result of electrophysiological synchronization of all brain activity. (Ursula Şchiopu, 1979)

Objectives: the main objective of this research is to reduce stress in young people aged 14-18. The secondary objective would be to establish the content and structure of a therapeutic training program over an annual cycle.

Hypothesis: using a dance-therapy program for 6 month we can obtain modified value of the indices of Motivational persistence.

Research Methods

Period and place was a period of 6 months, (2016 Sept.-2017 Feb.) at George Barițiu High School, Cluj-Napoca. *Subjects:* high school students from the 8th grade participated.

Applied tests: SPM Scale of Motivational Persistence. This test evaluates motivational persistence, a person's ability to resist motivationally in the sense of achieving the assumed goal. The test allows the evaluation of motivational persistence through 5-step response items (1 - to a very small extent, 5 - to a very large extent), items aiming at identifying three factors: long-term pursuit of goals (LTPP - Long Term Purposes Pursuing) identifies individuals who have long-term professional and personal goals, continuing work hard, finding resources always to achieve the proposed goal despite repeated obstacles; Current Purpose Pursuing (CPP), which is characteristic for those people who accept tasks with a high degree of difficulty, yet still manage to focus on day-to-day activities even if they become uninteresting. Recurrence of Unattained Purposes (RUP) defines those people who are often thinking about some of the deferred or even abandoned personal initiatives, detaching them from being difficult. They are thinking about past projects that they have had to give up and create new ideas about old projects. The

cumulative scores of the three factors of the SPM Questionnaire allow assessment of individual global persistence of persistence: a person's ability to persevere behaviorally and motivationally in the effort to achieve ambitious goals; the tendency to persist, to invest time and effort, not to abandon (high scores).

The intervention program was applied over a period of 6-months (sept.2016 - Feb. 2017), and consisted in the implementation of an intervention program built from gymnastic movements and dance steps. Classical music was used, musical compositions of the composer and musician Nikos Ignatiadis as well as Ernesto Cortazar.

The components of artistic execution, after Grosu & Padilla (2011), from different start positions:- In any trunk movement the head has a delayed action, it comes a little longer to give the impression of amplitude and prolongation of the movement.

- Holding the trunk, with the abdomen sucked, the basin slightly projected forward to reduce the lumbar curvature for the purpose of a supple line of the body.
- Shoulders pulled down to release throat line.
- Using the "sustained arms" position to release the headline.
- At the position of the arms supported sideways or forward they are slightly rounded (with elbow and fist joints), with slightly controlled but relaxed fingers.
- In any movement of the arms, the hand has a delayed action to give the impression of a smooth, flowing movement.
- The toes of the legs and knees are slightly twisted outward, and at any movement of the foot, the tip leaves the last of the soil, and when it comes back it sits first.
- The tip is stretched as many times as the foot rises from the ground, either totally or only the heel. We will show below structure patterns:

A. complex with balancing from sitting:

Sitting: 1-standing; 2.- galloping on the right foot with the boom in the right oblique upside down and the left arm obliquely down; 3. Passing the weight on both legs with the knees bent simultane-

ously with a large bending of the trunk forward, with rounded back and the head flexing. 4- side gesture on the left foot with the left oblique arm leading up and the arm obliquely downward through the arm port.

Sitting: Right side arms: 1-side lateral to the right followed by balancing the torso and arms in the horizontal arc from right to left, with slight knee bending, 2 completed with 90 ° turn left in standing on left leg, right back on top, through temps-lie; 3-4 returning to the initial position and moving to the right by temps-lie.

On the knee: the arms to the right: 1 - sitting on the heel, 2 - the torso balance in the form of a horizontal bow, from right to forward to the left and a return to the knee once the balance is completed.

Left to left: Support on left forearm: 1 - 2 - Balance of upper leg up to ear level, 3-4 - Raise the basin from the ground and support on the left arm and on the tip of the right foot, with the straight boom leading forward. Repeat the structure to the left.

B. Movement complexes:

Sitting: 1 - 2 - Chasse to the right (step added), 3 - 4 - turn 360 degree on the right foot and then on the left, 5 - cross with the left leg in front, 6 - grand-battement with the right leg), 7 - crossed with right leg in front, 8 - rebound.

Sitting: 1 - grapes - wine to the right with the arms extended forward to the left foot, 3 - grapes - wine left with the left arm oblique up and the right arm oblique down, 4 - returning to the initial position.

Sitting: 1 - 2 - chasse forward with his left foot, swinging his arms in the sagittal plane on the floor back up, stopping on the right foot with his left foot back, stretched, 3-4 - coming back, chasse back with his left foot and turning his arms before, down, back.

