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THE SENSE OF COHERENCE OF MOTOR GIFTED BOYS

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Abstract

The paper deals with the relation between motor giftedness and a sense of coherence (a specific attitude towards the world and resistance to the surrounding stress) which has been tested on a sample of 275 10-year-old boys. Potentialy motor gifted boys have been identified by means of a battery of 11 motor tasks. The sense of coherence has been assessed by means of Margalit scale of child orientation. By using a T-test for small independent samples it has been confirmed that there is a statistically significant difference between the variable of coherence of motor gifted boys and the control group of boys ($p = 0.003$). The results support the thesis that motor giftedness of pupils should be examined in multiple ways, including other aspects of development.

Key words: motor giftedness, sense of coherence

Introduction

A better understanding of children and their development contributes to the general improvement of man. Children are one of the most interesting phenomena and this is the reason why the potential benefits of studying children, in practical as well as in theoretical purposes, do not have to be specifically underlined. Starting from the fact that the motor activity of school children is still insufficiently expressed field of the motor activity and one of the most important areas of child psychology as well, the study of this phenomenon was the essential matter of this research work. Child motion is the presentation of extremely complex, interactive and ever-changing internal process, therefore a quality treatment of preschool children needs to take into account any available reliable relevant information from various areas (Cemič & Ropret, 2008). New tendencies of the educational work view a child holistically, respecting the acknowledgement that the different aspects of child's development are in interaction and that they cannot be roughly separated (Gardner, 1993; Šefer, 2000, 2009; Khire 2000; Gojkov et al., 2002; Malina 2004; Sturza-Milić 1999; 2008; 2009a; Rajtmajer, 2008; Božin & Radovanović, 2009). However, in spite of this, and in order to understand the functioning of a child as an

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entity, separate parts of this entity and their interaction have to be considered and studied. What still leave enough space in the child individual study are exactly the relations of some separate segments.

Participation and success in physical education and sports ask for the development of many complex movements in children. Motor performance of a child depends to a great degree on situations in which basic movements used to appear, as well as on the existence of conditions for expressing a variety of movements and provision of problem situations for motor task solving (Sturza-Milic 2008; 2009b). Unfortunately, children today are not provided with optimal conditions (regarding environmental and educational conditions, etc) when physical activity is in question, and such a reality has negative effects on their overall development. Within their study on talents, Abbott, Collins, Sowerby and Martindale (2007) have pointed out that teachers believe that children will be "illiterate" in movement if they are deprived from suitable conditions for its development. Decreased physical activity in this period of life, i.e. at preschool age, has negative effects on life quality, i.e. health, family relationships (Firika & Sturza-Milić, 2004; Matejak & Planinšec, 2008; Rajtmajer, 2008).

Motor giftedness is a phenomenon which has been studied on a small scale, in spite of the fact that motor development with children is in the function of general development; furthermore, children express themselves through movement better than any other modality. One of the key elements for the appearance of pupil's motor gifted behaviour is the development and the quality of motor abilities, those which more specifically than any other feature contribute to the manifestation of motor giftedness. The majority of previous researches have aimed at identification of motor giftedness, using the technique of motor testing.

