

FITNESS LEVELS IN PUPILS OF ROMANI AND NON-ROMANI ORIGIN AT PRACTICAL ELEMENTARY SCHOOLS

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Abstract

The aim of this study was to assess and compare the level of physical fitness of 9- to 11-year-old pupils of Romani and non-Romani origin at practical elementary schools in Prague. Five motor tests (Standing broad jump; Repeated sit-ups; 12-minute run; 4 x 10 metre shuttle run; Sit and reach test) were used to assess physical fitness. The study confirmed that Romani children had a higher level of physical fitness than non-Romani children, with the differences being more pronounced among boys than among girls. The most equal performance among Romani and non-Romani children of both sexes was recorded in the running endurance test. A disproportion thus arises between the lower demands placed on Romani pupils in physical education classes and the physical abilities of this group of children. Therefore, higher demands should be placed on this socially disadvantaged group of children than on other pupils for whom total or partial atypical motor development is typical.

Introduction

Practical elementary schools [translator's note: these are known in the Czech Republic as "základní školy praktické"; formerly the term "zvláštní školy" was used, which is equivalent to the English term "special schools"] as a part of special education are the educational facilities most frequented by individuals with intellectual disabilities (ID). These facilities are primarily intended for children with mild ID (IQ 69-50); however, the composition of pupils attending them varies greatly. A great number of pupils are socially disadvantaged (a family environment with a low social and cultural standing, threat of socio-pathological phenomena), with Romani children being the most extensive group. Romani children are very often placed in practical elementary schools (PES) as a result of overall neglect (educational, hygienic, and cultural) and language unpreparedness (Prunner, 1994; Rokosová, 1998; Klíma, 2000; Šotolová, 2001; Portik, 2003). As a rule, they are thus not limited by ID on a biological basis; pseudo-retardation is typical for them. They can be generally classified among those PES pupils where the deterioration of the level of their intellectual abilities is determined both socially and genetically (polygenic inheritance). In this connection, Vágnerová (1995) mentions the term pseudoinheritance¹.

Many experts (Dolejší, 1987; Vlačihová, 1988; Plášková, 1991; Balvín et al., 1997; Klíma, 2000; Nečas, 2002) are justified in calling attention to the practice of automatic placement of Romani children into these types of schools; however, due to a lack of valid data, it is not easy to estimate the number of such Romani pupils².

¹ Deviations in mental development do not relate to changes in genetic predisposition, but to the way of life in the family; therefore, they may be handed down to the next generation through the same child rearing methods and lifestyles.

² Balvín et al. (1996) allege that Romani children attend special schools 28 times more often than children from majority society. According to Kupčiková (2002), 60% of the children in attendance at such schools are Romani children; according to Balabánová (1997), this number represents more than 80% of children from the Romani

Based on an analysis of the content of pedagogical-psychological documentation pertaining to 153 monitored pupils at PES in Prague, a large number of Romani children in our research (about 68%) were placed into a group where the deterioration of intellectual abilities, often not uniformly, occurs on the basis of such social disadvantage or educational neglect combined with polygenically conditioned lower levels of ability. These pupils in reality do not belong in PES and their placement into schools intended for pupils with ID was, according to Švarcová (1999), erroneous from the start. Many of them – thanks to intensive, qualified special educational care – tend to overcome their initial problems and deficiencies and soon exceed their peers with ID, and their performance exceeds regular PES requirements, thereby achieving proportionate accomplishments without exerting greater effort.

The pronounced heterogeneity of pupils attending PES demands the application of different pedagogical processes to the various groups, with physical education and extracurricular physical activities not being an exception. In this respect, lessons are very demanding for teachers – provided, of course, that they do not impose the same demands on all students equally. It is, thus, necessary to take into account internal differentiation in lessons that would allow the pedagogue to manage the lesson more effectively and, thanks to this, would even enable individualization respecting the special development and personality traits of each student possible.

