

SUNDAY, SEPTEMBER 13TH 2009

95. Smoking habits and prevention in young people

P1117**Screening spirometry of lung function in students and high school children reduces smoking**

Aleksandar Kamenov¹, Svetlana Pljaskic Kamenov², Borislav Kamenov³, Snezana Cekic⁴. ¹*Immunology, Pediatric Clinic, Clinical Center Nis, Nis, Serbia, Republic of Serbia;* ²*Pulmology, Health Center Nis, Nis, Serbia, Republic of Serbia;* ³*Physiology, Medical Faculty Nis, Nis, Serbia, Republic of Serbia*

Background: Screening with spirometry may be a tool to help students and high school children with asthma to stop or reduce smoking.

Method: To evaluate the smoking students and high school children with asthma opinion about screening with spirometry and if the performed screening had had an impact on their smoking habits.

Material: 100 students (52 smokers, 48 ex-smokers) and 100 high school children (55 smokers, 45 ex-smokers) with asthma had previously been screened with spirometry and received a questionnaire with questions about their smoking habits after the spirometry and if the spirometry had caused anxiety about their health.

Results: 72% of the students answered the questionnaire (31 smokers, 41 ex-smokers) and 79% of the high school children (45 smokers, 34 ex-smokers). The mean age (mean±SD) for the students smokers was 23±3 years with 5±1 smoking years and 17±2 years with 3±1 smoking years. 7 students smokers and 9 high school children smokers had stopped smoking after the screening and another 37% of the students and 41% of the high school children had decreased their cigarette consumption. Anxiety was the most important reason for reducing the consumption. A low FEV1 in % of predicted was correlated to an increased rate of smoking cessation or reduction, whereas the FEV1/FVC ratio was not. The degree of anxiety was strongly correlated to the decrease in FEV1 predicted.

Conclusions: Screening with spirometry in smokers leads to a reduction of smoking and many students and high school children ceased or reduced smoking. Anxiety and a low FEV1 in % of predicted was correlated to changes in smoking habits.

SUNDAY, SEPTEMBER 13TH 2009

P1118**Efficacy of school prevention programs in rising tobacco awareness in adolescents**

Maria Rita Furia¹, Claudio Sorino², Emanuela Taormina³, Michele Davi³, Nicola Scichilone², Antonino Furia⁴, Vincenzo Bellia², Duane Sherrill⁵.
¹Facoltà di Scienze della Formazione, University of Palermo, Palermo, Italy;
²Dipartimento di Medicina, Pneumologia, Fisiologia e Nutrizione Umana (DIMPEFINU), University of Palermo, Palermo, Italy; ³PREDICARE ONLUS, Associazione per la Prevenzione, Diagnosi e Cura delle Afezioni Respiratorie, Palermo, Italy; ⁴Pediatria, University of Palermo, Palermo, Italy; ⁵Mel and Enid Zuckerman College of Public Health, University of Arizona, Tucson, AZ, United States of America

Background: Tobacco smoking represents a major cause of disability and an independent risk factor for mortality in many diseases. Despite this, smoking initiation rates among adolescents steadily increase. A poor knowledge about health effects of tobacco and nicotine addiction appears to be related to smoking initiation among young students.

Aims: To evaluate the efficacy of a school smoking prevention program in increasing students' knowledge of the health risk related to tobacco use and awareness of nicotine addiction.

Methods: A questionnaire regarding the awareness on health dangers of smoking and the knowledge about nicotine addiction was administered to 769 children (411 boys, 358 girls) aged 11-14 years, before and after (one year later) participating in the "PREDICARE Smoke Free School" smoking prevention programme. The questionnaire consisted of 26 items, which explored 7 domains. Changes in the proportion of positive answers allowed to explore the efficacy of the programme.

Results: The proportion of adolescents aware of smoke-related diseases increased from 84% to 93% for lung cancer ($p < 0.001$), from 42% to 78% for cardiovascular diseases ($p < 0.001$), and from 9% to 61% for cerebral diseases ($p < 0.001$).

The proportion of those who were aware that tobacco causes dependence increased from 68% to 87% ($p < 0.001$).

No significant change was observed in the amount of current smokers before and after the programme (about 4%).

Conclusions: Primary smoking prevention programmes in school are able to increase the rate of awareness on smoke-related diseases and nicotine addiction among adolescents, which is expected to reduce their smoking initiation.

