FACTA UNIVERSITATIS
Series: **Physical Education and Sport** Vol. 9, Nº 3, 2011, pp. 229 - 238

Original empirical article

THE PREDICTION OF COMPETITIVE SUCCESS IN DISCO DANCE

UDC 793.34:06.63

Slavoljub Uzunović, Radmila Kostić, Saša Pantelić

University of Nis, Faculty of sport and physical education, Serbia

Abstract. *The aim: to determine the role of the performance speed of simple and complex movement structures in success in disco dance.*
The sample of subjects consisted of 60 female participants aged 13 to 14 (body height 156,38±7,86cm and body mass 46,62±8,36) . Following the initial selection, for one whole year the participants trained modern sports dance which was based on disco dance. The performance speed of simple and complex movement structures was evaluated with the help of ten measuring instruments. Competitive success was measured with the help of two criteria: Technique and Composition-Image. Data were processed using regression analysis. Between the group of predictor variables and the Technique criterion variable, a statistically significant multiple correlation (Q=.000) was found. The multiple correlation between the predictor and the Composition-Image criterion variable was not statistically significant (Q=.154). Research showed that there is a possibility to predict technical values of Disco Dance on the basis on performance speed of simple and complex movement structures.

Key words: *Disco Dance, speed, competition, influence.*

INTRODUCTION

Dance, due to its complex nature, is often a topic of interest for scientists and experts in various fields. All of them, dealing with dance from their respective standpoints, would like dance to be studied in detail, as an art form and as a sport or motor activity. The results of much research have confirmed the assumption that almost all the motor skills are important for the successful performance of dance structures of different types of dance in general (Shick, Stoner, & Jette, 1983; Oreb, 1984; Jocić, 1991; Kostic, 1994; Srhoj,

Received July 17, 2011 / Accepted October 02, 2011
Corresponding author: Slavoljub Uzunović
University of Nis, Faculty of sport and physical education, Serbia
Tel: + 381 (0) 18 510900 • Fax: +381 (0) 18 242482 • E-mail: uzun@hera.fsfv.ni.ac.rs

Katic, & Kaliterna, 2006; Streskova, & Chren, 2009; Uzunovic, Kostic, & Miletic, 2009), as are the individual anthropological ones (Kostic, Zagorc, & Uzunovic, 2004; Uzunovic, & Kostic, 2005; Wyon, Allen, Angioi, Nevill, & Twitchett, 2006). It is undeniable that the specific training methods involved in the training process of certain dance disciplines can contribute to dance success (Ross, & Butterfield, 1989; Alricsson, Harms-Ringdahl, Eriksson, & Wemer, 2003; Koutedakis, & Sharp, 2004; Chocckley, 2008; Weiss, Shah, & Burchette, 2008). Researches has shown that cognitive and music skills (Leste, & Rust, 1990; Jocić, 1991), conative characteristics (Jocić, 1991; Kostic, 1994; Kostic, Jocic, & Uzunovic, 1999; Lobo, & Winsler, 2006; Jocic, Uzunovic, & Kostic, 2008; Uzunovic, Kostic, & Miletic, 2009; Zaletel, & Zagorc, 2011) and functional abilities (Thomsen, & Ballor, 1991; Ryan, 2000; Wion, Head, Sharp, & Redding, 2002) are linked to success in dance and various dance forms in a statistically significant manner. Physical load during the performance of dance forms is closely related to concrete dance techniques and the tempo of the performance (Karanov, 2005).

Competitive success in dance sport to a great extent depends on coordination, explosive strength and frequency speed. The training of dance structures in modern dance sport can improve the results of coordination, strength and speed (Uzunovic, 2008, 2009). The study of basic motor skills in dance (effectiveness, education, training, competition and development) is based on the scientifically acknowledged research methodology, which is used in sport. The results of the cited studies point to the specific nature of the basic motor skills of dancers and the sports training which incorporates its basic training principles, but where the content and the methods differ. Coordination, speed, aerobic endurance, balance and flexibility are all motor skills which have a statistically significant influence on different dance forms (Jocic, 1991; Kostic, 1994; Srhoj, 2002; Srhoj, Katic, & Kaliterna, 2006; Uzunovic, 2008; Streskova, & Chren, 2009; Uzunovic, Kostic, & Miletic, 2009; Jarc Sifrar, Zaletel, Voglar, Bor, & Zagorc, 2011). The effectiveness of dance structures and competitive results correlate with basic motor skills in a statistically significant manner.

