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Z VĚDECKÉ ČINNOSTI

SOMATOTYPOLOGICKÁ A SOCIÁLNA CHARAKTERISTIKA 13–15ROČNÝCH RÓMSKYCH A NERÓMSKYCH CHLAPCOV

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Abstract

The aim of this work was to detect the somatotype of gypsy and not gypsy scholars at the primary school in Tornaľa; to advert on the possible differences in the body composition between gypsy and not gypsy scholars; get information about the adolescent age of gypsy and not gypsy pupils and to compare the somatotype of gypsy and not gypsy scholars. We also observed the life style of gypsy pupils right in their families and this way we tried to obtain information about the social influences on the families of the observed scholars.

The source was created by 13-15-year-old boys from the town of Tornaľa. Arrangement of these boys to age groups was defined on the base of decimal age classification (Lourie, Weiner, 1969).

Totally 240 partakers were assigned in this research, in each age category there were 80 people. Six groups were created (in each group 40 partakers): 3 groups of gypsy boys and 3 groups of not gypsy ones parallel.

In each group the somatotype according to the methodology of Heath and Carter (1975) was detected.

The results of this research show that between the observed gypsy and not gypsy scholars there are some differences in somatotypology, in some cases statistically meaningful ones. Unequal, in most cases non-comparable social background confirms this situation where the observed scholars grow up. According to our results social background influences the physical development of adolescent scholars in a very intensive way.

Key words: *somatotypology, gypsy boys, not gypsy boys, social background.*

STRAVOVACIE NÁVYKY 12–15ROČNÝCH CHLAPCOV

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Abstract

In our article we concentrated information about feeding habits of boys in the age of 12 to 15 years. We used questionnaire method. Boys were in the phase of puberty which is full

of significant changes whether physical or psychical. Our group was made of 300 boys from elementary schools in Nitra.

Feeding habits of respondents are different. We can assert that they have some positives and some negatives. We were nicely surprised that they eat often fruits, milk and milk products. The consummation of hamburgers and hot-dogs was not usual what is very positive. We could stay a while by the consummation of raw vegetables, which was indeed consummated more times in the week by approximately 25 % of respondents, but as many as 40 % of respondents eat raw vegetables rarely. We negatively evaluate the often consummation of sweets, cakes and white bread. The respondents eat the most poultry from all the meat sorts. The consummation of fishes is at approximately 50 % of respondents rare, what we insert also into negatives.

Key words: *feeding habits, puberty, boys.*

Tento príspevok vznikol s prispáním grantovej agentúry KEGA 3/3042/05.

REDUCING WATER ANXIETY OF CHILDREN LEARNING HOW TO SWIM BY MEANS OF VISUALIZATION

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Abstract

In this article we will illustrate the results of research pertaining to reducing water anxiety of children learning how to swim by means of visualization. The research involved introducing the rudiments of swimming in a run of 20 lessons (one lesson weekly). Lesson 2 to 5 inclusive comprised exercises acquainting with water. They aimed mostly at overcoming fear related to the new environment. During the fifth lesson an aptitude test according to an observation sheet formula was administered. Two equal-numerous research groups (47 pupils) were subject to the experiment: the visualizing group (employing visualization training) and the non-visualizing group. In the former, visualization of particular elements was combined with a standard method of teaching. The results were as follows: Firstly, it turned out that visualization substantially reduced water anxiety, which was reflected in a quicker and more effective realisation of 2b and 3b trials, which is accounted for in „observation sheet“ data (Table 1). Secondly – visualization not only influenced the reduction of water anxiety but it was also even more effective the more stress-related elements it concerned (Fig. 1 and Fig. 2): face-water contact – face submersion with exhalation exceeding 3 seconds and displacement exercises – individual lying on the back.

Key words: *anxiety, the level of anxiety reduction, acquainting with anxiety, visualization.*

THE RULING ELITE OF POZNAŃ IN THE LIGHT OF A SURVEY

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Abstract

The aim of the work is the presentation of social-demographic characteristics of people from Wielkopolska government elite. In the material analyze were taken into consideration the environmental background, which was described by: the level living place urbanization degree, age, social status, education, type and character of performed work, number of children in the family and ways of spending leisure time. From authorized research comes out that the most interesting seems from the point of using the social elites to promote basic pro-health norms is their lifestyle. People from elites spend their leisure time in a much more active way from the rest of the society. They work in the garden, read books, listen to music, visit theaters, and classical music performances, study foreign languages. They take care about their physical condition, practice sports and recreation. The elites having the opinion creating force, may have positive influence on general social understanding of needs in the range of preferring active life style, and their attitude towards physical activity may be a pattern to follow or negate.

