

ENVIRONMENTAL ISSUES

HEALTH BENEFITS FROM RADON REMEDIATION PROGRAMME IN SLOVENIAN SCHOOLS (221)

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INTRODUCTION: Radon (²²²Rn) is a natural radioactive gas without odour, colour and taste occurring in the uranium decay chain. It is a known human carcinogen (classified by IARC as a Group 1 A) with a genotoxic action. When it was identified as a ubiquitous indoor air pollutant, it raised a widespread alarm for public health. The risk of lung cancer increases with increasing indoor concentration.

The data from 13 European case-control studies of residential radon and lung cancer show that residential radon, particularly for smokers and recent ex-smokers, is responsible for about 2 % of all deaths from lung cancer in Europe.

MATERIALS AND METHODS: Radon concentration in the air of 890 Slovenian schools was measured with alpha scintillation cells in the Slovene Radon Project in period 1990–1994. Subsequently, in 1997–2002 and in 2004, additional monitoring was performed in 78 schools with values exceeding 400 Bq m⁻³. At these schools also effective doses for the school personnel and children were estimated.

RESULTS: Radon concentration in Slovenian schools – mean values:

Slovenia (912 schools): 193 Bq m⁻³

East Slovenia (422 schools): 148 Bq m⁻³

West Slovenia (366 schools): 241 Bq m⁻³

Ljubljana (124 schools): 200 Bq m⁻³

Minimum radon concentration value: 10 Bq m⁻³ and maximum 5300 Bq m⁻³.

Maximal calculated annual effective dose (according to ICRP 65 methodology) for school personnel was 8.2 mSv and for children 6.8 mSv.

CONCLUSION: In this study, annual effective doses before and as a consequence of radon remediation, as obtained from the above mentioned survey, have been used and ERR (excessive relative Risk) for lung cancer will be calculated and reported.

Schools should be healthy places for schoolchildren and personnel.

Key word: health benefites, radon

CHEMICAL SAFETY KNOWLEDGE ASSESSMENT IN THE SCHOOLS OF BUDAPEST (92)

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Teaching chemical safety in younger ages was an innovative thought. Hungary was one of the firsts who accomplished to regulate the legal system of teaching chemical safety at schools (Chemical Safety Act made in 2000). The Act's 27th's section: education of the knowledge connected to hazardous substances and products should be constructed into the so-called National Basic Curriculum.

According to the previously mentioned Act, our (Chemical Safety Department's) aim was to supervise the process of carrying out the work of educational preventive chemical safety. We started to realize this project even in 2001.

To execute the plan we defined our aims, worked out a strategy how to complete the tests, how to check them and we created a schedule. We decided, that our survey spreads out for the whole capital city and, that questions would concentrate exclusively on the material which can be found in the course books. Examining's fundamental pedagogical requirement is, only that can be questioned, what is in the textbook.

We administrated, and stored the questionnaires in an appropriate, confidential way for VIIth and VIIIth classes. We made the keys for both tests, with a view to have an unified correction.

On the 15th of May in 2003 we checked 1758 student's chemical safety knowledge in an anonymous knowledge assessment.

The result of the survey called attention to the fact, that it is very important to continue cooperate with the educators. In order to improve the results we carried out a plan of action. We had held presentations at schools and scientific forums about the outcomes.

On the 11th of May in 2004 2145 student's knowledge was checked again. From 23 district 1-1 school and in 4 schools we made a so called „controll”survey. Our „PR”work between the two surveys had a quite significant result. The children's average learning at the primary school in both generations was higher with the second time, than at first. We experienced the same in the „controll” groups.

On the 12th of May in 2005 we are again going to make a chemical safety assessment again.

Our presentation will be about mentioned results.

Key words: chemical safety

HEALTH RISK ASSESSMENT OF COMMUNITY NOISE AT SCHOOLCHILDREN IN THE URBAN CENTER SKOPJE (23)

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INTRODUCTION: Community noise has been recognized as stress factor from the environment and it can cause cognitive-behavioural disorders in exposed population, especially children. Aim of the study is chronic noise exposure assessment of school children, who study and live in urban centre and health risk assessment of community noise in school children.

SUBJECTS: Study group is consisted of 266 school children from primary schools in urban centre and control group is consisted of 263 pupils, from schools in suburban area, middle age of 10 years.