P1119**Prevention of childhood home exposure to environmental tobacco smoke (ETS) – a school-based programme**

Sofia Belo Ravara¹, José Precioso², Catarina Samorinha², José Manuel Calheiros¹, Manuel Macedo³, Henedina Antunes⁴, Paulo Vitória¹, Hugo Campos⁵. ¹Preventive Medicine, Faculdade de Ciências da Saúde, Universidade da Beira Interior, Covilhã, Beira Interior, Portugal; ²Instituto de Educação e Psicologia, Universidade do Minho, Braga, Minho, Portugal; ³Pulmonology, Hospital de S. Marcos, Braga, Minho, Portugal; ⁴Unidade de Adolescentes, Pediatrics, Hospital de S. Marcos, Braga, Minho, Portugal; ⁵Life Sciences Computing, ALERT Life Sciences Computing, S.A., Rio Tinto, Minho, Portugal

Introduction: Previous studies conducted in Portugal reveal that ETS exposure among children at home is common. This calls for effective preventive programmes.

Aims: 1) To evaluate the prevalence of ETS exposure at home among fourth-year primary school children. 2) To evaluate the effectiveness of a "Smoke-free Homes"-type preventive programme, based on a strategy developed by the U.S. Environmental Protection Agency (2004) – "The ABCs of Secondhand Smoke."

Methods: The programme was conducted by primary school teachers in charge of 32 fourth-year classes in the municipality of Braga during 2007/2008. It was based on the proactive development of the children's skills, parental ETS awareness and commitment to create a smoke-free home. A self-report questionnaire was administered before and after the intervention. The statistical analysis used a chi-squared model test.

Results: The initial prevalence of ETS exposure was 42.2% dropping to 32.6%, after the programme ($p < 0.001$).

Pupils reporting that their fathers smoked at home dropped from 68.0% to 51.6% ($p < 0.001$). Pupils reporting that their mothers smoked at home dropped from 67.0% to 62.4% ($p = 0.126$).

Conclusions: Among fourth-year primary school pupils, the prevalence of ETS exposure at home is high. The programme was effective, reducing the number of parents and other adults who smoked at home. Nevertheless, the reduction in mothers was not statistically significant. There is a need to expand, develop and improve the programme in order to increase its effectiveness.

P1120**Impact of pictorial warnings on smoking habit in young students in Romania**

Elleni Vaia, Poliana Leru, Mihnea Dumitrescu. *Internal Medicine Department, Coletina Clinical Hospital, Bucharest, Romania*

Smoking habit continues to increase in young people in Romania. Since July 2008 pictorial warnings were introduced on cigarette packages according to Directive 2001/37/CE of the European Parliament. The aim of our study was to evaluate characteristics of smoking behaviour in young students, knowledge about conse-

quences of smoking on health and influence of pictorial warnings on smoking habit. We conceived a questionnaire with 24 questions addressed to 400 students from Bucharest University. The study group was aged between 18-28 years, with 52,2% females.

We found out 223 smokers (55,75%), from which 50,22% more than 10 cigarettes/day, 63,2% having duration of smoking between 1 and 5 years and 31,4% more than 5 years. Regarding smoking onset context 40,8% started with friends, 32,73% at school and 14,7% with family. 56,9% of smokers had smoker parents. Most of responders (79,75%) are aware about risks of smoking. Regarding pictorial warnings intention, 32,28% of smokers consider that is smoking prevention, 30,94% information and 36,77% smoking cessation. More than half of smokers group (55,6%) thought more of smoking risks and cessation after the implementation of pictorial warnings. 78,75% of responders consider that pictograms should be changed frequently (36,25% at 6 months and 19,25% at 1 year). Almost half of smokers (45,29%) used or expressed the intention to cover the pictograms.

Conclusion: We concluded that smoking is a serious social and health problem in young students that needs a more complex approach. Pictorial warnings are expected to have positive impact, but have to be changed frequently and accompanied by continuous education from health institutions, addressed also to families and teachers.

P1121**Smoking prevalence among pilot schools students of Kochkor region in Kyrgyzstan**

N. Brimkulov¹, A. Kalieva². ¹Education, Kyrgyz Health Promotion Republic Center, Bishkek, Kyrgyzstan; ²Health Promotion, Project "Promoting Lung Health in Kyrgyzstan 2007-2009", Bishkek, Kyrgyzstan

Goal: of the study was to study prevalence of active and passive smoking among the pilot school students in Kochkor region.

Material and methods: according to the goals set, questionnaire was developed, containing 16 questions. 700 school students participated in the anonymous survey, of whom 292 (42%) were boys and 408 (58%) were girls. Age of the surveyed students varied from 13 to 15 years (96% of 7-9-graders were covered).