Key words: elite, physical activity.

TUÁLNÍ ČISTOTA V SEXUALITĚ

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Abstract

In their report, the authors deal with sexuality and its ritual aspect from the view of different cultures. They emphasize anthropological point of view that starts from traditions of particular cultures. They try to record variety, diversity in particular societies and emphasize significance of ritual purity in sexuality.

Key words: sexuality, rituals, culture, ritual purity.

VLIV POHYBOVÉ AKTIVITY NA TĚLESNÉ SLOŽENÍ DÍVEK PUBESCENTNÍHO VĚKU

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Abstract

The research study is focused on monitoring somatic parameters in adolescent girls, in order to examine their morphological development. The aim of the study was to investigate,

evaluate and compare the current somatic state of girls with specifically focused, regular and controlled physical activity, and girls without such an activity and to compare the somatometric parameters of monitored groups with the Czech population standards (Bláha et al., 1986). The subjects of the experiment were young girl volleyball players (n = 53) and girls that did not participate intensively in any sport (n = 63). They were 12 years old. The body constitution was provided according to Matiegka (in Riegerová, Přidalová, Ulbrichová, 2006).

The development of the girls was in agreement with ontogenetic patterns of adolescents; there were no significant differences from the population standard in assessed somatic attributes in both groups. The analysis of body composition showed that girls in both groups had low accentuation of muscle fraction and higher representation of fat fraction in comparison to the normative. The positive impact of physical activity on a young organism was evident in the comparison of the two groups. Young volleyball players had more fat free mass (especially muscles) and less fat than girls „non-athletes“. The results showed that specifically focused regular and controlled physical activity had a positive effect on the body constitution.

Key words: body composition, girls, older school age, volleyball.

KVALITA HYBNÝCH FUNKCÍ SVALOVÉHO SYSTÉMU DÍVEK STARŠÍHO ŠKOLNÍHO VĚKU

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Abstract

Main point of this presented study is the assesment of muscular functions and movement stereotypes. The subject of the experiment were young girls (n = 63) of elementary schools in Olomouc. Muscular functions were evaluated by a modification of Janda (1996) and Lewit (1990).

The evaluation of the muscle system showed a dominant role of bilateral shortening of the rectus femoris and shortening of the erector spinae. In group prevailed bilateral substitution mechanisms. The most problematic movement segment was the hip joint area, where we diagnosed greatest muscular dysbalance.

Key words: muscular dysbalance, movement stereotypes, girls, elementary school.

RELIABILITA MĚŘENÍ LEBEK A JEJICH DIGITÁLNÍCH FOTOGRAFIÍ: SROVNÁVACÍ METODOLOGICKÁ STUDIE

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Abstract

The main goal of this study was to compare the reliability of measurement of real skulls and their digital photographs crea-

ted in standard conditions. The study was conceived as a preliminary methodological part of a project of a metric analysis of a special documentary material of Upper Palaeolithic skulls that was irreversibly destroyed during the 2nd World War.

As a research material we used Pachner's collection of identified adult skulls from 30s of 20th century. We compared 25 dimensions on 80 skulls and their photographs in frontal and lateral projections. The digital measurement of photographs was performed by means of softwares SigmaScan and Craniometrics and it was statistical evaluated by means of softwares MS Excel and Statistika 6.0.

The real measurement was found very accurate. Intraobserver and interobserver errors were found also very small. In the measurement of digital photographs there was found a high reliability ($R \geq 0,9$) for example in these dimensions: n-b, g-op, ek-ek, apt-apt, zy-zy. Some digital measurements of photographs (for example mf-ek) were influenced by distortion of pictures (e.g. Frieß, 2003). The majority of dimensions was found larger in the photographs as compared with the real measurement (e.g. Quimby et al., 2004).