Results and findings

The Scale of Motivational Persistence (SPM) was applied to the two groups: Control group and experiment group in the two

tests: T1 - initial testing and T2 - final test. In the statistical analysis of Long-Term Purpose Pursuing (LTPP), statistically significant differences between the two lots ($p < 0.001$) were observed at non-paired samples at time T2. In the statistical analysis for pairs, statistically significant differences were observed between the two time points in both group I and group II ($p < 0.001$).

Tabel 1. Scale of Motivational Persistence in the groups studied and the statistical significance.

Indicators	Moment	Lot	Score	ES	Median	DS	Minimum	Maxim	*Statistical semnificance (p)*		
									I-II	T1-T2	
PM	T1	I	3,63	0,2935	3	1,6078	2	8	0,6237	Lot I	< 0,0001
		II	4,07	0,4095	3,5	2,2427	1	9			
	T2	I	4,50	0,3023	4	1,6557	2	8	< 0,0001	Lot II	< 0,0001
		II	7,13	0,2570	7	1,4077	5	10			
LTPP	T1	I	4,27	0,3320	4	1,8182	1	7	0,9786	Lot I	< 0,0001
		II	4,37	0,3968	4	2,1732	1	9			
	T2	I	5,00	0,2537	5	1,3896	3	7	< 0,0001	Lot II	< 0,0001
		II	7,33	0,2507	7	1,3730	4	10			
CPP	T1	I	4,53	0,3207	4	1,7564	2	8	0,8163	Lot I	< 0,0001
		II	4,60	0,3444	4	1,8864	1	8			
	T2	I	5,30	0,3000	5	1,6432	3	9	< 0,0001	Lot II	< 0,0001
		II	7,97	0,1825	8	0,9994	6	10			
RUP	T1	I	4,17	0,3036	4	1,6626	2	8	0,0254	Lot I	0,0005
		II	5,47	0,4617	5	2,5289	1	10			
	T2	I	4,70	0,3395	4,5	1,8597	2	8	< 0,0001	Lot II	< 0,0001
		II	8,33	0,2266	8	1,2411	6	10			

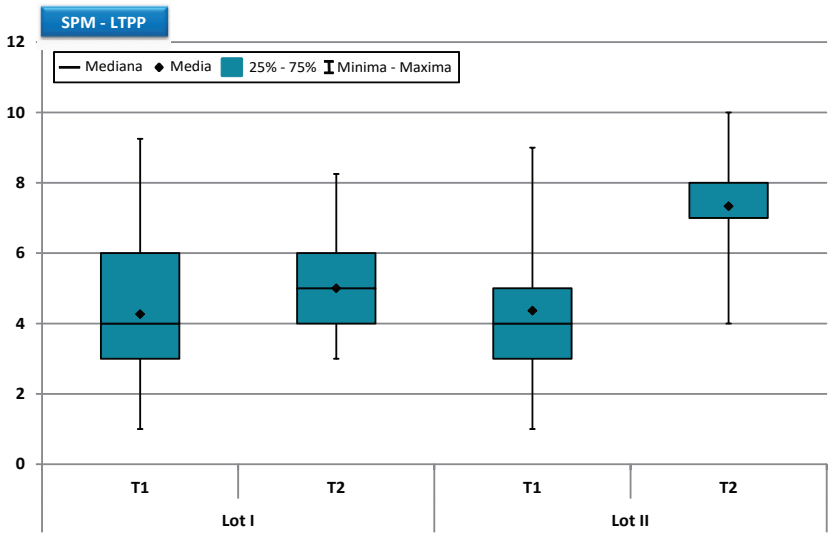

Fig.1 Correlations between SPM – LTPP.

In the statistical analysis of current Purpose Pursuing (CPP) values for non-paired samples, statistically significant differences were observed between the two groups ($p < 0.001$) at T2. In the statistical analysis for pairs, statistically significant differences were observed between the two time points in both group I and group II ($p < 0.001$).

The statistically significant difference between the two lots ($p < 0.05$) at time T1 and statistically significant differences between the two groups was observed in statistical analysis of unattained goals (RUP) $p < 0.001$) at time T2.

In the statistical analysis for pairs, statistically significant differences were observed between the two time points in both group I and group II ($p < 0.001$). In the statistical analysis of the Motivational Persistence Scoring (SPM) scores based on the three previous items, statistically significant differences between the two groups ($p < 0.001$) at T2 moment were observed.