METHODS: Noise measurement in residential area of urban centre Skopje, determining outdoor noise level for noise exposure assessment. We have used psychological tests (Anxiety test-GAS Sarason, questionnaire for attention deficit disorders according to Lynda Thompson) for identifying cognitive-behavioural disorders in exposed schoolchildren. Statistical analysis of data was performed with descriptive statistic, Mann-Whitney U Test, χ^2 test, Spearman Rank Order correlations.

RESULTS: Noise levels in urban centre were above the WHO guidelines and schoolchildren were exposed on elevated noise level in schools and in residential area. Psychological tests have shown decreased social adaptability (RR=1.39) and opposing behaviour (RR=1, 46) in exposed schoolchildren on elevated noise level. We have not found association between noise exposure and anxiety, decreased attention and hyperactivity in children exposed on increased noise level.

CONCLUSIONS: Schoolchildren who live and study in urban centre Skopje are exposed on elevated noise level. Chronic noise exposure is associated with behaviour disorders at exposed school children, decreased social adaptability and increased opposing behaviour in a dose-response function.

Key words: community noise, school children, risk assessment, psychological tests, behaviour disorders

YOUNG PEOPLE'S KNOWLEDGE AND ATTITUDE TOWARDS SMOKING (188)

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INTRODUCTION: The Global Youth Tobacco Survey (GYTS) aims to monitor tobacco use among young people and to enhance the capacity of countries to plan, implement and evaluate tobacco control and prevention programmes. The GYTS was carried out in Hungary in 2003. It provides data on prevalence of tobacco use among young people as well as several determinants of tobacco use. This presentation will describe Hungarian young people's tobacco-related knowledge and attitude in relation with gender, age, smoking behaviour, parental, teacher and student smoking as well as passive smoking at home and school.

SUBJECTS: The sample was nationally and regionally representative and included 4484 students aged 13-16 years.

METHODS: The GYTS is a school-based survey and it uses anonymous questionnaires for data collection. A two-stage cluster sample design was used to produce representative data. Statistical analysis included descriptive statistics, correlations, one- two- and three-way ANOVAs and PCA.

RESULTS: Significant but moderate negative correlation was found between knowledge and attitudes. Both of these smoking determinants were influenced by gender and age. Significant relationships were also found with smoking behaviour and the level of exposure to environmental smoking both at home and school.

DISCUSSION: Knowledge and attitudes have role in initiation of tobacco use and smoking behaviour among young people. Furthermore a smoking environment may have significant unfavourable influence on not only students' health but their attitudes and knowledge too.

CONCLUSION: Tobacco prevention and cessation programmes should not ignore the importance of attitude towards smoking. They also should be aware of the influence of environmental adult and peer smoking behavioural pattern on students' attitude.

Key words: young people, smoking, attitude, knowledge, parental smoking, smoking at school

UNIVERSITY AS A HARMFUL AND PROTECTIVE FACTOR OF STUDENTS' LIFE (14)

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University as an organization is a special field of the connection between the future professionals, and it has an outstanding role in learning different coping strategies. University sets the frames of mental health in coping with several stress situations.

University events are formed under tensions between centripetal and centrifugal forces. Centripetal forces are interpreted as protective factors of the students' mental health and centrifugal forces are interpreted as harmful factors. There are different institutional rules and filters for students to handle these forces and create appropriate coping strategies.

The presentation explains the results of an empirical research with qualitative methods among law students. The content analysis concerning students' perceptions on university is presented with interlinked themes: students' images of social support, the importance of profession, the complexities of patterns and the different contexts of coping strategies.

The conclusion is that several constructive strategies tend to be helpful and protective the majority of students. Even the best and most constructive strategies are not usually helpful, and strategies that are usually harmful are helpful some situations. Also, what is protective and harmful depends, at least partially, on the nature of the self-related stressful situation. These finding set the stage for additional research to help us better understand the joint effects of the organizational and individual conditions under which these strategies tend to be protective and harmful among students. University as an organization can give the students skills transmitted by higher education, which become devices and chance for handling of their mental health.