Ethnic origin (provided that a racially non-discriminative approach is observed) or aetiological handicap, based on which students are classified into relatively homogenous groups with approximately the same motor competence, could be considered as one of the criteria of such differentiation. A certain “typology” of motorics would then help pedagogues to differentiate the content of teaching materials, refine physical programs in the interests of the all-round development of pupils, focus systematically and in compliance with special education principles on those areas of motorics where there are smaller or bigger deficiencies or disorders, and contribute to resolving the issue of minimal and optimal physical activities for these differentiated groups. In this way, no disproportion would arise between the lower demands placed on, for example, Romani students and their physical abilities.

1 Problem

In research, the issue of the aetiology of ID or the various groups of PES pupils and their motor capabilities appears very rarely, which is reflected both in practice in the physical education process and in the unsatisfactory state of scientific knowledge. Contemporary civilization is in ever greater need of individuals who, through their perfect performance, are able to keep step with the sophisticated technologies, and as the future work of pupils graduating from PES will for the most part be manual work, an optimum level of physical fitness is also a prerequisite for the success of these graduates on the job market. The level of physical fitness of PES pupils should be ascertained regularly, especially with regard to monitoring their physical and motor development and preventing health risks tied to the hypokinetic lifestyles of this population group. The basic data on the state and developmental tendencies of the level of physical fitness of children and youth could also serve as the impetus for corrective intervention in school physical education.

population. In 1999, the Czech government also stated that 80–90 % of the pupils at some special schools at that time were Romani (Case D.H. and others vs. Czech Republic 2007). According to data obtained by the European Court for Human Rights, the total number of pupils at special schools in Ostrava was 1 360, of which 56% were Romani. Furthermore, while only 1.8% of the all non-Romani children attended special schools, the percentage of Romani children attending these schools was 50.3% (Case D.H. and others vs. Czech Republic). About 34% of our research sample of 153 pupils aged 9–11 years attending PES in Prague comprised Romani children.

We have already (Lejčarová 2007a) discussed the relationship between aetiology, or types of ID, and the motorics of persons with such disability (PES pupils). The issue of motor performance of children of Romani ethnicity has been dealt with only singularly; in Slovakia, the situation is much better in this regard. The category of Romani with moderate ID was part of the target group in the study conducted by Válková, Thaiszová (1989), who compared the level of certain motor indicators (standing broad jump, 60-metre dash, grenade throw, 5kg shot put, 12-minute run, set figures with a stick) of clients of a social care institute for youth aged 14–26 years differentiated on the basis of certain criteria (mild ID – athletes; mild ID; moderate ID – simple/Romani/individuals with Down’s Syndrome; severe ID); for each group they then assessed the possibility of their development over a two-year period. Ješina, Matochová, Růžicková (2010) compared the level of selected motor abilities of pupils of Romani ethnicity aged 9–13 years and of their peers from the majority population (both groups from elementary schools with a predominance of pupils of Romani ethnicity). The non-Romani pupils achieved better results in the majority of the motor indicators.

Horváth, Horváthová (2001) compared the state of physical development and motor performance of 7- to 10-year-old Romani children and children from the regular population (by applying the EUROFIT test). The results confirmed the existence of a disparity in favor of the regular population. Adamčák (2005) also discovered that 7- to 10-year-old Romani pupils lagged behind in physical development and in the level of motor performance by at least two years compared to the regular school population. Trochtová (2002) compared the motor skills level of a 6-year-old Romani child to that of a three-year-old non-Romani child. According to the author, thanks to sufficient natural movement, the motor skills of these pupils are proportionately developed, but fine motor skills are, however, at a very low level. Šotkovská, Hucec (1999) and Turek, Hucec (1996) confirm that general motor performance of Romani pupils is at a lower level compared to their non-Romani peers. They mention, in particular, a lack of physical endurance activities and overall uneven acceleration of expected motor development.

The aim of the submitted research study was to ascertain the level of physical fitness of middle school-aged pupils attending PES and perform a comparison between pupils of Romani origin and pupils of non-Romani origin.