Modern dance sport is the common name given to various types of dance which have appeared in the last few decades of the 20th century. The music involved is to a great extent responsible for their popularity, since it appeared at the same time, accompanied by music videos, movies and the like. The basic characteristics of these types of dance are more freedom and improvisation in choreography selection, which is, at the same time, an important component of their popularity. Modern sports dance falls under four big categories: Performing Art, Street Dance, Special Couple Dances and Possible Other Dance Discipline. Within each groups of dance there are different dance styles prescribed by the IDO (International Dance Organization).

Street Dance Disciplines include the following dance styles: Break Dance, Electric Boogie, Disco Dance, Disco Freestyle, Street Dance Show, Hip Hop, Techno, International Freestyle and Hip Hop Team Battle. In our study the sample of female subjects were all beginners of the Disco Dance .

The aim of this study was to determine the possibility of predicting competitive results in disco dance on the basis of the performance speed of both simple and complex movement structures, on a sample of beginner female dancers.

METOD

The sample of subjects

The sample consisted of 60 female subjects aged 13 to 14, with an average body height of 156.38±7.86cm and average body mass of 46.62±8.36kg. The sample of female subjects was selected following the initial dance selection, which included the evaluation of movement coordination abilities and the performance of rhythmic structures. Prior to selection, the female subjects did not take part in any kind of dance training. Following the formation of the dance groups, all of the female subjects were included in disco dance training processes at the dance clubs in Vranje and Nish. In addition to the regular training sessions in the dance clubs (twice a week for a period of 60 minutes, for one whole year), the female subjects also attended physical education classes in their schools.

During the course of that year, the main content of the dance training sessions consisted primarily of the basic dance technique of Disco Dance, followed by the choreography the beginner female dancers performed at their first regional level competition.

Their performance was evaluated by five referent judges with national judging licenses.

The sample of variables

The predictor group of variables consisted of ten variables which covered the performance speed of simple and complex movement structures, while the criterion consisted of two variables.

The description of the predictor variables (a short description)

Predictor set included variables of coordination and speed. Result of each depended on speed in which tusk was performed, or of number of performed tusks in certain time. Because of this, variables of coordination and speed in this research were titled as speed of performance of simple and complex movements.

The following measuring instruments were used: Side-steps, 20 steps forward with a baton, Horizontal jump rope, Turns to 6 squares, Foot and hand drumming. Foot tapping against a wall, Hyper-extension, twist, touch, Hand tapping, Foot tapping, Jumping over a gymnastics bar (Uzunovic, 2009).

Side-steps: The result of this test is represented by the time necessary for a female subject to move as fast as she can to the right and to the left (side step-shift sideways), from one line to the next, which were located at a distance of 4 meters from one another. The distance is crossed a total of six times consecutively, and the time is measured in seconds.

20 steps forward with a baton: We measure, in seconds, the time necessary for a female subject to perform the following task in its entirety: to step forward with her right leg, drag the baton below her right leg with her left hand, and take the baton with her right hand. Then, she steps forward with her left leg, drags the baton with her right hand below her left leg and takes hold of it with her left hand.

Horizontal jump rope: A female subjects rotates the jump rope bent in half above the floor and jumps over it on both feet for a period of 20 seconds. The best result out of three is selected.

Turns to 6 squares: We count the correctly performed structures which consist of linked semi-turns which are carried out while the subject is standing on her whole foot within six squares, while moving to the right, and then the same structure is performed to the left, for a period of 28 seconds. A proper structure requires that the female subject move to the rhythm of a metronome (104 MM) and not move outside the frame of the squares drawn on the ground.