Key words: higher education, coping strategies, content analysis

EXPERIENCES FROM SIX YEARS OF SCREENING FOR VOICE DISORDERS AMONG TEACHER STUDENTS (28)

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The results of several studies show that occupational voice disorders are common among those who work in vocally demanding occupations. There are some epidemiological studies concerning voice disorders and vocal symptoms in students studying for such occupations and the results show that voice problems are common among them also. One of our earlier studies focused on students studying in order to become teachers and the results revealed that about 20% had an organic voice disorder. Such results prompted us to develop of a voice screening test that could be administered by nurses at the Student Health Center in Turku, Finland.

The screening test consists of a questionnaire concerning vocal symptoms and a perceptual assessment of voice quality performed by nurses who have received training in using the test. The students who report two or more vocal symptoms occurring weekly or more frequently and/or have deviant voice quality have been referred to a medical examination performed by a phoniatician.

The voice screening has now been carried out since 1999 and a total of 455 students have participated in the test. The results from six years of screening show that the most common symptoms reported by the students are throat clearing or coughing, the voice becomes strained or tires, and sensation of pain or lump in the throat. About 9% of the students who have participated in the test have a functional voice disorder. Additionally, about 9% have chronic laryngitis and 2% have vocal nodules or minor findings on their vocal folds.

The experiences from six years of voice screening suggest that first-year students have less severe voice disorders than those who have studied for several years. Students who have voice disorders should preferably be offered voice therapy at an early stage and these students have received voice therapy and/or medical care for their voice disorder. Based on our experience, we recommend that regular voice screening tests should be offered to students who study for vocally demanding occupations in order to prevent more serious voice disorders.

Key words: voice disorders, screening, prevention

THE TEACHER'S BURNOUT AS A STRESSOR POSSIBILITY FOR SCHOOLCHILDREN (213)

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INTRODUCTION: By the WHO European Bureau organised Health Promoting School Movement estimated:

The school, including the environment and the staff, have to be not hazardous for schoolchildren. The good mental state of the teachers is fundamental in the avoidance schoolchildren from high level stresses.

METHODS: In 1986 and 2004 we pleased 400-400 teachers in different schools in Hungary to fill out a „lifestyle questionnaire” – At the evaluation the data of the questionnaire we could estimate the teacher's health behaviour and on the base of the data we could try to recognise, how our teachers can work as a hazardous stressors in schools.

RESULTS: The gender distribution of the responders was in both year 87 % female and 13 % male

Facts 1986., 2004., Evaluation

Non smokers 65 % ,54 %, negative

Social drinkers 47 % ,57 %, negative

Abstinent 16 % ,10 %, negative

More espresso cafe in a day 38 % ,51 %, negative

Regular tranquillisers 30 % ,14 %, positive

Known high blood pressure 25 % ,24 %, -

Cured blood pressure 12 % ,6 %, negative

Overweight 33 % ,32 %, -

Daily physical activity 17 % ,30 %, positive

Tired frequently 7 % ,18 %, negative

Full with energy in the morning 21 % ,20 %, -

Enjoy their job 20 % ,14 %, negative

She/He is happy 19 % ,24 %, positive

Successful 13 % ,6 %, negative

Isolated in society 38 % ,4 %, positive

Failed life 10 % ,14 %, negative

CONCLUSION: There are more negative changes in 2004 than positive ones. Our teachers looks like frustrated, near to burnout and these like teachers could be and will be stressors for schoolchildren. The regular mental support for teachers is necessary if we want prevent the frustrated teachers produce frustrate schoolchildren in our country.

Key words: Promoting School Movement, lifestyle questionnaire

**DISABILITY TO STUDY AND THE NEED-SPECIFIC MENTAL HEALTH
TREATMENT; A FOLLOW-UP STUDY IN FINNISH STUDENT HEALTH SERVICE
(214)**

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The ability to study is a process that needs specific mental resources e.g. good enough capacity to concentrate and to use one's cognitive skills creatively. The more the mental problems bind these resources the worse is often the ability to study. The difficulties in solving age-specific developmental tasks may also obstruct the ability to study effectively.

Psychotherapy – with or without medication - is the most important means of treating and rehabilitating those student patients whose working capacity is impaired.

To have a better knowledge of the number of those university students whose capacity to study is impaired, and who need psychotherapy and other forms of rehabilitation, our team in Turku Student Mental Health Centre made a psychodynamic evaluation of 99 consecutive new patients. During this evaluation process we found that ca 50 % of these students had distinct problems in their ability to study. We made a special rehabilitation program for all of them and tried to find a suitable need-specific psychotherapeutic treatment to them.