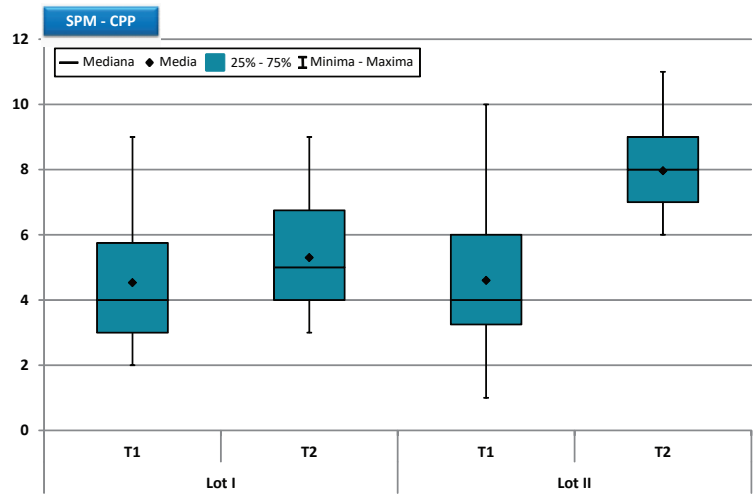

Fig.2. Correlations between SPM – CPP.

In the statistical analysis for pairs, statistically significant differences were observed between the two time points in both group I and group II ($p < 0.001$).

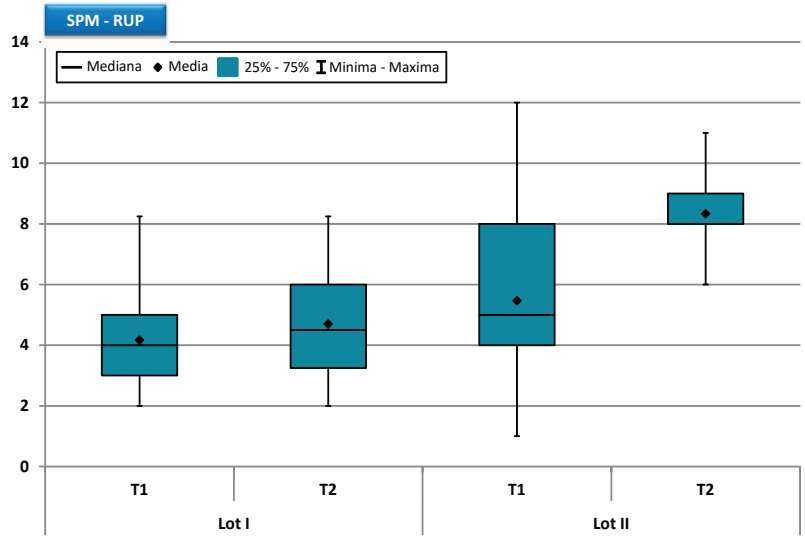

Fig. 3 Correlations between SPM – RUP.

The statistical analysis of the correlation between SPM item values showed: *at the I st group* **-** *at the time T1:* a good correlation between PM-LTTP, LTTP-RUP, CPP-RUP; an acceptable and same correlation between PM-CPP, PM-RUP, LTPP-RUP.

At the time T2: a good correlation between PM-LTTP, LTPP-CPP, LTTP-RUP, CPP-RUP, an acceptable correlation between PM-CPP and PM-RUP

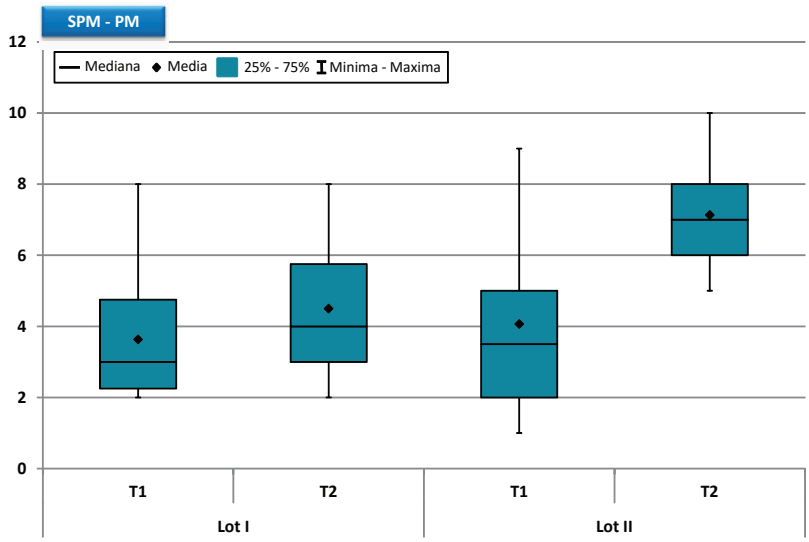

Fig.4 Correlation between SPM - PM Items at the studied groups

Tabel 2. Statistical analysis of correlation between item and SPM scores.