Results and conclusions: data analysis demonstrated geometric growth of familiarization with tobacco with age among adolescents of 13-15 years. Among the 13-years old students of 7th grade 32% have ever tried tobacco products, 3% of them use tobacco daily. Among the 14- and 15-years old students 60 and 67% have tried tobacco products accordingly, 4% and 8% use them daily. It should be noted that students willing to quit make 88%. This fact shows that the surveyed adolescents are open to the useful information and are ready to change their smoking behavior.

Almost half of the surveyed students noted that they have family members smoking at home (47% - 13, 42% - 14, 54% - 15 years). Negative attitude towards parents smoking at home was reported by 94% of 13-years old students, 77% 14-years and 53% - 15-years. High prevalence of passive smoking and significant change of students' attitude towards passive smoking with aging from negative to tolerant indicate that neither parents nor children do not realize the real harmfulness of tobacco.

Summary: 13-15 years old students of Kochkor region have high rate of familiarization with tobacco, that increases from 32 to 67% within 3 years. Number of regular smokers increases from 3% to 8% within 3 years, that is increasing two-folds.

P1122**Attitude of adolescent students of the pilot schools in Kochkor region towards smoking**

Anara Kalieva. *Education, Kyrgyz Health Promotion Republic Center, Bishkeke, Kyrgyzstan*

Goal: was to study awareness of students of Kochkor region on the harmfulness of smoking and to study their attitude towards smoking with the purpose of development and introduction in the curriculum of smoking prevention lessons among adolescents.

Material and methods: specially developed questionnaire was used to conduct a survey among 700 students at the age of 13-15 years (96% of 7-9th graders). 292 (42%) of the surveyed students were boys and 408 (58%) – girls.

Results and conclusions: according to the analysis data, adolescents assume that they know about harmful effect of tobacco smoke on the health of people exposed to smoke (92% - 13-year, 95% - 14-year, 98% - 15-years old students). However, attitude of adolescents towards smoking was diverse. 78% of 13-year old students noted that they would like their parents quit smoking. Insufficient number of positive answers indicate that already by the age of 13 years children tend to accept smoking as a normal widely spread habit, meanwhile 92% of children know about harmfulness of tobacco. We have found that the rate of positive answers on the question "Would you like your parents to quit smoking?" decreases significantly with age of students (78% of 13-year old students answer positively, 76% - of 14-years and 65% - of 15-years old students accordingly). This indicates reinforcement of the tolerant attitude of adolescents to tobacco smoking in their critical age.

Besides, data analysis showed that 60% of children of smoking parents try smoking. And regularly smoking boy always (in 100% cases) has smoking father. Our

SUNDAY, SEPTEMBER 13TH 2009

data indicate that parents' smoking behavior has direct influence on establishment of attitude of children towards smoking.

P1123**Smoking behaviour and attitude towards smoking in austrian teenagers. Influence of social environment, gender and education**

Joerg Lindenmann, Manuela Hiller, Nicole Neuboeck, Veronika Matzi, Christian Porubsky, Alfred Maier, Freyja-Maria Smolle-Juettner. *Division of Thoracic Surgery and Hyperbaric Medicine, Department of Surgery, Medical University Graz, Graz, Austria*

Introduction: The high smoking prevalence among the Austrian population is quite alarming, since smoking is associated with cardiovascular diseases and several cancer types.

Aims and objectives: The aim of our study was to evaluate the smoking behaviour and the attitude towards smoking among teenage pupils in Styria.

Methods: 2250 pupils (1132 boys and 1118 girls, aged from 10 to 17 years; mean age 14.52 years \pm 1.27 years) were questioned about demographical data, their smoking habits and attitude towards smoking. We used a questionnaire consisting of nine binary items and twenty free text items. An exploratory data analysis was performed.

Results: Smoking on a regular basis started at an average age of 10.77 \pm 2.46 years. 55.4% of the pupils admitted to have tried at least one cigarette, and 61.1% out of them had continued smoking. The latter consumed a mean of 34.9 cigarettes weekly. In rural communities the "first try" happened about 6 months earlier than in the towns. The number of smoking adolescents with smoking parents is twice as high as with of non-smoking ones. 88.1% of non-smoking, but only 44% of the smoking teenagers welcomed a ban on tobacco in restaurants. Only 9.4% of non-smoking youths compared to 21.9% of the smokers endorsed smoking in the presence of small children.

There is a much higher prevalence of smoking among children attending technical high schools (42.0%) and vocational training schools (57.4%) in comparison to general high schools (10.8%) and secondary schools (15.4%).

Conclusions: Social environment plays a major role in the development of smoking habits in teenagers and more efforts should be focused on preventive measures.