Foot and hand drumming: A female subject needs to perform as many correct structures as possible in a corner of the room for a period of 20 seconds. The structures consist of the following movements: hitting the left wall with the left foot, hitting the right wall with the right palm, hitting the left wall with the left palm twice, and the right wall with the right foot. The impact point is marked on the wall, and is at shoulder height for the arms and at a height of approximately 30 centimeters from the ground for the feet.

Foot tapping against a wall: Standing at a distance of 20-30 centimeters facing the wall, a female subject touches the square drawn on the wall (36 centimeters from the ground) twice in a row with one foot, and then twice in a row with the other foot. Two taps with one leg are worth one point. The overall number of points from correctly performed taps over 15 seconds is selected.

Hyper-extension, twist, touch: A female subject, who has her back to the wall, over a period of 20 seconds touches with both hands, as fast as she can, the square drawn on the ground in front of her, and then the square drawn on the wall behind her at shoulder height, without moving her feet. The upper square is touched with a twist of the body, once to the right, the next time to the left (alternately). Tapping the square on the ground and behind the subject‘s back is worth one point. The number of points gathered over a period of 20 seconds counts.

Hand tapping: A female subject uses the palm of her dominant hand to alternately tap disks which have been placed at a distance of 40 centimeters on the table at which she is seated. The number of taps to the disks is counted. Two taps (one on each disk) are worth one point. The total number of points over a period of 20 seconds is counted.

Foot tapping: A female subject, who is seated on a chair, has to move her foot as fast as she can over a vertical balance board, to hit the board on the other side and immediately return her foot to the initial position (to the bench on the other side). The board is positioned on the ground in front of the chair. The number of cycles (two taps) over a period of 20 seconds is counted.

Jumping over a gymnastics bar: Standing with her side to a Swedish bench, a female subject uses both feet to jump from one side of the bench to the other, moving forward at the same time. The number of jumps over a period of 10 seconds is counted.

The description of the criterion variables

The criterion variables were formed on the basis of the marks which the female subjects received during the competition. The first criterion variable was the mark for Technique. The second criterion variable was the mark for Composition-Image. The grades, according to the elements for the evaluation of both criteria, were given by five qualified judges holding national judging licenses for competitions in dance sport. The judges awarded marks from one to five.

Each group of competitors begins with a one-minute performance, dancing together in each round. Then they danced individually for one minute. Each group danced the final minute together. Both the opening and final performances were used to give the judges an opportunity to compare the dancers. Number of dancers on the floor in subsequent rounds during second minute of performance is specified in the Section 3 General Rules & Regulations for Competitions.

Marks were recorded for each of the subjects, and a special questionnaire was prepared for each criterion. The marking was carried out in accordance with the basic rules and criteria of the IDO Dance Sport Rules & Regulations, Sections 3 and Section 8.

Table 1 shows the basic elements used to evaluate the criterion variables.

Table 1. The elements for the evaluation of the criterion variables

Technique (Elements for evaluation)	Composition-Image (Elements for evaluation)
The precise performance of the basic techniques of Disco Dance.	Movement, dance figures, rhythm and space coordination, a schematic image
Displaying an authentic style	Originality in the use of every component.
Dance figure level of difficulty.	The use of horizontal and vertical space.
The correct use of basic rhythms.	Physical and emotional expression, presentation and communication.
The use of space.	Performance energy and strength, Charisma.
Music synchronization.	Costumes, make-up.

Statistical procedure

The means were specially calculated for the Technique and Composition-Image criterion variables, as was the standard deviation, as the basic descriptive statistics parameters. The distribution of the results was tested using the Kolmogorov-Smirnov procedure, and Skewness and Kurtosis were calculated as well. In order to determine the metric characteristics, the following were calculated: particle inter-correlation, the percentage of the overall common variance, the Cronbach coefficient of reliability, and particle homogeneity. The connection between the predictor and criterion variables was determined using a linear regression analysis. The results were analyzed using the Statistical Package for the Social Sciences software (SPSS-version 12, Chicago IL).

THE RESULTS

The basic descriptive indicators of the criterion variables are shown in Table 2.