2 Method

2.1 Subjects

A total of 153 pupils (61 girls and 92 boys; average age of 10.62 ± 0.56 years) from PES in Prague, with two identical years of birth, took part in the testing. This was an accessible selection at those schools that provided adequate conditions and consent for its execution (a total of 17 from the basic set of 24). Of the total number of 153 pupils, 52 Romani [32 boys (61.5%), 20 girls (38.5%); average age of 10.69 ± 0.57 years] and 101 non-Romani [60 boys (59.5%), 41 girls (40.5%); average age of 10.59 ± 0.55 years] appeared in the research sample.

An informed consent was provided to the school principals and parents or primary caregivers of these children.

Some pupils could not do all the motor tests owing to permanent health limitations (heart defects, asthma, epilepsy, diabetes) and were therefore not included in the final results in the particular disciplines.

2.2 Measurements

The UNIFITTEST (6–60) test battery was used to assess the level of physical fitness. Motor abilities tests with minimal demands on motor skills (*Standing broad jump; Repeated sit-ups; 12-minute run; 4 x 10 metre shuttle run*) had proved to be suitable for application at PES in prior research (Lejčarová, Tilinger, 2004). A Sit and reach test was used to assess active joint mobility, flexibility and muscular elasticity, primarily with regard to the spine, lower back and hip joint.

The body height of pupils was ascertained by scale on a wall and a triangle (accuracy of data 0.5 cm); body weight was ascertained using a personal stand-on scale with a measuring accuracy of 0.1 kg.

2.3 Procedure

The actual measuring was done by the author to guarantee its objectivity and uniformity. Before each motor test the children were given precise instructions and told the applicable rules. In view of the insufficient ability to concentrate and lower standard of comprehension among children from special schools, often linked to problems of understanding oral instructions, it was necessary to aid their comprehension of a specific task with a visual demonstration by the examiner herself, sometimes in the form of illustration, in some cases by tactile assistance.

The testing took place in school classrooms and in gyms and on playing fields where physical education is taught at a particular school, i.e. in conditions the test subjects were very familiar with and used to. The pupils were interested and involved and, for the most part, cooperated well with the examiner.

2.4 Data analysis

The following basic descriptive statistical characteristics were used to assess the standard and consistency of performances in individual motor tests (and somatic indicators): arithmetical mean (M), standard deviation (SD), minimum performance (x_{\min}), maximum performance (x_{\max}). The substantive significance of differences in average performances was assessed using Cohen's d index (effect size). This index operates with conventional values, which make it easier to determine when a difference is large, or relative substantive significance of the difference in performance averages (Hendl, 2004; Kromrey et al., 2007). When judging substantive significance we worked on the sole basis of the means of the scores of probands who had completed a given motor task.

3 Results

The performance of Romani pupils in all motor tests is, in terms of size of the arithmetic average, higher in comparison with the performance of non-Romani pupils. With regard to substantive significance, the differences among boys are greater than among girls (Tables 1 and 2) – except in the *12-minute run test*, the d index attains a medium value. The performance of Romani and non-Romani pupils (for both sexes) shows the least differentiation in the running endurance test. Overall, in terms of the evenness of performance, the group of Romani pupils appear more homogenous, whereas a greater inter-individual variability is characteristic of the non-Romani pupils.

Tab. 1: Comparison of differences of somatic and motor indicators in PES boys, differentiated according to ethnic origin

PES boys	Motor and somatic indicators	<i>n</i>	M	SD	x_{\min}	x_{\max}	<i>d</i>
Romani Non-Romani	Height [cm]	32 60	143.69 144.98	6.25 8.31	129 126	155 172	0.17
Romani Non-Romani	Weight [kg]	32 60	39.09 38.03	12.00 9.20	21.5 23	71 75	0.10
Romani Non-Romani	Standing broad jump [cm]	32 60	136.97 121.60	21.17 30.81	76 35	173 197	0.55
Romani Non-Romani	Repeated sit-ups [number of cycles]	32 60	27.16 21.27	9.66 10.65	0 0	50 48	0.57
Romani Non-Romani	12-minute run [m]	30 50	1648.33 1508.20	414.65 374.32	980 750	2620 2340	0.36
Romani Non-Romani	4 x 10 m shuttle run [s]	31 57	13.27 14.14	1.44 1.69	11.4 11.6	17.4 20.0	0.54
Romani Non-Romani	Sit and reach [cm]	32 60	45.66 41.40	6.44 8.04	27 27	57 57	0.57