Lot	Indicators	Moment T1		Moment T2	
I	PM-LTPP	0,5806	***	0,5401	***
	PM-CPP	0,4371	**	0,3370	**
	PM-RUP	0,4549	**	0,3649	**
	LTPP-CPP	0,4961	**	0,5718	***
	LTPP-RUP	0,6066	***	0,6366	***
	CPP-RUP	0,5994	***	0,5396	***
II	PM-LTPP	0,7404	***	0,6608	***
	PM-CPP	0,7080	***	0,5744	***
	PM-RUP	0,7697	****	0,1385	*
	LTPP-CPP	0,5307	***	0,6236	***
	LTPP-RUP	0,6818	***	0,2802	**
	CPP-RUP	0,5464	***	0,2417	*

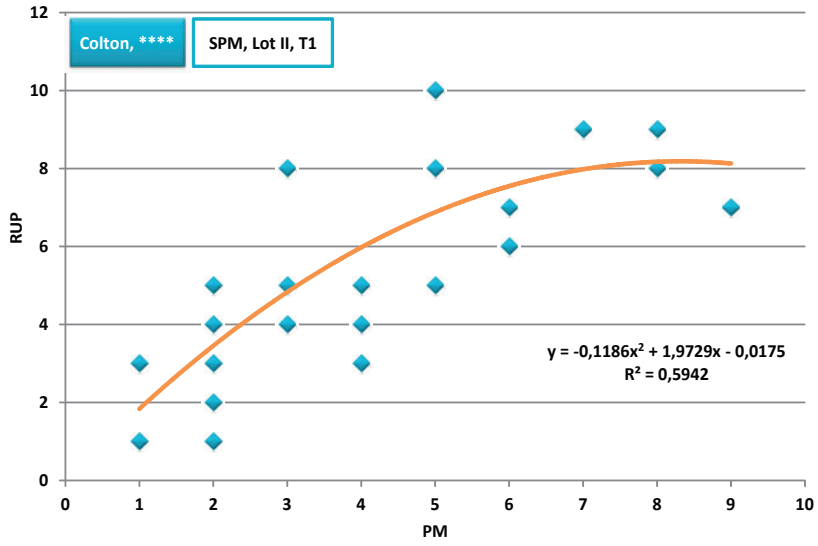

Fig. 5. Very good correlations between SPM indices, at Lot II, T1.

Discussions and conclusions

The conscious perception of fatigue (Alan St. Claire Gibson., 2012) is like a conscious feeling and less a physiological appearance. Feeling tired means awareness of the changes taking place in the subconscious homeostatic control system. In carrying out this research, we propose the development of an action strategy to reduce stress through different artistic techniques, and the evaluation of the effectiveness of applied research methods.

We would be tempted to think that a samurai was preparing his battle techniques by turning to dance and music. No, dance and music were just mystical forms, just like many of the techniques the practitioner used in prayers, prayers with which Kami (spirits) were called to participate in military training. Following these exhilarations, legends say that Yamagugi, the spirits of forests can participate and even reveal certain secret techniques. (Barboş, I.P, 2015).

*At the II nd group, at the time T1***:** a very good correlation and the same meaning between PM-RUP**;** a good correlation between PM-LTPP, PM-CPP, LTPP-CPP, LTPP-RUP, CPP-RUP

At the time T2: a good correlation between PM-LTPP, PM-CPP, LTPP-CPP*;* an acceptable and equal correlation between LTPP-RUP.

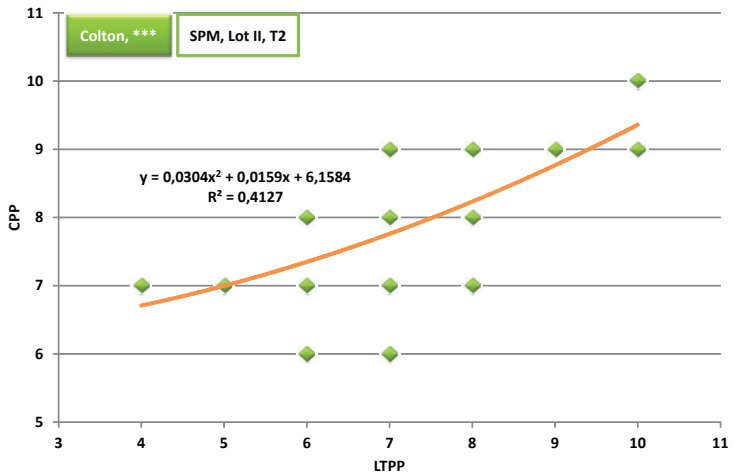

Fig. 6. Good corelations in T2 between SPM items at II group.