Table 2. The descriptive parameters and result distribution of the criterion variables (n=60)

The judges	Technique				Composition and Image			
	Mean	Std.Dev.	Skew	Kurt	Mean	Std. Dev.	Skew.	Kurt.
1	4.03	.78	-.502	-.044	4.03	.78	-.502	-.044
2	4.30	.64	-.375	-.661	4.28	.66	-.393	-.792
3	4.23	.85	-.816	-.203	4.16	.86	-.658	-.538
4	4.18	.83	-.724	-.195	4.21	.69	-.315	-.851
5	4.21	.84	-.784	-.207	4.11	.61	-.065	-.295

Abreviations: Mean - Mean, Std.Dev. – Standard Deviation, Skew. – Skewnes, Kurt. - Kurtosis

On the basis of the results for the metric characteristics of the criterion variables (Table 3), it can be concluded that the statistical coefficients of reliability and homogeneity are reliable, and that sensitivity is decreased.

Table 3. The basic metric characteristics of the criterion variables

Technique	
Inter-correlation between the particles	.71
Percentage of the common variance	79.22%
Cronbach-alfa coefficient of reliability	.905
Homogeneity	Kurtosis – normal, mesokurtic distribution
Sensitivity	Reduced, since the standard deviation is smaller than 1/3 of the means
Composition-Image	
Particle inter-correlation	.69
Percentage of common variance	78.88%
Cronbach-alfa coefficient of reliability	.910
Homogeneity	Kurtosis – normal, mesokurtic distribution
Sensitivity	Reduced, since the Standard deviation is smaller than 1/3 of the means

The value of the multiple correlation coefficient (R=.834) and its significance lead us to the conclusion that a strong linear connection exists between the predictor and Technique criterion variable (Table 4). The influence of the predictor variables on the criterion is explained by 69% (RSq =.695). On the basis of the significance of the Fisher test (Q=.000) it can be concluded that changes to the variables from the regression model are caused by significant changes to the value of the dependent variable. By standardizing the regression coefficient with the aim of analyzing the influence of certain variables on the criterion, the value of BETA was obtained. The greater its absolute value, the more influence the variable has on the criterion. On the basis of the regression coefficient analysis and its significance Q(BETA), we can conclude that the predictor variable for the evaluation of the performance speed of complex movement structures, the performance of rhythmic structures (hand and foot drumming), has the greatest projection on the criterion variable.

Table 4. The regression analysis of the predictor system of variables and the criterion Technique

Variables	PART-R	BETA	T	Q(BETA)
Side-steps	-.037	-.068	-.625	.535
20 steps forward with a baton	-.027	-.114	-1.044	.302
Horizontal jump rope	.024	.123	1.142	.259
Turns to 6 squares	.055	.100	.868	.390
Foot and hand drumming	.196	.735	5.915	**.000**
Foot tapping against a wall	-.027	-.087	-.783	.437
Hyper-extension, twist, touch	-.033	-.049	-.532	.597
Hand tapping	-.010	-.072	-.605	.548
Foot tapping	.002	.012	.074	.942
Jumping over a gymnastics bar	-.037	-.088	-.799	.428
R= .834 RSq= .695	F(10,59)= 11.157	Std.Error = .521	**Q= .000**	

Legend: PART-R–the partial correlation; BETA–the standard partial regression coefficient of each predictor variable with the criterion; T-the t-test; Q(BETA–the significance of the correlation of individual predictor variables with the criterion. R–the coefficient of the multiple correlation of the criterion variable and the predictor system; RSq–the coefficient of determination; the F-test; Std.Error–the standard margin of error for the partial regression coefficient; Q–the significance of the influence;

The value of the multiple correlation coefficient and its significance (Q=.154) indicate that no statistically significant connection exists between the system of predictor variables and the Composition-Image criterion (Table 5).