Source: Own

Tab. 2: Comparison of differences of somatic and motor indicators in PES girls, differentiated according to ethnic origin

PES girls	Motor and somatic indicators	<i>n</i>	M	SD	x_{\min}	x_{\max}	<i>d</i>
Romani Non-Romani	Height [cm]	20 41	141.90 140.83	8.52 9.02	126 122	157 160	0.12
Romani Non-Romani	Weight [kg]	20 41	37.78 34.18	11.67 8.94	24 23	67 67	0.36
Romani Non-Romani	Standing broad jump [cm]	20 41	117.50 107.68	25.99 27.63	60 43	168 160	0.36
Romani Non-Romani	Repeated sit-ups [number of cycles]	20 41	23.05 18.83	9.29 9.75	0 0	38 35	0.44
Romani Non-Romani	12-minute run [m]	18 40	1445.56 1427.50	257.50 282.45	700 770	1910 1950	0.07
Romani Non-Romani	4 x 10 m shuttle run [s]	18 41	13.94 15.11	1.39 2.30	12.4 12.2	18.2 22.8	0.57
Romani Non-Romani	Sit and reach [cm]	20 41	48.55 43.77	6.93 9.71	31 20	58 59	0.54

Source: Own

To create a comprehensive picture of both groups of pupils differentiated by ethnic origin, the level of each somatic and motor indicator was also observed from the gender point of view. In both groups, body height and weight are greater in boys than in girls; the substantive differences among non-Romani pupils are greater than among Romani pupils (Table 3). In motor tests, boys always performed better than girls, with the exception of the flexibility test. The performances of boys and girls vary more in Romani pupils (especially in the *Standing broad jump* test), whereas differences in performance of non-Romani pupils in terms of gender tend to disappear.

Tab. 3: Substantive significance of differences in motor and somatic indicator values in the PES sample, differentiated by gender

Motor and somatic indicators	Romani		Non-Romani	
	Difference	<i>d</i>	Difference	<i>d</i>
Height	small	0.25	small	0.48
Weight	small	0.11	small	0.42
Standing broad jump	large	0.84	small	0.47
Repeated sit-ups	small	0.43	small	0.24
12-minute run	medium	0.56	small	0.24
4 x 10 m shuttle run	small	0.47	small	0.49
Sit and reach	small *	0.44	small *	0.27

Note: * better test performance achieved by girls (based on simple comparison of the arithmetic mean of girls' and boys' scores)

Source: Own

4 Discussion

Unfortunately we do not have a comparison for the acquired data with any available research monitoring a suitable target group, i.e., Romani and non-Romani pupils attending PES (even with regard to age) and using similar diagnostic instruments to assess the level of motor abilities. Studies dealing with assessment of physical development and motor abilities of Romani children in particular (Horváth, Horváthová, 2001; Adamčák, 2005) use for comparison children from regular elementary schools, i.e., children without ID. It was found that Romani pupils aged 7–10 years lagged behind the regular school population by at least two years. Ješina, Matochová, Růžicková (2010) found that 9- to 13-year-old Romani pupils achieve worse results in the majority of selected motor abilities tests than their non-Romani peers, with the difference among girls being greater. In Romani boys, better performance compared to non-Romani boys was registered in the *Standing broad jump* test; in Romani girls, better performance compared to non-Romani girls was registered in the 4 x 10 m shuttle run test. None of the above differences in performance was, however, statistically significant; thus, the authors did not confirm a difference in motor abilities levels between Romani and non-Romani children.