Key words: *craniometry, reliability of measurement, digital photographs.*

PHYSICAL ACTIVITY AND MOTOR FITNESS OF SECONDARY SCHOOL STUDENTS

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Abstract

The aim of the research was to estimate the level of motor fitness of secondary school students at different levels of physical activity and participating in extra after-class and after-school PE classes. In the course of the research 468 students attending one of the secondary school in Kielce were examined. Motor fitness was evaluated on the basis of selected exercises included in the International Physical Fitness Test concerning speed, stamina, agility and strength, while the method of a questionnaire was used to find out the level of their physical activity. The best average results in the given motor fitness exercises were achieved by the students who did exercise four times a week or more and attended some extra activity classes, while the weakest results were observed among the students doing exercise only once a week or less often and attending only compulsory PE classes at school. Generally, students characterised by the increased movement activity were also characterised by better general fitness level.

Key words: *fitness, physical activity, speed ability, strength.*

THE CHANGE IN AGGRESSIVE BEHAVIORS OF PRISONERS RESULTING FROM THE INFLUENCE OF A SOCIAL EXPERIMENT

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Abstract

We had it in mind to examine whether physical activity in the form of team game is instrumental in lowering prisoners' aggressiveness. It transpired that the experiment with football tournament held in prison has brought to light the following transformations in terms of the syndrome of aggressiveness:

- 1) prisoners taking up sports activity manifest a significantly lower level of aggression intensification in its various forms,
- 2) under the influence of long-lasting stimulus in the shape of football tournament a reduction of aggressive behaviors has taken place in relation to prisoners themselves, fellow-prisoners and the personnel of the institute,
- 3) prisoners taking part in the tournament changed their attitudes with respect to fellow-prisoner interaction, regardless of their subculture affiliation.

Key words: *aggressiveness, resocialization, physical activity, Inventory of Psychological Aggression Syndrome.*

VLIV PRAXE V MĚŘENÍ TLOUŠŤKY KOŽNÍCH ŘAS NA STANOVENÍ SOMATOTYPU

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Abstract

The paper deals with the influence of further experience related to measuring skin folds and setting the somatotypes. The aim of the research is verify the less experienced participants' objectivity and validity within measuring of 4 skin folds (subscapular, suprailiacal, above a triceps, on a calf) with the help of caliper (type Best) as well as to examine the influence of possible deviations concerning the value setting of endomorphic and mezomorphic somatotypes.

The research involved 25 students (7 males and 18 females) of Pedagogy who can be regarded as ordinary university population. The less experienced participants were randomly chosen students of a special seminar dealing with measuring technique of skin folds. The teacher of the seminar represented the expert of the project. The expert measured all anthropometric parameters important for identifying the particular somatotypes of the group. The methodology stated by Riegeřová, Přidalová, Ulbrichová (2006) was applied to identify the somatotype as well as measure the skin folds.

The results of our research have proven that the measuring of 'suprailiacal' skin fold is considered to be at least variable. However, measuring of the skin fold on a calf appeared as the most problematic as the caliper results have been enormously different. The absolute values of measured skin folds cannot be regarded identical by both the professional and less experi-

enced participants. In the resultant value regarding the endomorphic component is the stated influence clearly demonstrated (differences in the result are objectively important). However the values related to the mezomorphic somatotype are of no factual importance.

Key words: *somatotype, endomorphy, mezomorphy, measuring of skin folds, objectivity (validity) of measuring.*

INTERPOPULATIONAL COMPARISON OF THE HUMAN CRANIOFACIAL COMPLEX: A MULTIVARIATE APPROACH

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Introduction

Many large-scale researches conducted in biological sciences focus on the morphology of the human craniofacial complex. This stems mainly from the fact that such studies explore problems of anthropological and medical nature. Our current knowledge on the craniofacial complex is greatly enriched by the studies of the growth and development and also the final formation of this part of the cranium, taking place in the course of human ontogenesis.

An understanding of the mechanisms which contribute to a normal craniofacial development is of importance for diagnosis and treatment of morphological and functional disturbances in the masticatory system and adjoining regions. A factor which may be of relevance in this connection is the relationship between craniofacial complex morphology and the human neurocranium and basicranium (Cameron, 1927; Björk, 1955; Björk, Palling, 1955; Ricketts, 1961; Moss, Salentije, 1971; Farkas, Munro, 1987; Enlow, 1975, 2004).

Cephalometry led to many fundamental insights into the behaviour of the face and the neurocranium during growth. Understanding of the basics of cephalometry remains very important for academic researchers as well as clinicians, and is essential to diagnosis, treatment planning, treatment selection and treatment effects.