However, experience has shown that the isolated observation of a sole segment of child's development is unacceptable. Motor giftedness of pupils should be observed and studied confluently, i.e. multivariantly, including all other developmental aspects: affective, cognitive, morphological and others, since it is likely that there is a significant integrated influence of a whole range of components on motor giftedness. Thelen (1995) finds that motor development ensures universal, biologically grounded basis for early development of cognitive abilities, as well as language and social behaviour. When considering child's development, attention should be directed to the research on the interaction among developmental fields, rather than to the fields themselves. At early ages socialisation is global, while each experience and behaviour of a child has general psychological meaning. Psychological capacity is the most important feature in identification of motor giftedness and talent (Bompa, 1999). There are findings that numerous individuals, physically predetermined for success, have failed due to the lack of psychological characteristics. The stated author has also emphasized that the contemporary programs of identification of talent put minimal accent on psychological factor and its influence on the final outcome of success. Khire (2000) sees the faster development of an individual in the development of an integrated personality, while the development of potentials should be followed by the five basic fields of man's life: physical, intellectual, emotional, social and spiritual. However, a fact should not be neglected that there are researches showing that many individuals with extraordinary abilities in one field can have serious difficulties and regression in another one (Gardner, 1983). Vajtmor (1980, according to Đorđević, 1998) has, offering numerous arguments supporting his standpoint, pointed out that the self-image and the world view are two most important determinants of mental health, human behaviour and success in a field. Božin (2001) argues that a world view represents relatively permanent disposition directing individual's behaviour in life in general. Antonovski (according to Božin, 2001) compares the sense of coherence (a specific attitude towards the world and resistance to the surrounding stress, world view) with several related terms: "a firm, passionate personality", "unbeatable children", "potency", etc. Child's self-image is a construct consisting of a set of perceptions developed from experience. The researches studying the features of those who have succeeded or failed, point to the fact that a negative self-image seems to be the central feature differentiating the

successful from the unsuccessful. Intelligence and the sense of coherence are in important connection with the school achievement, i.e. the higher level of intelligence and the stronger sense of coherence make a construction according to which more successful students differ from the less successful ones (Božin & Radovanović, 2009). Motorically more able children, compared to other children, have more sense of coherency, they can manage stress better and are more immune to everyday stress that modern life brings (Sturza-Milić, 2008).

The basic aim of the paper is to consider whether potentially motor gifted boys have more expressed sense of coherence (specific world view and resistance to the stressors surrounding them) in comparison to boys not supposed to be motor gifted .

Method

Participants

The sample has included 275 10-year-old boys attending primary schools in Vršac. Potentially motor gifted boys (N = 39) have been identified using the technique of motor testing (15 % boys who have achieved the best results on motor testing). The positioning of pupils has been carried out according to standardized values of individual motor tasks in one Z-value. A control group of boys (N = 38) has also been formed according to the method of random sample, consisting of those children not supposed to be gifted.

Instruments

The sample of motor tasks:

1. Standing long jump (SLJ),
2. Endurance in pull-up position (EPP),
3. Sit-ups (SIU),
4. Running 15 m (R15),
5. Tapping rate (TAP),
6. Agility run 10x5m (AGR),
7. Training ground with jumping and pulling through (TJP),
8. Targeting (TAR),
9. Flamingo balance test (FLA),
10. Sit and reach (SIR),
11. Shuttle run on 20m track (SHT).

Motor tasks were adjusted to the sample of children and had shown optimal measuring characteristics in previous research (Sturza-Milić, 2009a).

The Scale of children orientation has been used for the evaluation of the sense of coherence. It has been developed by Margalit (1999, according to Božin, 2001) and her associates, starting from the theoretical sense of coherence. The Scale of children orientation consists of 16 statements to be commented according to the scale ranging from 1 (it never happens to me) to 4 (it always happens to me) in relation to life situations expressing the sense of coherence. The instrument includes 3 more statements representing “questions for sleepers”, not to be taken into consideration when scoring.

Data processing

Data processing referred to the calculation of main descriptive indicators of motor variable (AGR, FLA, TAR, SIU, TJP, SIR, SLJ, TAP, R15, EPP and SHT) for the sample of motor gifted boys and control group of boys. Regarding the variable of the sense of coherence, the difference between the potentially motor gifted boys and the control group has been tested according to the T-test.

Results

After motor testing of the complete sample (n = 275), the results from separate motor tasks have been standardised and turned into one Z-value. All boys who had the results over 85 percentile from the top of the list have been put into the sample of potentialy gifted boys (n = 39). A control group has also been formed from the remaining pupils, i.e. those whose results were below 85 percentile rang by using the method of random sample (n = 38). Tables 1 show the basic descriptive determinants of motor variables.