P1124**What do the adolescents think about ban strategies and smoking in Turkey?**

Baki Umut Tugay¹, Burcu Ilhan², Tuba Catak², Tubga Kabakci², Hatice Koc², Nazan Tugay¹. ¹*Physiotherapy and Rehabilitation, Mugla University, School of Health sciences, Mugla, Turkey;* ²*Department of Nursing, Mugla University, School of Health sciences, Mugla, Turkey*

Preventing youth from initiating tobacco use is a key aspect of all tobacco prevention efforts. Most smokers become tobacco dependent before age 18 years. Although most teenagers are well informed about the carcinogenic effects of tobacco, there is still a lack of knowledge about other hazardous effects of smoking. In addition, a positive smoker image was associated with attention to advertising and mediated the relation between attention and smoking. The purpose of the present study was to investigate thoughts of high school children about smoking behaviours and antismoking policies in Turkey. 731 students (336 male, 395 female, mean age 16.20 \pm 1.15) from 7 different high schools volunteered to participate in the study. After taking written consent from their parents all the students filled the 16 item questionnaire developed by the researchers. 72.7% of the students thought that their teachers were not good models for not smoking. 10.9% believed that smoking is a sign of growing up and 45.7% the students believed that they can quit whenever they want if smoked. 85% of the students agreed with the prohibition of cigarette advertising and 95.4% of the students agreed with the prohibition of smoking in public places but 42.8% of the students believed that smoking on the streets is not a stimulating behavior. 30.6% did not think that increasing the cigarette prices would not have positive effect on decreasing smoking rates. 12% of the students thought that light cigarettes are less harmful than the normal cigarettes. A clear opportunity for intervening with youth lies in the school setting, and so besides the ban policies, comprehensive tobacco control and education programs should be initiated.

P1125**The relation between actual condition and psychological factor of the smoking in senior high school student**

Hiroshi Odajima, Yoko Murakami, Chikako Motomura, Sankei Nishima. *Pediatrics, Fukuoka National Hospital, Fukuoka, Japan*

Background: Tobacco smoking is one of the important risk factors for respiratory diseases. Recently the prevalence of tobacco smoking has been decreasing in Japan. However, it is reported that it might be high in high school children. In our clinical experience, the tobacco smoking in patients with asthma might be related to the psychological factors.

Material and methods: To clarify the relationship between tobacco smoking and psychological factors, we investigated the actual condition of smoking and Self-Rating Depression Scale (SDS) in the high school students in Japan.

Results: Only 70% of the responder knows the cigarette to be a risk factor of asthma. As for the first smoking experience, it was seen in most frequent in 13~14

years old. The tobacco has been obtained from vending machine, friend, and seniors, in the beginning. It is obtained from convenience store, when the interval is lengthened. The smoking experience of the child increases, when whose mother smokes. The smoking of the mother lowers first smoking age of the child. The smoking of the mother increases present smoking. According to the SDS score, the smoking experienced was classified into depressive group (53-) and neurotic group (40-52) and normal group (-39) based on the value of SDS. Present smoking rate was Depressive group > Neurotic group > Normal group.

Conclusion: The smoking cessation education should start before 12-year-old. It should be emphasized that the smoking is the deterioration factor of the asthma. In the smoking cessation education, the patient depressive tendency should be also considered.

P1126**Prevalence and risk factors that relate to begin smoking in teenagers**

Mar Juarez, Izaskun Guinea, Empar Valdivieso, Cristina Rey, Marisa Barrera, Susana Carolina Tudela. *Servei d'atenció Primària Tarragona-Valls, Institut Català de la Salut, Tarragona, Spain; Servei d'Atenció Primària Tarragona-Valls, Institut Català de la Salut, Tarragona, Spain; servei d'Atenció Primària Tarragona-Valls, Institut Català de la Salut, Tarragona, Spain; Servei d'Atenció Primària Tarragona Valls, Institut Català de la Salut, Tarragona, Spain; Servei d'Atenció Primària Tarragona Valls, Institut Català de la Salut, Tarragona, Spain; Servei d'Atenció Primària Reus, Institut Català de la Salut, Tarragona, Spain*

Introduction: Objective: This study describes the smoking prevalence and factors related with the beginning of tobacco consumption in teenagers.

Methods: Transversal observational study at the beginning of a community interventional study in Primary Care. Study focused on 29 schools in the towns of Tarragona and Reus (Spain). A total of 2,256 students aged 12-13 years were included. Main variables were: school type, consumption of cigarettes, perception of tobacco (by validated questionnaire), two-paired carbon monoxide measures and consumption of tobacco in friends and parents.