One of the possible factors influencing the results of our research could be laziness or lack of interest on the part of Romani pupils at PES in performing physical activities. Romani pupils are actively involved in sports only rarely and no one motivates or supports them to do sports; therefore, such activities are not important to them in any way. Romani children are not very interested in extracurricular school activities (Drmotová, Elichová, 2011). Non-Romani children at PES are more active than Romani children. Children who are active in sports – be they non-Romani or Romani – can be found at PES only sometimes. For them, physical education classes are usually the only place for managed physical activity, and according to Karásková (2000), physical education possesses a number of attractive aspects (they do not have to learn, they can experience the feeling of success thanks to their inborn physical capabilities, the language barrier falls away, it is possible to unload excess energy, they excel in dancing) and detractive aspects (aversion to obligation, responsibility, necessity to curb temperament and extroversion, problems with subordination to authority). According to Michal (2009), the majority of Romani pupils at the middle and upper school are not interested in physical education. The high level of interest or lack of interest on the part of pupils in this subject can also relate to what the specific physical activity is. In terms of the content, Romani children prefer physical and sports games and exercises in combination with music (Liba, 1999); they also enjoy hiking, skiing and skating (Michal, 2009).

Šotkovská, Hügec (1999) and Turek, Hügec (1996) emphasize physical education as a positive way of affecting the development of endurance abilities and the related use of motivational means.

It is very difficult to involve pupils attending PES in regular sports activities and to have them continue with such activities, as their interests are often diffused, nondescript, quite distinct and short-term. Typically, there is a lack of initiative and inability to overcome the smallest of obstacles and to continue to do a certain activity for a longer period of time, combined with indolence or even laziness, the focus on material and short-term goals (Langer, 1996), and a low frustration tolerance threshold. Hypobulia (reduced volitional ability) is pronounced; it is clearly applied in only those cases where the children know how they should act but do not feel the need to act in this way. In the realization of goals, especially if long-term, difficulty with self-control and the ease of being affected by other momentary distractions continue to be a problem (Vágnerová, 1993). The children lack perseverance and diligence to “train”, the ability to want something, strive for something, motivate themselves to undertake training and complete something, as for them the goal is too distant.

Michal (2009), in a survey of 101 Romani pupils in middle school, discovered that only 14.9% attend sports clubs within or outside school. The pupils stated a lack of finances and not being “welcome” there as reasons for not participating in sports activities. The authors see the reason being a general lack of interest in sports activities.

According to our research at PES in Prague, only 19% of pupils aged 9–11 years take part in physical activities compared to 55% of pupils of the same age attending regular elementary schools (Lejčarová, 2007b). The results of our tests were quite balanced also probably due to the fact that neither non-Romani nor Romani pupils attending PES usually do sports regularly. Why, however, were Romani pupils always better compared to non-Romani pupils? Is this due to anthropological differences or are Romani pupils attending PES in fact placed in these schools inappropriately, something that many Czech experts have been pointing out for a number of years (Dolejší, 1987; Vlačihová, 1988; Plášková, 1991; Balvín et al., 1997; Klíma, 2000; Nečas, 2002)?

When comparing the results of Romani and non-Romani pupils, the values of the Cohen coefficient d was in the mid range in most motor tests. The only exception was the 12-minute run test, where the value of the d index in both genders was small (0.36; 0.07). The performance of pupils in endurance runs was thus the most balanced. This fact can probably be attributed to the general deterioration of cardio-respiratory endurance across the entire population of children (Bouchard, Blair, Haskel, 2007) and the low motivation and weak volitional traits of pupils attending PES (see above), be they Romani or non-Romani.

From the methodological point of view, it is very difficult to ascertain endurance ability in individuals with ID. Implementation of long-term running endurance field tests is problematic in individuals with decreased intellectual abilities and, in this regard, it is necessary to consider them only as indirect methods of measuring endurance abilities. The main difficulty lies in the fact that individuals with ID are not able to complete the run (Seidl, Reid, Montgomery, 1987). This can be attributed to a combination of factors, including a low-level of cardio-respiratory fitness, difficulty in allocating and maintaining a suitable running speed, and a lack of motivation and perseverance to continue with a longer lasting and monotonous activity³ despite discomfort related to, for example, the inability to deal with an increased breathing rate and weariness, fatigue and even pain (DePauw et al., 1990; Pizarro, 1990;

³ This problem was shown to be serious especially at the moment when the intervals between individual pupils during mass testing began to increase.