Apart from contribution to general knowledge of craniofacial growth serial cephalometric studies provide statistical data which may be used as controls of statistical comparisons against populations or to establish craniofacial norms and treatment objectives. Comparisons of the differences concerning face morphology between various contemporary living populations are of particular significance for this research.

The general concept of this work is to assess the intensity of differences in the craniofacial complex of human living populations differing with regard to geographical localisation. The specific objectives of the study include:

- assessment of the nature of spatial differentiation of the human groups under study
- interpopulational comparison of the anthropometric features characteristics describing particular parts of the craniofacial complex

POHYBOVÁ AKTIVITA 5–8LETÝCH DĚTÍ V KONTEXTU ENVIRONMENTÁLNÍ STIMULACE

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Abstract

Conversion of the child from pre-school to primary school is one of the important ontogenetic milestones. Correlation between children's inactivity is significantly related to children's obesitas. Experts search for ways to resolve problems connected with this topic. Main goal of the work is interception and description of the changes in the size of physical activity and environmental stimulation after entrance to primary school and trace of problem section of the week (in respect of behavior of motion).

Key words: *physical activity, environmental stimuli, pre-school children, primary school children.*

PODOBA KARLA HYNKA MÁCHY

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STĚSNÁNÍ ZUBŮ V DOLNÍ ČELISTI Z PREHISTORICKÉ LOKALITY ROONKA V JIŽNÍ AUSTRÁLII

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SEVERSKÁ CHŮZE VE VÝBĚRU POHYBOVÝCH AKTIVIT PRO SENIORY

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Abstract

Homo sapiens sapiens is only primate walking upright due to habitual bipedis. From the beginning of his days he was very mobile, the proof of which is his spreading on all the continents which is connected with his hunting and picking way of life. The ability to walk upright was one of the key moments of evolution as it freed the upper limbs and opened the way to the development of intelligence. Walking remained the main means for reaching far away destinations for most of the mankind's history until the „transport pandemy“ of 20th century that changed everything.

Key words: *nordic walking, health, senior.*

Realizováno v rámci grantového projektu 406/05/0034

SLOŽENÍ TĚLA A VÝPOČET REGRESNÍCH ROVNIC PRO ODHAD TUKOVÉ FRAKCE U ŽEN VE VĚKU ČASNÉHO STÁŘÍ (SENESCENCE)

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Abstract

Within the framework of the grant project GAČR 2005–2007, we performed analysis of body composition via the bioimpedance method (Quadscan 4000) in a group of 63 senior females with the average age of 62.95 years. The women had, on average, a moderate degree of excess weight, and the average WHR index values are on the borderline of risk. The body height, weight, waist girth and gluteal girth were used for calculating the regressive formulas from the anthropometric data, and the impedance of 50 kHz from the bioimpedance measurements. The difference of the error of fat percentage estimation calculated on the basis of our regressive formulas, in relation to the calculated fat percentage according to the QuadScan formula varied in the interval ± 0.04 to 6.33 %; the difference between 1.0 and zero prevailed. This fact determines the very low average error (1.07 %). The regressive QuadScan formula for estimating the fat share of the senior females showed itself as convenient.

Key words: senior women, body composition, regressive formulas.

Realized within the framework of the grant project 406/05/0034.

VLIV ČÍNSKÉHO TERAPEUTICKÉHO CVIČENÍ NA SVALOVÉ FUNKCE A DRŽENÍ TĚLA SENIOREK

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Abstract

In year 2006, in the framework of a grant project GAČR 2005–2007, there was the 2nd stage of a targeted intervention programme accomplished. Chinese therapeutic exercise Chuej čchun kung was applied for a period of 6 months. The body height and weight of senior females ($n = 23$) were not different from the norm of the Czech population, BMI and typological analysis corresponded to a more robust constitution and mild degree overweight. Also the average values of body content correspond with typology, as this content was determined based on the anthropometric measurement using the Matiegky method – 15.64 % portion of skeleton, 37.55 % portion of muscle tissue, 28.11 % of fat and 18.70 % of residual component. After six-month exercise occurred changes in the condition of the muscular system in terms of positive and negative effects. Significant improvement of postural muscles (improvement of