Logistic regression was used to establish related factors with tobacco consumption, considering "to have smoked one cigarette at least in the last 30 days" as dependent variable consumption of cigarettes.

Results: Overall, 30.2% of the students have experienced at some time in making cigarette puffs. An occasional cigarette was smoked in 14.7% of boys and 11.7% of girls. Daily smokers: 4.6% and 4.2%, respectively. Parental consumption is around 41.7% in parents and 34.3% in mothers.

12.8% of students believe the tobacco as a substance that is not a drug. Factors independently associated with tobacco consumption were: smoking father (OR 1.629; 95% CI 1.05-2.53), smoking mother (OR 1.53; 95% CI 1.07-2.18) and smoking friends (OR 7.36; 95% CI 4.89 -11.06) as well as a low perception risk to tobacco (OR 1.83; CI 95% 1.47 -2.28).

Conclusions: Parents smoking cessation and education on health in the school could be helpful to reduce the incidence of smoking in teenagers.

Training strategies aimed at youth to resist peer pressure, boost self-esteem and taught to be critical in relation to health.

P1127**Prevalence and factors influencing the onset of cigarette smoking among adolescents in konduga local government area of Borno state Nigeria**

Ahmed Hammangabdo¹, Shuaibu Yahya², Babatunde Omotara³. ¹*Department of Medicine, University of Maiduguri Teaching Hospital, Maiduguri, Borno state, Nigeria;* ²*Department of Community Medicine, University Teaching Hospital, Maiduguri, Borno, Nigeria;* ³*Community Medicine, University Teaching Hospital, Maiduguri, Borbo, Nigeria*

Aim: To determine the prevalence and factors influencing the onset of cigarette smoking among adolescents in Konduga local government area.

Methods: A cross-sectional study involving 400 randomly selected subjects aged 10-20 years from the four districts of the local government using a multistage sampling method. The data was obtained using a modified version of the standard World Health Organisation (WHO/SMO, 1984) for surveying smoking habit.

Results: The prevalence of cigarette smoking was 21%. Friends/peers was the major factor for initiating smoking habit in adolescents (57%). Others were pleasure (24%), stress (13%), family members (4%) and cigarette adverts (1%). The study also revealed that the adolescents continued to smoke even though they were aware of the health consequences of smoking. The majority of the respondents (70%) advocated outright ban on tobacco sales by the government as the most effective way to check this world's major preventable health hazards.

Conclusion: The result of the study showed that the prevalence of cigarette smoking was to previous studies in the southern part of the country but was higher than what was obtained in other African studies¹. Friends/peer group was the dominant factor influencing the onset of cigarette smoking among adolescents. This underscores the need for targeting the group in behaviour change communication.

Reference: Emmanuel R., Abdurrahman A., Adamson S.M. Prevalence and determinants of adolescent tobacco smoking in Addis Ababa Ethiopia, BMC Pub. Health 2007;7(176): 1471-1478

SUNDAY, SEPTEMBER 13TH 2009

P1128**Comparative analysis of prevalence of smoking among Ukrainian adolescents between 2003 and 2007**

Nataliya Slepchenko, Yuriy Mostovoy, Andrii Sidorov. *Chair of Propedeutics of Internal Medicine, Vinnitsa National Medical University n.a.M.I.Pirogov, Vinnitsa, Ukraine*

Considering poor introduction of anti-smoking programs in Ukraine it is important to study the dynamics of smoking prevalence and demonstrate the urgent necessity of conducting anti-smoking activities at the state level.

In 2003 we studied the prevalence of smoking among 2123 young people at the age of 13 – 16. It was found that 12.9% of 13-year-old, 14.8% of 14-year-old, 19.6% of 15-year-old and 24.2% of 16-year-old adolescents smoked. 62% of them were males. 16-year-old teenagers were found to begin smoking at 14.3 years of age and 13-year-old – at the age of 11.8. It is evident that every year adolescents begin to smoke earlier. In 2007 a similar study was performed among 2012 persons aged 13-16 years old. Increase of adolescents who smoke by 5-7% in all age groups as well as increase of girls who smoke was noticed. Thus, absence of well-defined and well-regulated anti-smoking activities in Ukraine leads to increase of prevalence rate of smoking among youth which will have a negative impact on national health in future.

P1129**Prevalence of smoking and perceived risks in an undergraduate student population from Timis county, Romania**

Sorin Ursoniu¹, Stefan Mihaicuta², Brighita Vlaicu³, Salomeia Putnoky³, Corneliuta Fira-Mladinescu³. ¹Public Health, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania; ²Pulmonology, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania; ³Hygiene, Victor Babes University of Medicine and Pharmacy, Timisoara, Romania

Background: Cigarette smoking is the leading cause of preventable death in many countries and has serious long-term effects on health. Young adults 18-25 years of age have one of the highest rates of smoking.