Baumgartner, Horvat, 1991; Lavay, McCubbin, Eichstaedt, 1995; Kozub et al., 1998). Significant in this respect is also the complexity of the task tied to the abstractness of expending maximum effort for a certain period of time, i.e., understanding the purpose of a long-distance run – if a specific task is not set or the length of the track is not delineated, then many pupils lose interest in the run and stop (Fait, 1972; Cressler, Lavay, Giese, 1988).

When executing the tests, not only volitional deficiencies but also emotional deficiencies were displayed by some pupils following, in particular, such emotional impulses that they were not able to handle in an acceptable manner. This behavior apparently appeared as a reaction to excessive strain. The results could have been influenced even by the children's limited or complete lack of experience with endurance runs, which is also confirmed by Jakubec (2005) in pupils in grades 8 and 9 of former special schools in the Czech Republic; he discovered that 34 % of the 147 pupils surveyed had never taken part in an endurance run during physical education classes in school.

When assessing the results of this test, we also have to take into account the number of pupils who could complete it and who crossed the finish line (11 non-Romani and 4 Romani pupils failed to complete the test). The data used for comparative purposes do not represent the entire spectrum of the children's performance, but only the results of the strongest sample in terms of performance due to the mentioned lack of motivation, associated disability (heart defects, asthma, epilepsy, diabetes) or early interruption of the test by the probands.

The ascertained values of somatic and motor indicators in both groups of PES pupils differentiated according to gender are also of interest. In Romani pupils, the substantive significance was greater overall, whereas in non-Romani children, the results of measurements were closer together. In both groups of PES pupils, it was confirmed that gender differences in motor abilities or in the level of motor performance and physical fitness are small in the monitored age period (middle school age or pre-pubescence); with increasing age however, it increases in favor of males. Thus, the younger the children are, the less their motor abilities differ, which, according to Čelíkovský et al. (1977), is caused by the fact that immediately from birth physical development and motor skills start; with an increasing number of years, difference in muscle tissue, the external environment and the entire education system (e.g., different interests of girls) have a greater influence on motor skills. According to Měkota (1979), gender differences arise not only from different biological predispositions, but also as a result of lower performance motivation and lack of training and physical experience.

Čelíkovský et al. (1977) and Hájek (2001) state that in the 8- to 11-year-old age group, boys achieve better results in basic motor performance tests than girls. Our testing showed that at PES, boys performed significantly better in all motor tests except in the Sit and reach test. Karásková (1987) also found apparent differences between the performances of boys and girls at special schools at the time, with girls performing worse, whereas according to Hájek (2001), sexual dimorphism (in an intact population) does not manifest itself so readily in endurance-related performance; according to the author, the differences are more apparent in volitional traits.

It was discovered (Möser, 1970; Rarick, Widdop, Broadhead, 1970; Londeree, Johnson, 1974; Rarick, 1981; Karásková, 1987) that gender differences of children with mild ID or PES pupils on the level of motor abilities, especially in terms of physical condition, do not differ substantially from the intact population. Better results were also registered in girls in the Sit and reach test– in joint flexibility, girls are in anatomical and physiological terms indeed better predisposed than boys (Čelíkovský et al., 1977). Contrary to this, Rarick, Dobbins (1972, in Bauer, Pellens, Van der Schoot, 1981) and Krebs (1995) state that boys with mild

ID achieve almost without exception a greater level of flexibility than girls with mild ID (the authors of course do not state the age range to which this statement applies).

As regards somatic parameters, no great differences were found between Romani and non-Romani pupils, especially in body height. In body weight, differences are more conspicuous in girls – Romani girls are heavier than non-Romani girls. These results do not correspond to the research conducted by Olejár (1972), Bernasovský, Bernasovská (1995), Horváth, Horváthová (2002), Adamčák (2005), who found that Romani children lag behind the regular school population in physical development. Bernasovský, Bernasovská (1995) however call attention to the fact that the ethnical factor should be applied in biological parameters; therefore, the physical development of Romani children should not be assessed according to norms applicable to the rest of the population.

