

Branka Vajngerl*
Mateja Videmšek
Damir Karpljuk
Jože Štihec

ANALYSIS OF SPORT ACTIVITY AND SMOKING OF 15-YEAR-OLD STUDENTS AND THEIR PARENTS

ANALIZA ŠPORTNE AKTIVNOSTI IN KADILSKIH NAVAD PETNAJSTLETNIH DIJAKOV IN NJIHOVIH STARŠEV

Abstract

The aim of this research was to analyse the sport activities and smoking of 15 year-old male and female students, and to establish whether students whose parents smoke are more likely to smoke and practice less sport. A questionnaire including 21 variables was used to study 235 male and female students from Ljubljana high schools.

This research shows that 8% of male and 13% of female students smoke. On average, male students started smoking at the age of 13 and female students at the age of 14. Care for health is the main reason why the majority of students do not smoke and the reason why these students are active in sport. A little less than half of the male students' parents smoke and over one third of female students' parents smoke. We have established that students whose parents smoke are more liable to smoke than those students whose parents do not smoke. Regarding sport, 74% male students and 66% female students are active. Most of them practice sport recreationally and irregularly. We have established that the smoking behaviour of students' parents does not affect how often students practice sport, even though the results show that non-smoking parents are more active in sport. Despite the fact that the level of active parents is low, the majority of parents advise their children to take up sport.

In order to decrease smoking among young people, influence should be exerted upon students' families and their coevals. More and various activities that they can attend in their spare time should be made available for the students.

Key words: teenager, parents, smoking, sport

Faculty of Sport, University of Ljubljana, Slovenia

**Corresponding autor:*

Branka Vajngerl

Faculty of Sport, University of Ljubljana

Gortanova 22, SI-1000 Ljubljana

Tel.: +386 1 5207763

Fax: +386 1 5207730

E-mail: branka.vajngerl@fsp.uni-lj.si

Izvleček

Namen raziskave je bil analizirati športno dejavnost in kadilske navade petnajstletnih dijakov in dijakinj in ugotoviti, ali dijaki staršev kadilcev v večji meri kadijo in se manj ukvarjajo s športom. V raziskavo je bilo vključenih 235 dijakov in dijakinj iz ljubljanskih srednjih šol, ki so izpolnili vprašalnik z 21 spremenljivkami.

Ugotovili smo, da kadi 8 % fantov in 13 % deklet. V povprečju so začeli dijaki kaditi pri trinajstih, dijakinje pa pri štirinajstih letih. Zdravje je glavni razlog, zaradi katerega večina dijakov ne kadi in zaradi katerega se jih največ ukvarja s športom. Nekaj manj kot polovica staršev dijakov je kadilcev, pri dijakinjah je staršev kadilcev več kot tretjina. Ugotovili smo, da dijaki, ki imajo starše kadilce, kadijo v večji meri kot njihovi vrstniki, ki nimajo staršev nekadilcev. Športno aktivnih je 74 % dijakov in 66 % dijakinj, največ se jih s športom ukvarja rekreativno neredno. Ugotovili smo, da kajenje staršev ne vpliva na pogostost ukvarjanja mladih s športom, čeprav rezultati kažejo, da se starši nekadilci bolj pogosto ukvarjajo s športom. Kljub temu, da športno aktivnih staršev ni veliko, večina priporoča svojim otrokom ukvarjanje s športom. Da bi mladi manj kadili, je potrebno vplivati zlasti na družino in vrstnike. Ponuditi jim je potrebno še več različnih aktivnosti, s katerimi se lahko ukvarjajo v svojem prostem času.

Ključne besede: mladostnik, starši, kajenje, šport

INTRODUCTION

Currently, smoking is the most widely spread addiction. Not enough attention is paid to the problem of smoking, especially to smoking among the young people. There is too little awareness that smoking has a wide range of consequences in the society (Videmšek, Štihec, Karpljuk, & Debeljak, 2003). There are very few human unhealthy habits that are so devastating yet so easily prevented. Society as a whole should be more interested in preventing and suppressing smoking, since it represents a serious threat the health and lives of people (Kopriva, 2002).