Objectives: The aim of this study was to identify prevalence of smoking and to examine perceived risks about this habit among undergraduate students from Timis County area.

Design and methods: We conducted a cross sectional study using a stratified cluster sample design to produce a representative sample of undergraduate students from Timis County, Romania. Only students present the day of the survey were eligible for participation. Anonymity was assured. The students completed a self-administered questionnaire in their classroom during a class period.

Results: A total of 2076 students (aged 18-25) were included in the survey. We found out that 55.8% of the female student and 64.8% of the male students tried cigarette smoking. A high proportion of the students (29.8% of the females versus 35.6% of the males; $P=0.006$) reported smoking on one or more days in the previous 30 days. Daily smoking was reported by 17.5% of the female students and 21.6% of the male students. Smoking one or more packs of cigarettes per day was perceived as great risk behaviour by a large proportion of students (78.1%). However, smoking occasionally was perceived as great risk by only 16.5% of the students. Among those who are current smokers, 71.6% declared they tried quitting.

Conclusion: Our results indicate that smoking prevalence among undergraduate students is high in spite of the fact that heavy smoking is perceived as great risk behaviour by a large number of students.

P1130**Smoking rates in young adult patients with pneumonia**

Safak Yildiz, Ergun Ucar, Seyfettin Gumus, Canturk Tasci, Ahmet Ertugrul, Omer Deniz, Ergun Tozkoparan, Metin Ozkan, Hayati Bilgic. *Department of Pulmonary Medicine, Gulhane Askeri Tip Akademisi, Ankara, Turkey*

Aim: Pneumonia is an inflammatory disease of the lung which occurs due to an imbalance between host defense mechanisms and microorganisms. Host defense mechanism involves entire respiratory system from upper airways to the alveoli. It's known that smoking has various negative effects on the respiratory defense mechanisms such as impairment of mucociliary clearance and macrophage function. For this reason, we have hypothesized that patients with pneumonia might have higher smoking rate than healthy individuals.

Method: Medical records of 61 patients with pneumonia without any comorbidities were screened for smoking habit, body mass indices (BMI) and biochemical parameters. Fifty-four healthy individuals without any history of pneumonia were randomly selected as controls. Both groups were compared with Ki-square test for smoking habits.

Results: Mean ages of the patients with pneumonia and healthy controls were 21 ± 2.1 and 23 ± 2.5 respectively. Smoking rate was significantly higher in the pneumonia group (52/61; %85) with respect to healthy individuals (27/54; %50, $p<0.001$).

Conclusion: This study suggests that smoking rate was higher in the young adult patients with pneumonia and smoking might be a predisposing factor for development of pneumonia.

P1131**Evaluation of the motivation to quit smoking among high school students**

Anna Stoklosa¹, Michal Bednarek¹, Robert Plywaczewski², Dorota Gorecka¹. ¹2nd Department of Respiratory Medicine, National Research Institute of Tuberculosis and Lung Diseases, Warsaw, Poland; ²Department of Respiratory Failure, National Research Institute of Tuberculosis and Lung Diseases, Warsaw, Poland

Background: Teenagers are confronted to tobacco smoking during their school education. Many of them smoke. Understanding their motivation to quit may help the primary prevention of smoking.

Aim: To estimate a motivation to quit smoking among high school students.

Material and methods: 193 students (67 boys [B] and 126 girls [G]), mean age 18, 58 ± 2 filled in a questionnaire regarding motivation to quit smoking.

Results:

Table 1

	B	G	p
Cost	18 (62%)	24 (71%)	NS
Health	16 (55%)	20 (59%)	NS
Cosmetic reasons	7 (24%)	12 (35%)	NS
Unwilling to be addicted	6 (21%)	7 (21%)	NS
Feeling of guilt	2 (7%)	3 (9%)	NS

Differences between both sexes in all questions were not significant.

Conclusions: The main motivation to quit were health reasons and cost. There was no significant difference among B and G.

P1132**Impact of passive tobacco smoking on childhood asthma**

Sukhbir Shahid. *Pediatrics, Shahid Clinic, Mumbai, MH, India*

Childhood asthma is a multifactorial chronic airway disorder. Passive tobacco smoke exposure induces as well as exacerbates asthma in children. Does passive tobacco smoke prepond or increase severity of asthma in children?