After the follow-up period of one year we see how the need-specific treatment plans have fulfilled and if there is any improvement in the ability to study. The follow-up study will be finished by the end of June and the results are presented in the congress.

Key words: special rehabilitation program, age-specific developmental tasks

URGENT PROBLEMS OF HYGIENE OF CHILDREN'S EDUCATION AND TRAINING IN RUSSIA: STATE AND WAYS OF DECISION (215)

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At present stage of the development of society and modernisation of Russian education the hygienic problems of education and training take on a special actuality. It is stipulated by negative trends in health state of children and adolescents and by increase of the prevalence of harmful habits. The complex of unfavourable school factors during the education leads to increase of diseases of musculoskeletal system and visual organs. The rising educational loads, internet-technology, lowering the age of school admittance bring to stress states, sleep deficiency. It is also accompanied by increase of neuropsychopathy disorders and functional deviations of cardiovascular system. The deficiency of motor activity owing to the overload of school curriculums, the negative attitude to physical training, the absence of reliable sport clubs and sections promote the deterioration of functional state of the organism, physical state and health of children and adolescents.

The level of poor health of today's schoolchildren dictates the priority of health-protecting approaches in organisation of the educational process.

The most important condition of health promoting of children and adolescents is rational nutrition. However there are often revealed significant disorders in the structure of nutrition and in children's food status. The infrastructure and the material and the technical basis of school catering are weak.

One of the actual tasks of modern school education is forming the adequate attitude of child to his health. It must be the leading necessity for life.

It is actual the development of this scientific trend as a guarantee of safety of children's goods which is based on an integral evaluation of the influence of the complex factors allowing to estimate children's goods differentially.

Scientific-methodical bases of the plan of actions in the environment and children's health in Russia have been worked out.

The important direction of work in children's improving from health point of view is development of the health promoting schools network.

Key words: harmful habits, hygiene, education, health promotion

INFLUENCE OF THE WAR EVENTS ON BODY WEIGHT AND HEIGHT IN CHILDREN ENROLLING THE FIRST GRADE OF ELEMENTARY SCHOOL (8)

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Physical growth is usually estimated by body weight and height measurements. Both parameters are strongly influenced by genetic and environmental factors.

The study investigated the effect of war related psychological stress and socioeconomic deterioration on growth of children born and grew during the war-years. We compared body weight and height in 2 groups of preschool children at time of admission to the first grade of elementary school. In the first group of children school entry medical examination was performed in spring 1990 and 1991 (pre-war group), while the second group of children had school entry medical examination in spring 1998, 1999 and 2000 (war-group).

The mean body weight of children in pre-war group (n=200; 98 girls) was 24.52±4.16 kg, height 122.50±4.71 cm, and the average age was 6.67±0.33 years. The war-group (n=214; 100 girls) were of the same mean age (6.67±0.34 years), but they were lighter for 500 g and lower for 5 mm in average. However, the differences in body weight and height were not statistically significant (weight=1.21, p>0.05; height=1.13, p>0.05). The two groups matched in gender (chi-square test=0.13, p>0.05). More educated parent of every child in pre-war group was employed, while 4 more educated parents (1.87%) in war-group were unemployed, but the difference was not statistically significant (chi-square test=2.07, p>0.05).

We conclude that growth of preschool children was affected by stressful war events and war related socioeconomic situation, but statistical non significance. Therefore, one could expect that these influences would be maybe statistically significant if we could examine the effect of the secular growth trend.

Key words: war events, preschool children, body weight, body height

INFLUENCE OF WAR AND POST-WAR EVENTS ON HIGHSCHOOL STUDENTS' RISKY BEHAVIOURS (10)

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Risky behaviours of young people are related to their individual features as well as to the influence of parents, dominant friends and social circumstances.

This paper presents results of a survey on high school students' risky behaviours (smoking, alcohol and drug abuse, sexual activity) in respect with war events (loss of one or both parents, or of another close relative, moving) and post-war events (loss of job of one or both parents). Five years after war was ended, 1009 students of the last class of 5 gymnasiums and 4 trade schools were examined (girls 42.22%, boys 57.78%), aging from 15 to 19 years (17.50 ± 0.70 years).