Table 5. The regression analysis of the predictor system of variables and the criterion Composition-Image

Variables	PART-R	BETA	T	Q(BETA)
Side-steps	.114	.270	1.580	.121
20 steps forward with a baton	.014	.076	.443	.660
Horizontal jump rope	.026	.168	.983	.330
Turns to 6 squares	-.026	-.062	-.337	.737
Foot and hand drumming	.078	.378	1.928	.060
Foot tapping against a wall	-.026	-.108	-.614	.542
Hyper-extension, twist, touch	.053	.099	.684	.497
Hand tapping	.012	.113	.599	.552
Foot tapping	.003	.021	.083	.934
Jumping over a gymnastics bar	.107	.326	1.880	.066
R = .489 RSq = .239	F(10,59)= 1.540	Std.Error= .637	Q=.154	

Legend: PART-R–the partial correlation; BETA–the standard partial regression coefficient of each predictor variable with the criterion; T-the t-test; Q (BETA–the significance of the correlation of individual predictor variables with the criterion. R–the coefficient of the multiple correlation of the criterion variable and the predictor system; RSq–the coefficient of determination; the F-test; Std.Error–the standard margin of error for the partial regression coefficient; Q–the significance of the influence;

DISCUSSION

In Disco dancing, using modern trends such as Hip-Hop, Break Dance, etc., are allowed, but Disco Dance movement dominates all the performances. Acrobatic movements are not permitted. Acrobatics are those movements in which the body rotates round the sagittal or frontal axes, such as somersaults, cartwheels and similar figures. Props are not permitted. The Figures and Movements which are allowed include: slides, leaps, jumps, kicks, spins and pirouettes. Floor figures such as splits, back and bump spins are allowed but should be kept to a minimum. Long running jumps across the floor must not exceed four steps at a time. Musicality and originality are highly valued.

The cited dance techniques are mainly carried out using the neuro-muscular activation of all the parts of the body, whose movements and motions must be harmonious to the fullest in space and time, and must be dynamic. The elements of technique and dance structures of dance sport based on the Disco Dance are performed at a certain speed in accordance to the rules of the competition. The performance speed of this type of dance can indirectly contribute to development, in other words change, primarily in coordination and the ability to perform rhythmic structures. Motor coordination is primarily manifested, but it is also determined through the realization of simple or complex movements and motions in space and time. What this means in practical terms is that the set movement structure is repeated over a concrete period of time, where the speed of the performance is the most important factor. The repetition of the newly acquired movement structures and their combination with the already acquired movement structures influence the transformation of coordination and speed abilities. Thus transformed, the coordination and speed abilities probably facilitate the acquisition of the Disco Dance choreography.

The results obtained in this study can be linked to those from some previous studies (Miletic, Srhoj, & Bonacin, 1998; Weis, Shah, & Burchette, 2008; Uzunovic, 2009). The results indicate that the performance speed of simple and complex structures contributes to the technical value of dance in a statistically significant manner. What this can actually mean is that, on the basis of the speed qualities, competitive success in dance sport based on the Disco Dance can be predicted. (Srhoj, 2002). The relation between the quality of speed and dance has been proven in various studies (Mandaric, 1999, 2003; Uzunovic, 2008, 2009). This result is probably justified, and it is probably possible, in practice, to assume that beginner dancers, if they possess a higher level of performance speed for simple and complex movement structures, will be more precise in the performance of basic dance techniques, which includes the proper basic rhythms and synchronization to music.

The results of the regression analysis for the Composition- Image criterion have shown that there is no statistically significant influence of the predictor variables on the criterion (Q=.154). This kind of result is somewhat to be expected, considering the fact that the research was carried out on a sample of beginner female dancers. The beginners were still not at that technical level of dance structure performance, to be able to shown the expression, harmony, grace, energy, communication and other elements which are evaluated (Kostic, Rabrenovic, & Uzunovic, 1999) by this criterion. The elements of the marking connected to Composition-Image probably require more dance experience and a more complex motor skills than is the performance speed of simple and complex movement structures.

CONCLUSION

The performance speed of simple and complex movement structures is connected to the technical value of dance in a statistically significant manner, in the case of a sample of beginner disco dance dancers. The greatest predictive value was found for the variable for the evaluation of performance speed of rhythmic structures. The obtained results indicate that on the basis of the determined speed indicators, competitive success in disco dance related to Technique can probably be predicted. Contrary to that, the performance speed of simple and complex movement structures is not connected to Composition-Image in a statistically significant manner, and so it is assumed that the isolated qualities of speed are not sufficient for the prediction of this criterion. Results of this research are in the greatest degree important for beginner dancers.