In order to determine this, we carried out an analysis of wheezing children attending our clinic. The cases were grouped into those with history of exposure to household tobacco smoking and those who gave no history of such exposure. The age of onset of wheeze and its severity were determined in these two groups. Severity of wheeze was graded as per GINA guidelines. Family history of atopy and history of tuberculosis in child were also noted.

263 (43.8%) patients had confirmed history of exposure to household tobacco smoke. Age of presentation of wheeze in passive smokers did not differ significantly from non-passive smokers. Also tobacco smoke did not tend to increase severity of wheeze. However, passive smokers with a positive family history of atopy were significantly younger compared to passive smokers with no such history (1.8 ± 0.2 vs. 2.5 ± 0.3 years respectively, $p<0.05$); though their asthma severity remained unaffected.

Genetically predisposed children had early onset wheeze with household tobacco smoke exposure. Proper environmental control for such pollutants in early life would aid in curtailing the likelihood of development of wheeze in them.

P1133**Environmental tobacco smoke and respiratory health in preschool age**

Antoaneta Manolova, Galya Tsoleva. *Health Promotion and Disease Prevention, National Center for Public Health Protection, Sofia, Bulgaria*

Environmental tobacco smoke (ETS) is a significant public health burden, especially for children.

Objective: To evaluate the respiratory health risk in preschool children exposed to environmental tobacco smoke.

Methods: Cross-sectional ETS prevalence study, comprising a representative sample of 986 children aged 4-7 years from 15 randomly selected kindergartens in Sofia was carried out. Lifetime exposure to household ETS, type, rate and time of occurrence of respiratory symptoms and diseases was obtained by ATS-DLD-78-C questionnaire, completed by the parents of the children.

Results: showed that the parents of 72% of the children smoke and have smoked more than 5 cigarettes daily at home during the overall life of the child (in 34% one parent smokes and in 36% both parents smoke). Cough, not related to respiratory infections (OR=1.19), night cough, wheezing and whistling in the chest (OR=1.89) were more frequent, started in earlier age and tend to become chronic in exposed children group ($P<0.05$). Children with diagnosis chronic obstructive bronchitis (OR=1.56), pneumonia (OR=1.63) and bronchial asthma (OR=1.28) belong also to this group. The risk for the development of respiratory symptoms and bronchopulmonary conditions showed a significant dose-response relationship depending on exposure ($P<0.05$).

Conclusion: It should be emphasized that our results reveal the relevance and significance of passive smoking effect on preschool children's respiratory health. The intervention strategies for smoking control should include both public policies and preventive measures implemented by health professionals.

SUNDAY, SEPTEMBER 13TH 2009

P1134**Usefulness of the determination of carbon monoxide in exhaled air (COEA) in second hand and direct exposure to tobacco smoke during childhood and adolescence**

Laura Fidalgo-Marron¹, Estela Insfran-Marron², Pilar Robles-Cascallar³, María Jose Molina-Soares¹, José María Jiménez-Bustos¹. ¹Department of Paediatrics, Hospital Universitario de Guadalajara, Guadalajara, Spain; ²Faculty of Medicine, Universidad Complutense de Madrid, Madrid, Spain; ³Department of Paediatrics, Hospital Universitario Puerta de Hierro-Majadahonda, Madrid, Spain

Introduction: Tobacco exposure (TSE) is an important health problem during childhood and adolescence. COEA determines recent TSE.

Aims: The aim was to find out the relation between TSE and COEA in children and adolescents.

Methods: COEA was determined by MicroCO Monitor in a population of non-smoker children (aged 6-14) and in a population of adolescents (aged 16-17) who filled in a questionnaire.

Results: We found in the group of 110 adolescents (61 male,55.5%): 43.6% non-smokers (NS), 22.7% smoke every day (SE), 24.5% don't smoke every day (SNE), 6.4% stopped smoking (ES) and in the group of 446 children (270 male,60.5%): 61.4% parents declared never smoking (NSH), 17.7% sometimes smoking (SSH), 7.8% often smoking (SOH), 11.7% usually smoking at home (SUH). Averages of COEA (95%CI) in NS, SE, SNE and ES adolescents, were 0,8 (0,5-1,1), 14,2 (12,4-16), 8,0 (6,6-9,3) and 3,0 (0,9-5,0). Differences were significant among all the groups except between ES and NS.

The averages of COEA (CI 95%) in children whose parents NSH, SSH, SOH and SUH were 0,58 (0,45-0,71), 0,61 (0,29-0,92), 1,29 (0,19-2,38) and 0,62 (0,32-0,92). Significant differences were only found in the group of children whose parents NSH and SOH.