One billion, one hundred million people in the world smoke today. Consequently, tobacco causes one death every 10 seconds (Turk, 2000). This plainly shows that smoking is a drug addiction disease, having the characteristics of an epidemic. If the present trends continue, there will be over 1.5 billion people smoking by 2025 (Zaletel-Kragel, 2004).

Movement to heavier, more frequent smoking is generally unidirectional, although many youths attempt to quit one or more times. The appearance of any symptom of dependence altered the subsequent pattern of smoking behavior (Wellman, DiFranza, Savageau, & Dussault, 2004).

Smoking causes death in 19.3% of cases and it is in the second place among causes of deaths (following cardiovascular diseases) in Slovenia. Three thousand, five hundred people in Slovenia die from smoking each year. In EU countries, this number is half a million – smoking kills more people than alcohol, drugs, AIDS, suicides, homicides, and car accidents combined (Drole, 2005b). Over 1,000 people in Slovenia die of lung cancer each year, among which there are 20 times more smokers than non-smokers. Even though the statistical data shows that since 1988 the number of smokers is decreasing (today 25% people in Slovenia smoke, in 1991 the percentage was 42%), the following two findings are most worrying: an increasing number of smokers among high school students and among women. The results of a health care research (the UICC day without a cigarette, 2002) have shown that over one third of young women under 30 smoke. These are primarily young women during their birth-giving period and smoking causes various disorders and problems. Therefore, special attention should be paid to teenage girls and young women, particularly those who end their education after high school (Zaletel-Kragelj, 2004).

DiFranza et al. (2007) tried discover the diagnostic criteria for tobacco dependence and a biochemical measure of nicotine intake (the DANDY study). The most susceptible youths lose autonomy over tobacco within a day or two of first inhaling from a cigarette. The appearance of tobacco withdrawal symptoms and failed attempts at cessation can precede daily smoking and typically appears before consumption reaches two cigarettes per day.

The results of a research by the European bureau of WHO, which included 162,000 young people (aged between 11 and 15) from 35 countries have shown that 23.2% girls and 22.5% boys aged 15 have declared themselves as regular smokers. These results rank Slovenia fourth (Drole, 2004). Between 1995 and 2003, the percentage of young people who start smoking at the age of 11 or earlier increased. Almost one third of those, who in 2003 stated they have smoked, had their first cigarette when they were 11 or younger. Boys start smoking earlier than girls. The most critical years for girls to start smoking are the ages between 13 and 15 (Stergar, 2002).

Research shows that young people very well know how smoking affects health; however, the latent period (mostly ages between 25 and 30) when serious health problems may occur is too far away for them to consider (Lampret, 2004). Despite that, health problems may already occur

in young people. The CDC (Centers of Disease Control and Prevention) data indicates that lung capacity of young people who smoke is lower than of those who do not smoke; smoking interrupts the lungs growth. Early signs of cardiovascular diseases appear quite quickly in young people. Smoking weakens a person's physical condition so the endurance and motor abilities of young people are lower. The resting heart rate of young smokers compared to non-smokers is faster by 2 to 3 beats per minute. Young smokers suffer from shortness of breath three times more often. They are three times more likely to drink alcohol, eight times more likely to take marijuana and twenty-two times more likely to take cocaine (Stergar, 2004).

Many studies have recently proved that passive smoking is even more harmful than active smoking (Kogovšek, 1999). The research (Kopriva, 2002) has shown that 4/5 of children, admitted to the department for lung diseases at the children's hospital in a period of one year come from smoking families. This clearly shows that even mere exposure to tobacco smoke (passive smoking) represents an important harmful factor that increases the risk of respiratory diseases in children. As Stergar wrote even the most passionate smoker has no right to endanger a non-smoker's life (Stergar, 2000).