The students who moved because of war events took alcohol more frequently than those who did not change the place of living (chi-square=5.34, $p < 0.01$). Those students who experienced a loss of a parent, or of both parents, or of another close relative for the war reasons, were not found to be have more risky in respect with smoking (chi-square=0,004, $p > 0,05$), alcohol (chi-square=0,04, $p > 0,05$) and drug abuse (chi-square=0,03, $p > 0,05$), nor sexual activity (chi-square=0,09, $p > 0,05$). Neither the loss of job of one or both parents had an influence on the risky behaviours (chi-square smoking=1, 26, $p > 0, 05$; (chi-square alcohol abuse=0, 01, $p > 0, 05$; (chi-square drug abuse=1, 26, $p > 0, 05$; (chi-square sexual activity=2, 97, $p > 0, 05$).

The results obtained indicate only a partial influence of the war and the post-war events on the risky behaviours in high school students. The reason for such a low influence could be founded perhaps on a relatively short duration of those events, or on the special motivations provoked by them.

Key words: health-risky behaviours, smoking, alcohol drinking, drug abuse, sexual activity, high school students, war

SOCIAL SUPPORT AND ADDITIVE BEHAVIORS IN PORTUGUESE COLLEGE STUDENTS (13)

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The reorganization of identity happens during adolescence involves important aspects of development and establishment of relationships. We choose the influence of the social network support (family, friendship and school) in addicted behaviour's of adolescence, as the goal of this study.

370 students, with an average of 17, 71 years old, enrolled in the 12th year, during the 2004/2005 school year, in two secondary schools was questioned by a direct application questionnaire including: ESPAD (European school Survey on alcohol and other drugs) adapted from the original scale and the ESSS (satisfaction scale with the social support). (Ribeiro, 1999), and 262 student's answered, being (45%; n=118) masculine and (55%; n=144) feminine.

Some characterization questions where introduced: Sex, Age, Residence place, Number of years enrolled in the 12th year of education, Current lecture and respective scientific area of study in which the student is enrolled.

Descriptive statistic and also the Spearman's correlation coefficient to verify the statistic significance of the relation between variables, was used for data treatment.

As well as been confirmed that the results of addiction to alcoholic drinks have increased when compare to similar investigations ("ESPAD" 1999 and "ESPAD" 2003). The results showed a bigger addiction of spirit/white drinks and beers. Bar's and pub's are the most chosen places for this kind of behaviours.

The obtained result about the Social Support suggests that teenagers are satisfact with their social support, feeling more satisfied with friendship and family.

About the relation between satisfaction with the social support and the adoption of addicted behaviours, the results of our study point's to a closer relation that can be considered statistical significant.

According with these values, we can assume that the addiction behaviour showed by the teenagers is in some way related with the satisfaction that any subject has with their social support.

Key words: social support, additive behaviours

STORY ABOUT DALEN - INTERGRATION BLIND BOY IN SCHOOL WITH HEALTHY CHILDREN (29)

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INTRODUCTION: Dalen is 16 years old blind boy. His story started when he was 17 months old and bilateral retinoblastoma was diagnosed. He was admitted to the Un.cen.Ljubljana when treatment was enucleation of his right eye and irradiation therapy for the left. Fortunately without distant metastases. Cariotyping of peripheral blood revealed abnormality of the 13th chromosome with a possibility of new location. Two years ago he has an epy atache. This year he was operated cataract on his left eye. All further controls were done at the clinics in Ljubljana, Essen and Zagreb.

OBJECTIVE: This study was designed to show the way how we could introduce the world to blind boy and integrate him in school with healthy children.

METHODS: Dalen is very emotional and social child and he was loved and protected by family but also prepared to be independent in kindergarten. In cooperation with principal of kindergarten, teachers, educational department and his mother all children and their parents were prepared for him to join the group. The room was prepared and adaptive to his needs. He was exposed to different life situations, he was taken out to notice sounds, smells, shapes and different objects. Fine motoric movement was encouraged. He learned use to the stick. At 6th he received the Braille tables and learned the Braille letter. Every day he was in contact with the pedagogue who followed his development. In 1996. he becomes a pupil in the first grade. With the help of the school that educated his teachers, professional institutions (V.Bek,Zg.), local community of Porec Dalen gets the necessary school equipment (audio-cassette, typing machine and books). In his environment he becomes unique in his openness gifted in music and languages. His mother being a member of the Assos.of handicaps an organised humanitarian actions to help buy computer for a blind child. Cooperation with emination experts have been important at all time. Dalen wants to continue further education in his city and be with family. On the basis of proffesinal opinion it is recommended that he enrolls in High School. His goal is met.

