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## CORRELATION EXPRESSION MOTOR ABILITIES RHYTHMIC STRUCTURES AND SUCCESS IN DANCE

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**Abstract:** *Research is conducted on sample of 37 girl's students of physical education from Niš with an objective to determinate correlation between abilities motoric expression rhythmic structures and success in dance. Abilities motorical expression rhythmic structures is appraise by the measured instruments: To drum with feet sitting on a chair, Jump into three square, Turns are in to six square, Cha-cha-caha, Steps and turns to five square, Stamping and steps in moving front. Success in dance is appraise basic on marks from the practical part of examine from folk dance, social dance and jazz dance. Dates are menagemented canonical correlation analysis. Results are affirmatived with hypotheses about correlation abilities expression rhythmic structures and success in dance.*

**Key words:** *rhythmic structures, dance, success.*

### 1. INTRODUCTION

Dance is a part of the physical education which characteristics are polystructuras moving activities which are necessary to performed in precedes determined rhythm, speed, power, space. Off Coors dance is performed whit music. One of the mast important element that is common for music and dancing is rhythm.

Results of former research point us positive correlation expression of rhythmic structures and success in dance (Žgajnjner, 1978, Oreb, 1984, Kostić, 1992, Kostić, 1994). In showed research abilities of expression rhythmic structures is estimated measure instruments A. Hošek and collaborators, 1973. In this research new measure instruments are applied.

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## 2. OBJECTIVE

Determine correlation ability's expression motor rhythmic structures and success in dance.

## 3. HYPOTHESIS

There exist important canonical correlation ability's expression motoric rhythmic structures and success in dance.

## 4. METHODS

### 4.1 Sample of examines

Sample of examine included 37 girl students of physical culture Faculty of philosophy, Department of physical education in Niš. Dates are broth together 1995/96 year samples are made students that passed practical part of exam in dancing.

### 4.2 Sample of variables

Predictor group variables made variable's abilities motoric expression rhythmic structures. For estimation of these abilities applied are next measure instruments: To drum with feet sitting on a chair, Jump into three squares, Turns are in to six squares, Cha-cha-caha, Steps and turns to five squares, Stamping and steps in moving front. Constructors are R. Kostić and V. Mutavdžić, 1994. Metrical characteristics are verify (Kostić, 1994, Mutavdžić, 1995).

For estimate success in dance applied are next measure instruments:

- ONI- estimate abilities performing given folk dance,
- ODP- estimate abilities performing given social dance and
- OJP- estimate abilities performing structures jazz dance.

#### 4.2.1 Description of the measured instruments

Estimate abilities motorical expressing rhythmic structures

*To drum whit feet sitting on a chair (RIT1)*

Task

At Sit on the chair. Legging and vp-knee under the right angle. Feet together on the floor. Hands on the up knee. At the sing "Now" perform the next structures.

- Hit whit left foot at the floor.
  - Hit whit right across over the left in front.
  - Hit whit left foot on the spot.
- Joining right foot whit left and at the same time hit the floor.

Mark

Result presents the number correct performed structures in 20 seconds every incorrect structure doesn't count (incorrect is if you don't follow ordering and number of hit's and if you don't hit whit whole feet). Task repetition five times.

Accessories: Stopwatch, chair.

*Jump into tree square (RIT2)*

## Task

Beginning position: Standing position, feet together, face toward shorter side rectangle on the floor. (Rectangle measures 150 - 50 cm. Divided on three equal squares).

At the sing "Now" perform the next structure moving forward:

- Step right foot into the first square.
- Two stamping with left foot in the second square and jamming on foot what contracted of right foot under right angle.
- Step with right foot into second square with transmitting weight of the body.
- Moving back-two stamping with left foot in second square and jump on left leg contracted of right leg under right angle.
- Step with right leg backward into the first square.
- Step out with left back in starting position.

## Mark

Task is developing faster and measures exact times of the structure in the whole from the sing "Now" until sing "Stop". Task is repetition five times.

Accessories: Stopwatch, chalk.

*Turns into six squares (RIT3)*

Task /perform in a rhythm of the metronome - MM =104 /

Starting position: examine stand, feet together in the first square, of total six tied which are in relation with examine placed right. Turns on metronome before the examine start with performing the task, stopwatches turn on in moment when the examine start.