REFERENCES

Alricsson, M., Harms-Ringdahl, K., Eriksson, K., & Wemer, S. (2003). The effects of dance training on joint mobility, muscle flexibility, speed and agility in young cross-country skiers. *Scandinavian Journal of Medicine & Science in Sports*, 13(4), 237-243.

Chocckley, C. (2008). 5 Ground Reaction Force Comparison between Jumps Landing on the Full Foot and Jumps Landing en Pointe in Ballet Dancers. *Journal of Dance Medicine & Science*, 12(1), 5-8.

IDO Dance Sport Rules & Regulations, september 2011. Retrieved September 24, 2011, from the WWW. IDO-online.org.

Jarc-Sifrar, T., Zaletel, P., Voglar, S., Bor., Zagorc, M. (2011). Effect of motor and morphological variables in sports performance of dancers (in Slovenian). *Sport*, LIX(1-2), 139-144.

Jocic, D. (1991). *The prediction of dance success on the basis of morphological, motor, cognitive and conative status.* Unpublished doctoral dissertation. Belgrade: The Faculty of Physical Education, The University of Belgrade.

Jocic, D., Uzunovic, S., & Kostic, R. (2008). Successful performance of the folk dance "Moravac" conditioned with some conative characteristics. In: B. Males, Dj. Miletic, M. Kondric, M. Kvesic (Eds), *3nd International Conference Contemporary Kinesiology* (pp. 120-126). Split (Faculty of Kinesiology), Mostar (Faculty of Natural Science, Mathematics and Education), Ljubljana (Faculty of Sport).

Karanov, B. (2005). *Functional load in dances of differing types and tempos*. Unpublisher master thesis. Novi Sad: The Faculty of Physical Education.

Kostic, R. (1994). Predicting the performance of folk and social dances. *Physical Education* (in Serbian), 48(4), 354-358.

Kostic, R., Jocic, D., & Uzunovic, S. (1999). Relation of conative characteristics and success of performing dance structures. *Facta Universitatis, Series Physical Education*, 1(6), 15-23.

Kostic, R., Rabrenovic, M., & Uzunovic, S. (2001). Elements for the evaluation of the artistic impression at sports dance competitions. In B. Bokan, J. Radojevic, S. Jovanovic, Dj. Stefanovic (Eds), *Physical Activity – Theory and Praxis-01-Competition* (60-67). Belgrade: The Faculty of Physical Education.

Kostić, R., Zagorc, M., & Uzunović, S. (2004). Prediction of success in sports dancing based on morphological characteristics and functional capabilities. *Acta Universitatis Palackianae Olomoucensis GIMNICA*, 34(1), 59-64.

Koutedakis, Y., & Sharp, N.C. (2004). Thigh-muscles strength training, dance exercise, dynamometry, and anthropometry in professional ballerinas. *J Streingth Cond Res*, 18(4), 714-718.

Leste, A., & Rust, J. (1990). Effects of Dance on Anxiety. *American Journal of Dance Therapy*, 12(1), 19-25.

Lobo, Y., & Winsler, A. (2006). The Effects of Creative Dance Movement Program on the Social Competence of Head Start Preschoolers. *Wiley InterScience J*, 15(3), 501-519.

Mandaric, S. (1999). *The influence of dance classes on the development of the sense of rhythm, coordination and movement frequency of the lower extremities.* Unpublished master thesis. Belgrade: The Faculty of Physical Education.

Mandaric, S. (2003). *The effects of programmed exercise to music on seventh grade elementary school students.* Unpublished doctoral dissertation. Belgrade: The Faculty of Sport and Physical Education.

Miletic, Dj., Srhoj, Lj., & Bonacin, D. (1998). The influence of the initial status of motor skills on acquiring motoric knowledge in rhythmic sports gymnastics. *Kinesiology*, 30(2), 66-75.