Table 1

Descriptive statistics of motor variables for the sample of motor gifted boys (GB, n = 39) and control group of boys (CB, n = 38)

MOTOR VAR.	Min		Max		AS		SD	
	GB	CB	GB	CB	GB	CB	GB	CB
AGR	15.78	17.02	23.75	25.22	19.058	20.14	1.727	2.134
FLA	3.89	1.78	60.00	60.00	27.474	11.595	18.306	11.003
TAR	7.00	7.00	30.00	36.00	21.200	19.878	5.277	6.431
SIU	7.00	3.00	21.00	20.00	15.737	14.012	2.991	3.105
TJP	3.44	3.44	6.65	7.50	4.656	4.864	0.667	0.636
SIR	16.00	3.00	37.00	39.00	28.132	21.414	5.603	5.991
SLJ	110.00	80.00	185.00	185.00	151.58	132.17	17.514	21.455
TAP	24.00	6.00	41.00	40.00	34.397	30.817	4.224	4.843
R15	2.07	2.38	3.66	3.90	2.706	2.936	0.363	0.326
EPP	1.93	0.92	68.00	68.00	36.612	19.217	17.353	18.055
ŠHT	128.00	80.00	304.44	266.5	228.16	156.73	48.563	48.345

AS – Arithmetic mean SD – standard deviation
Min – min. value Max – max. value

By using T-test for small independent samples, it has been confirmed that there is a statistically significant difference (p = 0.003) between the sample of motor gifted boys (n = 39) and the control group of boys (n = 38) in the variable of the sense of coherence. Table 2 shows that the former scored better in the test of the sense of coherence than the latter. The average value of scores of the sense of coherence in motor gifted boys was 51.157 (these pupils had the answers which were closer to maximum value - 4, i.e. they had more life situations in which

their sense of coherence was expressed), while the average value of scores in boys from the control group was 48.998.

Table 2

The significance of the difference in the sense of coherence between the motor gifted boys (GB) and the control group of boys (CB)

	n	AS	SD	t	p
GB	39	51.157	3.865	3.065	0.003
CB	38	48.998	3.986		

n – number of students
AS – Arithmetic mean
SD – standard deviation
t – t value
p – level of significance

Discussion

Many theorists assume that individual factors such as personality traits are the ones that define behaviour. Bandura (1999) has the opinion that these ideas are too simple and that behaviour of individuals can be predicted only when the complete context is taken into consideration. During childhood, processes of development and maturation are closely related and intertwined. Simonton (1999) feels that the top limit for the development of some talent of an individual depends on multiplicative integration of different components. The obtained results from this research correspond to these beliefs. If we look at the sense of coherence, among other things, as 'toughness, invincibility of personality', better resistance to stress from the surroundings in the modern way of living, motor gifted pupils have a stronger sense of coherence in certain life situations, according to the results. Bompa (1999) believes that many individuals who were physically predestined to succeed failed to do so due to lack of psychological characteristics. However, despite unavoidable importance of knowing personality traits for a better understanding of a child and better defining of giftedness, when the assessment of children personalities is in question we are faced with a number of problems. One of the problems lies in the fact that most personality tests (as well as the scale used in this research) are based on the paper-pencil principle and therefore subject to simulation of the testee, inadequate self-consciousness of him (one can think that he would do something in a certain situation which in reality he wouldn't do at all) and the gap between explicit attitudes showed on the test and implicit attitudes which influence behaviour in real life. Masked questions can solve this problem but only to a certain degree. The problem of sincerity is not as big with children as it is with adults because the former are more honest and open, but on the other hand, the problem of self-consciousness and the ability to imagine all the situations from the test and to predict how they would react in them is much higher when children are in question (Schefer, 2000). Even a bigger problem is the fact that child personality is not stable, as it changes from minute to minute and with small children it hasn't been formed yet. These facts should be taken into serious consideration when analyzing the results obtained by the usage of the test for the assessment of the sense of coherence.

To sum up, according to the results of this research, motor gifted boys tend to have a significantly better sense of coherence than boys who are less motor gifted. However, there is a need for further researching of the relations between motor giftedness and the sense of coherence in order to find out more about the relations of these phenomena. Furthermore, the results

support the thesis that motor giftedness of pupils should be examined in multiple ways, including other aspects of development because there is a possibility that there is a significant integrated influence of the whole spectre of components on motor effectiveness.

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