CONCLUSION: This example proves that even in small local community with cooperation of family, school, professional institutions and local government a program of integrating a blind child can be successful. Everyone involved gave 100% to show that there is chance for such individuals to become educated and equal members of our society. The city of Porec has shown that if given the chance such can succeed.

Key words: blind child, integration, support, cooperation, successful education

STRESS FACTOR IN SCHOOL ENVIRONMENT AS A PROVOCATIVE MOMENT (69)

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Clinical presentation of 12-year old child, directed in a psychiatric ambulance because of development of oro-facial hyperkinesia is treated ineffectively by neurologist, which pro gradiate to acquired aphasia, decreased attention with hyperactivity, depressive expression and progressive development of school phobia. The situation is clinically provoked from stress event – change of school environment. Previously, the child was with normal psycho - motor development, maintained general intelligence, orderly restored speech ability and acquired school skills. Heteroanamnestically, the patient at six-month age, provoked by regular immunization had losing his conscience with generalized tonic-clonic seizures without febricity. General tonic-clonic seizures are repeated four to five times. Phenobarbital was prescribed and the patient had been treated until three years ages. Additionally, electroencephalographs directed to regular findings. Treatment with Phenobarbital was suspended and patient was without attacks. Aphasia is previously indicated with sensorial changes of hearing which prominate in verbal agnosia with normal sense of hearing and full losing of expressive verbal ability that was established orderly. Electroencephalography showed specific changed electrical activity with occasionally spike-and-wave complexes with duration of five minutes, localized in left temporal lobe with secondary bilateralisation. Sleep electroencephalography activation is common and very prominent in slow-wave sleep when the normal elements of sleep architecture disappear and spikes-wave complex may become continuous. Prescribed antiepileptic treatment reduced symptoms at acquired aphasia to dysarthric speech and speech with excessive paraphrases and verbal stereotypes. Putting to benzodiazepine has changed dramatically clinical picture with complete establishing of verbal expression and restore of the other symptoms.

Key words: Landau Kleffner, aquiered aphasia, epilepsy

BMI OF ELEMENTARY SCHOOL PUPILS IN RELATION TO THEIR SCHOOL ATTAINMENTS AND EXTRACURRICULAR ACTIVITIES (87)

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AIM: To determine if there is a difference between BMI of school pupils in relation to their extracurricular activities and school attainments.

EXAMINEES AND METHODS: Retrospective study included 286 school pupils. Medical examination data of the same pupils in fifth and eighth grade were used. Examinees were grouped according to their participation in extracurricular sport activities, other extracurricular activities (music, dancing, foreign languages etc.) and school attainments. BMI was calculated using the formula: weight (kg) divided by height squared (m²). Statistical analysis was performed using χ^2 test, Mann-Whitney test as well as Pearson and Spearman's correlation coefficient with the level of statistical significance $p < 0.05$.

RESULTS: No statistically significant correlation between BMI and extracurricular sport activities (for both sexes) was found in neither fifth nor eighth grade.

There was statistically significant correlation of BMI for both sexes in fifth and eighth grade (Pearson's correlation coefficient $r = 0.828$ $p < 0.0001$).

Correlation between attainments and BMI (for both sexes) in fifth and eighth grade was not statistically significant (fifth grade: $r = -0.088$; $p = 0.148$ eighth grade: $r = -0.087$; $p = 0.153$).

There was an inverse correlation between attainments of female pupils in fifth and eighth grade and their BMI (fifth grade: $r = -0.168$; $p = 0.044$ eighth grade: $r = -0.187$; $p = 0.025$).

There was no correlation between attainments of male pupils in fifth and eighth grade and their BMI (fifth grade: $r = 0.052$; $p = 0.561$ eighth grade: $r = 0.004$; $p = 0.963$).

No statistically significant correlation between BMI and extracurricular activities (for both sexes) was found in neither fifth nor eighth grade.

CONCLUSION: It was determined in the study of a representative sample that there was no significant correlation between BMI and extracurricular sport activities, other extracurricular activities and attainments in male pupils whereas an inverse correlation was found in female pupils. Further study needs to be carried out with a larger examinee sample and an increased number of parameters being monitored.