It ensues from the hitherto results of anthropological research of Romani children and youth that the average birth weight and size of Romani newborns are lower than that of the regular population. According to Malá, Klementa (1980), the cause of these lower values lies in the insufficient care for the foetus by the mother during pregnancy, the physical constitution of the parents and their ethnicity, i.e., Indian origin. The different somatic development of Romani children is conditioned not only genetically, but also nutritionally and environmentally (Horňák, 2011).

Comparisons of the physical development of Romani children and youth living in a family environment and the physical development of children from orphanages and boarding schools are interesting – they allow the possibility to verify the effect of the environment on physical state. The influence of the external environment regarding Romani children from orphanages is seen chiefly in the retention of certain genetically conditioned traits; thus, certain differences between these Romani children and non-Romani children are apparent. From the physical fitness point of view, however, Romani children who live in long-term residential care are located roughly in the middle between non-Romani children and Romani children (Malá, 1975; Suchý, 1977) living in a Romani family environment, which is labelled as non-stimulating (Klíma, 1991; Balvín et al., 1996, 1997; Vojtěchová, 1998; Šotolová, 2001; Nečas, 2002). In this regard, tendency toward gradual equalisation of certain biological differences is apparent. Olejár (1972) states that children of non-Romani origin but from a disadvantaged family environment do not show significant differences in comparison with standards in body height, regardless of whether they are boys or girls.

It can be generally stated that the inherent biological rules of growth of the human body manifest themselves in Romani children in the same way as in non-Romani children. This is illustrated by developmental sexual dimorphism, whose indicator is the point where the growth curves of boys and girls cross during puberty. Romani boys, just like non-Romani boys, are smaller than girls from the age of 10 to 13 years. After the age of 9 years, girls also have a greater body mass than boys, which lasts until the period between 14 and 15 years of age (Malá, Klementa, 1980; Kouba, 1995). These facts stated in literature were not confirmed in PES pupils – the values of somatic indicators were on average lower in girls, whereas in non-Romani pupils the differences in terms of substantive significance was more pronounced (0.48; 0.42 vs. 0.25; 0.1).

Even in Romani pupils it is possible to register secular trends in body height – Romani children approximate non-Romani children in this somatic indicator; the difference, however, still does not exceed one standard deviation according to Malá, Klementa (1980). Even though obesity in Romani children has somewhat decreased, the tendency for Romani children to be obese continues to be a typical feature of this ethnic group (Horňák, 2001; Zeljko, et al. 2011).

Conclusion

The study conducted by us at PES in Prague confirmed a higher level of physical fitness in Romani pupils aged 9–11 years compared to their non-Romani peers. The differences were more pronounced in boys ($d = 0.36–0.57$) than in girls ($d = 0.07–0.7$). The most equal performances between Romani and non-Romani pupils were registered in both sexes in the running endurance test. As regards gender differences, boys always achieved better results than girls, except in the flexibility test. The performance of boys and girls differed more in Romani children, whereas the differences in the performances of non-Romani pupils were more ambiguous from the perspective of gender.

A disproportion thus arises between the lower demands placed on Romani children in physical education classes in schools and their physical capabilities. Therefore, greater demands should be placed on this group of socially disadvantaged pupils than on other pupils (especially with organically conditioned ID, for whom total or partial atypical motor development and lower level of motor skills are typical).

The above fact should be taken into account in the Frame Educational Program for Elementary Education governing the education of pupils with mild ID, or in special educational programs in the various PES supporting pedagogical autonomy in regard to the needs of all pupils (thus even Romani pupils). The Alternative Educational Program of Special Schools for Pupils of Romani Ethnicity, which was drawn up in 1998 and terminated on 31 July 2005 and whose main objective was to modify the education program at these schools with a predominance of Romani pupils to suit the specific needs and interests of these pupils, did not address this situation. The content thereof was almost the same as the now obsolete Special School Educational Program developed for pupils with mild ID.