A ROC curve was calculated using COEA to predict the tobacco consume in adolescents and the area under the curve was 0,98 (CI 95% 0,95-1,0). The area under the curve to predict TSE in children was 0,51.

Conclusions: Frequency of smoking in adolescents was high, COEA had a straight relation with tobacco consume. In school-aged children, 37,2% of parents admitted smoking at home, but the measurement of COEA didn't seem to distinguish properly second-hand TSE.

P1135**Smoking habits among high school students**

Anna Stoklosa¹, Michal Bednarek¹, Robert Plywaczewski², Dorota Gorecka¹. ¹2nd Department of Respiratory Medicine, National Research Institute of Tuberculosis and Lung Diseases, Warsaw, Poland; ²Department of Respiratory Failure, National Research Institute of Tuberculosis and Lung Diseases, Warsaw, Poland

Background: Teenagers smoking in adolescence will be more prone to nicotine addiction in adult life. Studying smoking habits may improve the primary prevention of smoking.

Aim: To evaluate smoking habits among high school students. Additional aims were to estimate the nicotine addiction and the influence of parents' smoking habits on teenagers.

Material and methods: 193 students (67 boys [B] and 126 girls [G]), mean age 18, 58±2 filled in a questionnaire regarding smoking habits.

Results: We found that 33% subjects were current smokers (43% B, 27% G) and started to smoke at the mean age of 14,3 (14 for B, 14,5 for G). 28% B and 44% G have never smoked. 52% of students smoked ≤5 cigarettes/d [cig/d], 30% 6-10 cig/d, 13% 11-20 cig/d, 2% 21-30 cig/d, 3% >30 cig/d. 54% of students smoked a first cigarette > 60 min after waking up, 27% 31-60 min, 10% 6-30 min, 8% ≤ 5min. Reasons for smoking among B were: 90% to reduce tension, 83% to improve the mood, 55% for pleasure and relax, 41% to show independence, 41% to be admired, 17% to feel adult. Reasons for smoking among G were: 62% to reduce tension, 76% to improve the mood, 35% for pleasure and relax, 59% to show independence, 41% to be admired, 23% to feel adult. The differences between both sexes were not significant.

Table 1

	Non smoking family	Smoking family
Non smoking G	59 (86,76%)	31 (55,36%)
Smoking G	9 (13,24%)	25 (44,64%)
	p=0,0001	
Non smoking B	21 (61,76%)	15 (48,39%)
Smoking B	13 (38,24%)	16 (51,61%)
	NS	

Conclusions: The main reason of smoking for both sexes was to reduce the tension and to improve the mood. The nicotine addiction was low. Non-smoking families significantly prevent girls from beginning to smoke. There was not such effect in boys.

P1136**Cigarette smoking habits among high school students in a rural region of Greece**

Dimitrios Giannopoulos¹, Stephania Voulioti¹, Dimitra Sereti¹, Andreas Skarpelos², Doukas Doukas¹, Georgios Chrysoyitsanos¹, Eleni Jelastopoulou³. ¹Health Center of Varda, Health Center of Varda, Varda, Iliia, Greece; ²Health Center of Santorini, Health Center of Santorini, Sandorini, Greece; ³Department of Epidemiology, University of Patras, Patras, Achaia, Greece

Background: The initiation of smoking and tobacco use in early ages is one of the most important problems in modern societies. Smoking rate is very high in Greece and there are only a few interventions in primary care regarding smoking cessation.

Aims and objectives: The aim of the current study was to estimate the prevalence of nicotine addiction, and the age that children begin smoking. We studied the factors that lead children to smoke.

Methods: A cross-sectional survey was carried out, including a total of 1460 high school students of both sexes, ages 11-15 years, (mean 12,6 S.D. ± 2,2) in 16 different Schools in Western Greece. They answered questions about their smoking habits, their family and friends, the age at which they began smoking, the reasons that push them to smoke, their concerns about the health hazards of smoking and demographic data.

Results: 508 students (34,8%) were occasionally smokers. The males predominated over the females. 169 of the smokers (11,57%) are every day smokers. 323 of the non-smokers (33,9%) have smoked once in their life. The likelihood of smoking increases substantially when there is a parent or close friend who smokes. The students pleaded as common reasons for them beginning smoking their need "to prove that they are mature and grown up" (66,5%) and their need "to taste something new" (56,8%). The majority of the smokers began to smoke at the age of 14 and 15 years.

Conclusions: The prevalence of smoking among young people is extremely high. As the children grow up, the proportion also becomes larger. The primary care physicians have to organize seminars at schools in order to inform young people and to prevent the spread of nicotine addiction among children.