## Structure:

- step with right foot in a second square with turn for the half of the circle on right,
- step with left foot in the tree square with turn forth half of the circle in right,
- step with right foot in the four square with turn forte half of circle on right,
- step with left foot in the fifth square with turn forte half of the circle on right,
- step with right foot in the six square,
- connect left foot with right without transmitting body weight.

(one structure)

Task continue immediately moving on left toward the start position in the rhythm of metronome.

- step with left foot on left with turn for the half on the circle on left,
- step with right foot on left with turn for half of the circle on left,
- step with left foot on left with turn for the half of the circle on left,
- step with right foot on left with turn for the half of the circle on left,
- step with left foot on left,
- connect right foot without transmitting the body weight.

(second structure)

Task is continue without pause performing structure from the start.

#### Valuation

Measure the number of the correctly perform structures in moving on right and correctly performed structures in moving on left in 28 seconds. Structures erases in case examine not turn in rhythm of metronome in case going out from the square in case in performing the turn lifting on fingers. It is aloud to hold the position with hands by the choice or swinging in the horizontal level. The task is repetition tree times.

Accessories: shalk, stopwatch, metronome.

Cha- Cha Cha (RIT4)

Task /performing in changeable rhythm of metronome/.

On the floor is draw rectangle with dimensions 150 x 100 cm. He's divided on six equal squares with dimension 50x50cm. Start position: examine stand with the left foot in the middle square and right foot in right middle square. Hands are on hips. Body weight is on the left foot until the right just thatching the floor. Metronome is on the 100 MM, in the moment when examine start whit performing the task turn on the stopwatch. Performed next structure moving:

1. transmit the body weight on the right foot,
2. step with left foot in the square in front of the right foot,
3. transmit the body weight on the right foot,
4. step with left foot in square behind the right foot,
5. transmit the body weight on the right foot,
6. step with left foot on left in the start position,
7. step with right foot in square in front of the left,
8. transmit the body weight on left foot,
9. step with right foot in the square behind the left foot,
10. transmitted the body weight on the left foot.

When is structure finish continue moving from the start with step of the right foot on right. The speed of metronome is changing step by step from the start (of 100MM - 200MM).

#### Valuation

Measure the number of correctly performed structures start with right foot and correctly performed structures start with left foot separated in time. Task is performing for 20 seconds and repeats tree time. For the one correctly performed structure goes can get 2 points incorrectly performed structures are in case the order of moving in place is not respect and if the speed of metronome is not respect.

Accessories: shalk, metronome, stopwatch.

#### *Step and turn into five squares (RIT5)*

Task Beginning position: examine standing whit feet together standing in first square of five of them that are connect in rectangle 250-50 cm. All squares have their number a the side (from one to five). Task is realize in the rhythm metronome sober temp (104MM). Metronome is turn before beginning of realization and stopwatch in the moment when examine beginning his task.

Task structure of moving /from 1-4 one, from 5-8 second/:

1. step with left leg forward in square number two,
2. step with right leg forward in square number three,
3. step with left forward in square four with synchronous turn for whole circle to the right,
4. step with right leg in fifth square forward synchronous turn for 1/2 at left,
5. step with left leg forward in square four,
6. step with right leg in square three forward,
7. step with left leg forward in square two with turn at right for whole circle,
8. step with right leg forward in square one with turn for 1/2 circle at right.

Mark

Task structure of moving is performed in 21 seconds. Number of corrected structures is counted. Structure is incorrect if it examines live one in the squares or if it doesn't follow the rhythm metronome. It is permitted to use hands during the turns. Turns are realized on half fingers. Steps are performed at the last of one beat metronome, and turn at the last two beats of metronome, so one whole structure last six beat task is repeated three times.

Accessories: metronome, chalk, stopwatch.

*Stamping and steps in moving front (RIT6)*

Task

Beginning position: standing with feet together, hands beside the body.

Structure for performing:

Hit with palms in front of the body, step with right leg in front two stamps with left leg (whole foot) on spot, step with left leg in front, and at the same time slap with palms in front of the body.

Mark

Examinee has to perform this structure as fast as he can from the sign "Now" to the sign "Stop" when it goes 15 seconds. Accepted are only correct structures. Examinee is moving directly. Task is repeated three times.

Accessories: Stopwatch.