A study in the journal The Arts in Psychotherapy, found that dance therapy had a positive effect on participants suffering from depressive symptoms. Koch S.C., (2007). The article by Panagiotopoulou E. (2018) emphasizes the importance of dance therapy in the school environment. It is based on a research done in two schools in Greece. The purpose of the research was to determine whether dance therapy could contribute to the development of pupils' social and emotional abilities. The data showed that the practice of dancing allows pupils to develop their potential and overcome their personal difficulties.

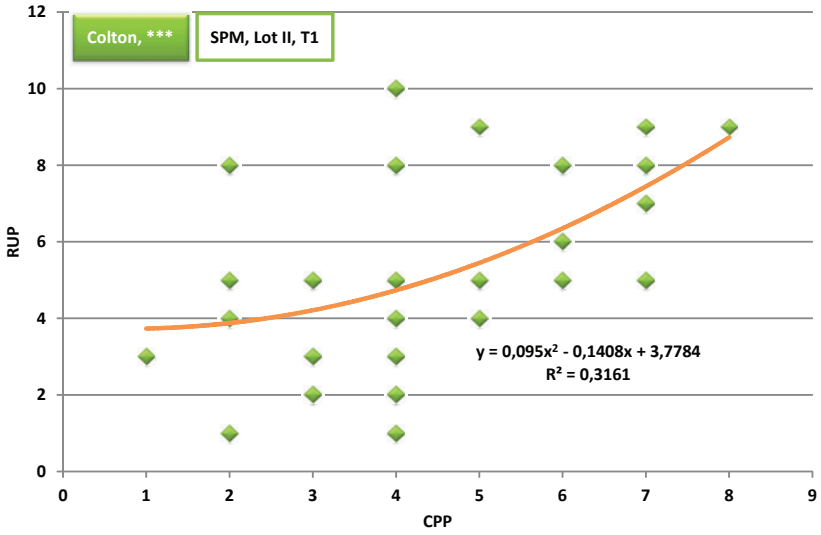

Fig. 7. Very good corelations and good corelations in T1, Lot II moment and between SPM items .

Dance is more than a therapy; it can offer more than therapeutic benefits. This is the conclusion researchers came to, analyzing Parkinson's disease and providing therapeutic dance for patients. Rocha P.A., Slade C. S., (2017).

A 16-week structured educational program combined with dance therapy seems to have a positive effect on the quality of life of obese people. Allet L., Muller-Pinget S., (2017). Dance therapy

has produced positive changes in body image: finding a pleasant sensation and feeling tolerance, finding pleasure and the significance of experiences. Pylvanainen P., Lappalainen R., (2018).

Moderate heterogeneity found in this analysis limits a pragmatic recommendation of dance therapy in people with hypertension. Meta-analysis showing a positive effect of dance therapy on exercise capacity. Conceicao S.R., Neto M.G., (2016). Dance therapy has allowed obese patients to establish their conscious and psychic consciousness over their body image. Muller-Pinget S., Carrard I, (2012). The findings in an article comparing dancers and athletes suggested that experienced dancers demonstrate safer landing strategies compared to athletes. Turner C., Crow S., (2018).

In an article by Hackett S., (2013), The Arts in Psychotherapy, it is proven that Music therapy provides conditions that can intentionally stimulate communication and increase opportunities for social interaction. Trend analysis using Statistical Process Control charts showed an improvement in hand frequency and return to MT.

In the article "Fifteen-minute music intervention reduces preradiotherapy anxiety in oncology patients" by Lee C., Le-Yung W., (2012), it has been investigated the effects of music therapy in reducing anxiety in patients to oncology. The results showed a statistically significant difference between the patients from the group of musicians and the control group. Music therapy has also lowered the level of anxiety.

In conclusions our hypothesis was confirmed, and dance – therapy can be used to increase effects of motivational perception.

Acknowledgments

This study is part of the research of the first author Vari Hanna, conducted within the doctoral studies of FEFS Cluj – Napoca with the theme: "Implementation of some elements of dance therapy in physical education classes, in order to reduce stress in schoolchildren"

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