Acknowledgements

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TĚLESNÁ ZDATNOST ŽÁKŮ ROMSKÉHO A NEROMSKÉHO PŮVODU NA ZÁKLADNÍCH ŠKOLÁCH PRAKTICKÝCH

Cílem této studie bylo zhodnotit a porovnat úroveň tělesné zdatnosti 9–11letých žáků romského a neromského původu na základních školách praktických v Praze. K posouzení této úrovně bylo použito pět testů (Skok daleký z místa odrazem snožmo; Leh – sed opakovaně; Běh po dobu 12 minut; Člunkový běh 4 x 10 metrů; Hluboký předklon s dosahováním v sedu snožmo). Šetření potvrdilo vyšší úroveň fyzické zdatnosti romských žáků oproti neromským, přičemž mezi chlapci byly rozdíly výraznější než mezi dívkami. Nejvyrovnanější výkony mezi Romy a ne-Romy byly u obou pohlaví zaznamenány v testu běžecké vytrvalosti. Vzniká tedy disproporce mezi nižšími nároky kladenými na romské žáky v předmětu tělesná výchova a jejich pohybovými dispozicemi. Zejména na skupinu těchto dětí se sociálním znevýhodněním by tedy měly být kladeny vyšší požadavky než na ostatní žáky, pro něž je typická celková či částečná atypičnost motorického vývoje.

DIE PHYSISCHE LEISTUNGSFÄHIGKEIT DER SCHÜLERSCHAFT MIT ROMA- UND NICHTROMA-HINTERGRUND AN DEN SONDERSCHULEN

Ziel dieser Studie war es, das Niveau der körperlichen Fähigkeiten von 9-11-jährigen Schülerinnen und Schülern mit Roma- und Nichtroma-Hintergrund an den Sonderschulen in Prag zu beurteilen und zu vergleichen. Zu diesem Zweck wurden fünf motorische Tests gewählt (Standweitsprung; Wiederholtes Hinlegen – Setzen; 12-Minuten-Dauerlauf; Achterlauf 4 x 10 Meter; Rumpfbeugen bei gestreckten Beinen bis zu Bodenkontakt). Die Untersuchung bestätigte das höhere Niveau der physischen Fähigkeiten von Roma-Kindern im Vergleich zu Nichtroma-Kindern. Dabei waren die Unterschiede bei den Jungen deutlicher als bei den Mädchen. Am ausgeglichensten waren die Leistungen von Roma und Nichtroma beiderlei Geschlechts beim Dauerlauf. Es entsteht also eine Disproportion zwischen den niedrigeren an Roma-Kinder im Sportunterricht gestellten Anforderungen und ihrer motorischen Disposition. Vor allem an die Gruppe von Kindern aus sozial benachteiligten Familien sollten deshalb höhere Anforderungen gestellt werden als an die übrigen Schüler, für die die vollständige oder teilweise Abweichung vom Durchschnitt der motorischen Entwicklung typisch ist.

KONDYCJA FIZYCZNA UCZNIÓW POCHODZENIA ROMSKIEGO I NIEROMSKIEGO W SPECJALNYCH SZKOŁACH PODSTAWOWYCH

Celem niniejszego opracowania jest dokonanie oceny i porównania poziomu kondycji fizycznej uczniów w wieku 9–11 lat pochodzenia romskiego i nieromskiego w specjalnych szkołach podstawowych w Pradze. Do oceny wskazanego poziomu zastosowano pięć testów motorycznych (Skok w dal obunóż z miejsca; Powtarzane przechodzenie z leżenia do siadu; Bieg przez 12 minut; Bieg wahadłowy 4 x 10 metrów; Skłon w przód w siadzie z dotknięciem palców stóp). Przeprowadzone badania potwierdziły, iż dzieci romskie mają lepszą kondycję fizyczną niż dzieci nieromskie, przy czym pomiędzy chłopcami różnice były znacznie bardziej widoczne aniżeli pomiędzy dziewczętami. Pojawia się więc dysproporcja między niższymi wymaganiami stawianymi romskim uczniom w ramach przedmiotu Wychowanie fizyczne a ich predyspozycjami ruchowymi. Zwłaszcza wobec tej grupy dzieci, znajdującej się w niekorzystnej sytuacji społecznej, należy stosować wyższe wymagania w porównaniu z pozostałymi uczniami, których rozwój motoryczny jest ogólnie lub częściowo atypowy.