For estimating abilities expressing determined folk dance (ONI), determined social dance (ODP) and determined structure's jazz dance (OJP) applied marks from practical examinee. Estimate is rhythmic structures, technique, style, harmony with music, aesthetics of performing. Marks were from 5 to 10. Program of dance can be seen on the Faculty philosophy in Niš.

#### **4.3 Data processing methods**

The correlation was established by Hotelling's procedure for maximum canonical interaction determination. The estimates included: canonical correlation coefficients (C), characteristic education roots (C2), Hi - quadrant for testing the significance of canonical roots (HI), significance of canonical roots (P).

## 5. RESULTS

Correlation between group of variable's abilities motoric expression rhythmic structures and group of variable's success in dance is explained with two important canonical correlation, respectively two important canonical factors in common space booth group of variables. On the basis value coefficient correlation first pair canonical factors (0.68), exist middle high correlation booth group (Table 1).

Table 1. Canonical correlation

Roots	C	C2	HI	P
1	0.68	0.47	35.18	0.01
2	0.58	0.34	15.49	0.05

In space abilities motoric expression rhythmic structures biggest projection on first canonical factor has RIT 2, RIT 3 and RIT 5 (Table 2).

In space success in dance biggest projection on first canonical factor has ODP and OJP (Tabel 3).

Table 2. Structure of canonical factors predictors variables

	Fac 1	Fac 2
RIT 1	-0.21	0.83
RIT 2	0.75	-0.39
RIT 3	-0.68	0.22
RIT 4	-0.09	0.67
RIT 5	-0.54	0.58
RIT 6	-0.20	0.59

Table 3. Structure of canonical factors criterion variables

	Fac 1	Fac 2
ONI	-0.43	0.87
ODP	-0.83	0.54
OJP	-0.65	0.55

In structures RIT 2, RIT 3 and RIT 5 are elements that correctly performances are necessary for success in ODP and OJP.

It is suppos that success in ODP and OJP can provide summon variables.

Connection second canonical pair is expression coefficient less numerical abilities in relation on first, but show on importance correlation booth spaces.

In space's ability's expression motorical rhythmic structures biggest projections on other canonical factors have RIT 1 and RIT 4, end in space success in dance ONI.

Lock in total for success in dance necessary is ability's expression rhythmic structures in all forms.

Success realization predictors variables depends of abilities hire rhythm, abilities memory sequence structures abilities for correctly technical performed set task moving in the rhythm, abilities fast study structure, and fast adaptation on the change fast

performance, of good concentrate attention and good coordination, flexibility and balance.

Realization criterion variables dependent of all speaking, but on the other abilities and characteristic examinee.

It necessary news research which to enable completely conclusion.

## 6. CONCLUSION

Research is conduct on sample of 37 girls students of physical education from Niš with a objective to determinate correlation between abilities motoric expression rhythmic structures and success in dance.

Abilities motorical expression rhythmic structures is appraise with six measured instruments. Success in dance is appraise basic on marks from the practical part of examinee from folk dance, social dance and jazz dance.

Dates are menagemented canonical correlation analysis.

Results are affirmated with hypotheses about correlation ability's expression rhythmic structures and success in dance.

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## POVEZANOST SPOSOBNOSTI IZRAŽAVANJA RITMIČKIH STRUKTURA I USPEŠNOSTI U PLESU

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*Istraživanje je sprovedeno na uzorku od 37 devojaka studentkinja fizičke kulture iz Niša sa ciljem da se utvrdi korelacija između sposobnosti motoričkog izražavanja ritmičkih struktura i uspešnosti u plesu. Sposobnost motoričkog izražavanja ritmičkih struktura procenjena je sledećim mernim instrumentima: Bubnjanje nogama sedeći na stolici, Poskoci u tri kvadrata, Okreti u šest kvadrata, Ča-ča-ča, Koraci i okreti u pet kvadrata i Topoti i koraci u kretanju napred. Uspešnost u plesu procenjena je na osnovu bazične ocene na praktičnom delu ispita za narodne igre, za društveni ples i za džez-ples. Podaci su obrađeni kanoničkom korelacionom analizom. Rezultati su porvrdili hipotezu o postojanju značajne korelacije između sposobnosti motoričkog izražavanja ritmičkih struktura i uspešnosti u plesu.*