Oreb, G. (1984). *The relations between primary motor skills and the effectiveness of performing dance structures on a sample of selected subjects*. Unpublished master thesis. Zagreb: The Faculty of Physical Education.
Ross, A., & Butterfield, A. (1989). The Effects of a Dance Movement Education Curriculum On Selected Psychomotor Skills Of Children in Grades K-8. *Research in Rural Education*, 6(1), 51-56.
Ryan, A.J. (2000). Reflections on over-training the dancer's heart. *J Dance Med Sci*, 4(2), 46-48.
Shick, J., Stoner, L.J., & Jette, N. (1983). Relationship between modern-dance experience and balancing performance. *Research Quarterly for Exercise and Sport*, 54(1), 79-82.
Srhoj, L. (2002). Effect of motor abilities on performing the Hvar folk dance Cicilion in 11-year-old girls. *Coll Antropol*, 26(2), 539-543.
Srhoj, L., Katić, R., & Kaliterna, A. (2006). Motor abilities in dance structure performance in female students. *Coll Anropol*, 30(2), 335-341.
Streskova, E., & Chren, M. (2009). Balance ability level and sport performance in latin-american dances. *Facta Universitatis, Series Physical Education and Sport*, 7(1), 91-101.
Thomsen, D., & Ballor, D. (1991). Physiological Responses During Aerobic Dance of Individuals Grouped by Aerobic Capacity and Dance Experience. *Research Quarterly for Exercise and Sport,* 62(1), 68-72.
Uzunović, S., & Kostić, R. (2005). A study of success in Latin American sport dancing. *Facta Universitatis, Series Physical Education and Sport*, 2(1), 35-45.
Uzunović, S. (2008). The transformation of strength, speed and coordination un der the influence of sport dancing. *Facta Universitatis, Series Physical Education and Sport*, 6(2), 135-146.
Uzunovic, S., Kostic, R., & Miletic, D. (2009). Motor status of competitive joung sport dancers–gender differences. *Acta Kinesiologica*, 3(1), 83-87.
Uzunovic, S. (2009). *The effects of the experimental program of modern sports dance on the changes of motor coordination, strength and speed*. Unpublished doctoral dissertation. Nish: Faculty of Sport and Physical Education, University of Nish.
Wyon, M., Head, A., Sharp, C., & Redding, E. (2002). The cardiorespiratory responses to modern dance classes: Differences between university, graduate, and professional classes. *J Dance Med Sci*, 6(2), 41-45.
Wyon, M., Allen, N., Angioi, M., Nevill, A. & Twitchett E. (2006). Anthropometric factors affecting vertical jump height in ballet dancers. *Journal of Dance Medicine and Science*, 10(3-4), 106-110.
Weiss, D.S., Shah, S., & Burchette, R.J. (2008). A Profile of the Demographics and Training Characteristics of Professional Modern Dancers. *Journal of Dance Medicine & Science*, 12(2), 41-46.
Zaletel, P., & Zagorc, M. (2011). Personality traits of male and female dancers in different dance styles (in Slovenian). *Sport*, LIX (1-2), 168-174.

PREDVIĐANJE TAKMIČARSKOG USPEHA U DISCO DANCE

Slavoljub Uzunović, Radmila Kostić, Saša Pantelić

Cilj istraživanja je bio da determiniše ulogu brzine izvođenja jednostavnih i složenih struktura kretanja na uspešnost u disco dancu. Uzorak ispitanika sastojao se od 60 osoba ženskog pola starosti 13-14 godina (visina tela 156,38 ± 7,86 i težina tela 46,62± 8,36). Nakon inicijalne selekcije, tokom cele godine učesnici su trenirali moderan sportski ples koji se bazirao na disco dancu. Izvođenje brzine jednostavnih i složenih stuktura kretanja procenjivana je uz pomoć 10 mernih instrumenata. Takmičarski uspeh procenjivan je pomoću dva kriterijuma. Rezultati su obrađeni korišćenjem regresione analize. Statistički značajna multipla korelacija je dobijena između grupa prediktorskih varijabli i tehnike kao kriterijumske varijable. Multipla korelacija između druge kriterijumske varijable, kompozicije i prediktora nije bila statistički značajna. Istraživanje je pokazalo da postoji mogućnost predikcije tehničkih vrednosti disco danca na osnovu brzine izvođenja jednostavnih i složenih kretnih struktura.

Ključne reči: *Disco dance, brzina, takmičenje, uticaj.*