Key words: BMI, elementary school pupils, extracurricular activities

NOURISHMENT OF CHILDREN CHECKED UP PRIOR TO THEIR ENROLLING IN FIRST (136)

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Nourishment is an indicator of an individual's health condition, as well as a potential prognostic tool for determining a numbers of illnesses. It is necessary to understand nutrition while monitoring the growth and development of children.

The aim of this project is to estimate the nourishment of children at the time of their enrolling in first grade of primary school, and to determine differences between areas where this research was made.

The examinees were children checked up prior to their enrolling in the first grade of primary school, in academic year 2004/2005. 416 children from the North-West of Varaždin County were examined (208 girls and 208 boys), as well as 166 children from the island of Krk (75 girls and 91 boys).

It has been established by this research that 8,9 % (52) of the examined children were undernourished, whereas 13,5 % of them (89) were found to be overweight. There are significant differences between the areas where the research was made.

On the island of Krk, the number of undernourished children (14,3 %) is twice as big as compared to the other researched area (6,7 %). The difference was not so striking in case of overweight children (12,7 % vs. 15,7 %). Sex was not found to be determining in neither of the areas. Mean BMI values for boys and girls in the continental area (18,5 % for boys, 18,9 % for girls) were higher as compared with those related to children residing on the island of Krk (16,1 % for boys, 16,2 % for girls). There were significant differences in parents' education. Parents from Krk were better educated. No correlation between socio-demographic characteristics of a family and the nourishment of children was established.

The percentage of both undernourished and overweight children in the island of Krk was higher than in the continental area. Mean BMI values for boys and girls from the island of Krk were lower. Families on the island of Krk enjoyed better socio-demographic characteristics, which did not however yield better nourishment as compared to the continental area.

Key words: nourishment, anthropometry

IT'S IMPORTANT TO HAVE A POSSIBILITY FOR CHOICE (138)

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INTRODUCTION: One of the greatest problems of youth is how to spend their free time. They usually do it sitting by the computer, TV set or in barrooms. Is it their real choice or they haven't has another one?

SUBJECTS AND METHOD: We gave a questionnaire to 472 graduates of Slavonski Brod's secondary schools where they had to make a choice between 3 possible ways to spend their free time. One of them was their traditional way, but other two were connected with sports and travelling.

RESULTS: Only 28 (6,8%) of them chose the old way, 220 (46,6%) were interested to change it, and also 220 (46,6%) pupils chose a healthy way to spend a free time and discarded previous sitting habits.

DISCUSSION AND CONCLUSION: When they have a choice, young people will always choose a proper way to spend their free time. The mission of community is to make that choice possible.

Key words: the youth, free time, choice

FOOD POISONING OF STUDENTS IN PRIMARY SCHOOL MARSHAL TITO IN VILLAGE MONOSPITOVO-MUNICIPALITY STRUMICA (211)

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INTRODUCTION: Using fast food and irresponsibility of food producers contributes to appearance of food poisoning.

AIM: To show epidemic between students with food poisoning.

MATERIAL AND METHOD: Epidemiological inquiries were used. Sanitary control in fast food shops Donka and Beti was executed. The material was processed epidemiologically, microbiologically and statistically using descriptive and analytical methods.

RESULTS: In primary school Marshal Tito -Monospitovo_Strumica learn 275 students. Epidemic, which was provoked by the bacteria Salmonella Enteritidis, had two waves: the first was on 21st of March 2002, when children who ate sandwiches with salami and mayonnaise on 20th March 2002 were diseased. The sandwiches were bought in fast food Donka. The second wave was on 22nd March 2002, when children who ate sandwiches on 21st March 2002 at 09.00 o'clock and 15.00 o'clock were diseased. A total number of 40 diseased students were reported. Period of incubation was 12-14 hours. Ten from them were cured in hospital conditions, and 30 were cured in ambulance. The age group 10-14 years old had the largest number of patients (23). Twenty-three were male and seventeen were female. There were examined 23 coprocultures from which 12 were positive with Salmonella Enteritidis.

CONCLUSIONS: Food poisoning of students happened because of consuming sandwiches with added mayonnaise prepared in domestic conditions on 19 March 2002. Because of no minimum work conditions of fast food shop Donka, working prohibition was suggested. Fast food Donka was closed by sanitary health inspection.

Key words: food poisoning