shortening) was found in case of m. iliopsoas, m. rectus femoris, m. pectoralis major and m. quadratus lumborum. Significant worsening (increased frequency of shortening) occurred in m. trapezius, in the adductors of the hip joint and in case of flexibility of the right girdle joint of the upper limb. Also the analysis of motion stereotypes has shown a statistically significant positive shift to perform abduction of the lower limb and to a performance of a forward bend of the body. Adjustment of the extension performance in the hip joint was in the limit of statistical significance. Evaluation of posture using DTP2 device has shown an improvement of pelvic symmetry and shift of the thoracic kyphosis towards an ideal vertical plane. Shape of the spine remained the same with mild increase in the depth of the lordosis. Senior females evaluated very positively the improvement of posture stability.

Key words: senior females, muscle function, body posture, Chuej čchun kung exercise.

Realizováno v rámci grantového projektu 406/05/0034.

THE LEVEL OF MOTOR FITNESS OF FEMALE CANDIDATES TO MILITARY SCHOOLS IN THE LIGHT OF THEIR SOCIAL BACKGROUND

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Abstract

One of the most positive contemporary social phenomena with regard to the army is the fact that young people are becoming more and more interested in professional military service and, accordingly, the popularity of military schools is constantly growing. It must be pointed out, however, that the admission criteria for professional military service are stricter than they used to be, which allows to select the best candidates, both in terms of intelligence and physical fitness.

Despite the fact that recruiting women for professional soldiers is a fairly new phenomenon, it does raise the issue of the motor fitness they should display in order to meet the requirements of everyday service. Therefore, the aim of this research is to assess the motor fitness of female candidates for professional military service in different army branches. Our main focus will be on the relation between candidates' performance at their entry PE exam and their social background.

BEHAVIORÁLNÍ EKOLOGIE SIGNÁLŮ OBLIČEJE: ANALÝZA NÁKLADŮ, ENERGETICKÁ NÁROČNOST SIGNÁLŮ A EKONOMIKA SOCIÁLNÍ INTERAKCE

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Abstract

Present paper concerns with cost analysis of human and chimpanzee facial expressions. Expressions are discussed within each of four basic behavioral systems: system of threats and defenses, system of play behavior and social cohesion, alarm system and system of expressions of negative affective states. Energy costs are evaluated according to the range of structural facial changes, signal duration, duration of communication sequence and presence / strength of vocalization. General concepts of signal behavioral ecology are applied to chosen facial expressions. In the discussion we review some critical remarks and provide possible future research emphasis.

Key words: *facial expressions, cost analysis, social interaction.*

SLEDOVÁNÍ POHYBOVÉHO SYSTÉMU U KLIENTŮ STŘEDNÍHO A SENIORSKÉHO VĚKU

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Abstrakt

This paper presents results of long term study. During the first two years muscle disbalances were examined by 89 men and 145 women at the age 31–90 years. The persons examined were divided into four age categories Maturus I (31–45 years), Maturus II (46–60 years), Presenilis (61–75 years) and Senilis (76–90). The graph clearly shows an increase of muscle shortening and weakening in the older age categories by both sexes. Statistical confirmation of this trend will be carried out after examining additional persons.

Key words: *muscle shortness, muscle weakness, middle age, seniors.*

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SELECTION FOR MILITARY SERVICE PROFESSION IN POLAND – MORPHOLOGICAL AND FUNCTIONAL CRITERIA

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Abstract

In Poland in recent years we observe greater interest among young men in military service than in previous one. There are many factors in the background of this fact, among these probably the situation on Polish labour market. With the present option of quantity reduction and creation of professional army, it creates the situation for better selection of candidates, concerning the criterium of physical efficiency as well as morphological and functional characteristics. The process of solid recruitment allows to select from candidates the ones who fulfill in the greatest level the needs of modern army specialization. The aim of work was grouping, concerning experimentally stated morphological criteria of young candidates and facing performed division with existing one into military formations which they represent. Such point of view allowed to verify the morphological and functional criterium as the element of selection for military specialization. Under research were 9 anthropometric and 5 functional characteristics, measured upon 600 men at the age of 20 years, who were on one year military training in 6 types of military service : mechanized, armour, logistic, recon, engineers and antibiological. For the workout of the material was used the method of concentration analysis, which allows grouping objects and diversified characteristics based on Euclidean ranges describing the range between researched objects.

Key words: *selection for military service, body building, physical efficiency*

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