Young people who smoke are rarely found among groups of people who reject smoking because of their social interests and goals (Videmšek, Karpljuk, & Debeljak, 2003). Undoubtedly, sport activities represent an important factor in preventing smoking. Most people smoke start smoking at an early age and become addicted easily. Therefore, it is important to offer young people a number of various healthy activities, among which sport activities undoubtedly belong (Shapiro, 1994). About two-thirds of boys and only one-third of girls (Slovenian secondary school students) engage in sport within their extracurricular activities (Završnik & Pišot, 2005). The study of 14 year-old children (Videmšek, Videmšek, Štihec, & Karpljuk, 2004) has shown that children who are more active in sport smoke and drink alcohol statistically significant less often. Appropriate sport activities can most efficiently restrain smoking attempts while wandering and strolling around with friends can only accelerate the progress of this unhealthy behavior. A healthy life style represents a very important aspect of education, which begins at home and continues in a kindergarten and school, and finally extends in a form of self-education. Leisure-time physical activity is associated with reduced mortality, even after genetic and other familial factors are taken into account (Kujala, Kaprio, Sarna, & Koskenvuo, 1998). The problem of smoking among young people should not be treated as a sole problem, but rather in the scope of caring for young people in general (Primic-Žakelj, 2002).

Kujala, Kaprio, and Rose (2007) studied the association between adolescent physical activity and later smoking in twin siblings, discordant for their baseline physical activity (4,240 individuals including 1,870 sets of twins). In within-pair analyses compared to the active members of discordant twin pair, the physically inactive co-twins had increased risk of future daily smoking. Persistent physical inactivity in adolescence relates to adult smoking, even after familial factors are taken into account.

This research is based on a questionnaire developed for the research by Videmšek, Karpljuk, and Debeljak (2003). The purpose of this questionnaire is to analyze the sport activity and smoking behavior of 15 year-old male and female students and their parents.

METHOD

Participants

The sample of subjects studied here includes 15 year-old students from Ljubljana high schools: 101 male and 134 female students. The selected sample of subjects is not a representative one for Slovenia.

Instruments

This research is based on a questionnaire developed for the research by Videmšek, Karpljuk, and Debeljak (2003) and includes 21 questions on the sport and smoking habits of students and their parents.

- Have you ever smoked?
- If you have already smoked, how old were you when you started?
- Why have you tried to give up smoking?
- If you do not smoke now, why not?
- If you smoke, how often do you smoke and how many cigarettes do you smoke?
- When do you smoke the most?
- Do your parents smoke?
- Do your parents know you smoke?
- How did your parents react, when they realized you smoke?
- Are your parents divorced?
- Do you feel lonely?
- Do you think smoking is harmful to your health?
- Where did you get most information about smoking being harmful?
- In what form would you like to receive information about smoking?
- How many hours per week are you active in sport, including PE classes at school?
- Which sport do you do in your spare time?
- How often are you physically active?
- Why are you taking part in sport activities?
- Why are you not involved in sport?
- Are your parents active in sport?
- Do your parents encourage you to be active in sport?

Procedures

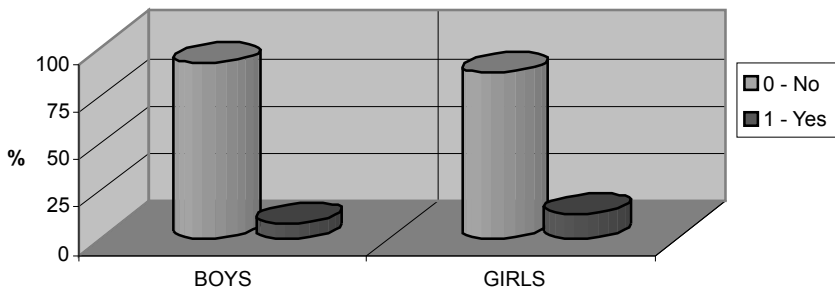
Data has been processed by the SPSS software (Statistical Package for the Social Sciences). Frequency and Contingency tables have been generated with the help of the FREQUENCY and CROSSTABS sub-programs. The probability relations among the variables have been tested by the contingency coefficient. Statistical significance has been evaluated at a 5 % risk level.

RESULTS

The purpose of this research was to analyze the sport activity and smoking behavior of 15 year-old male and female students and their parents.

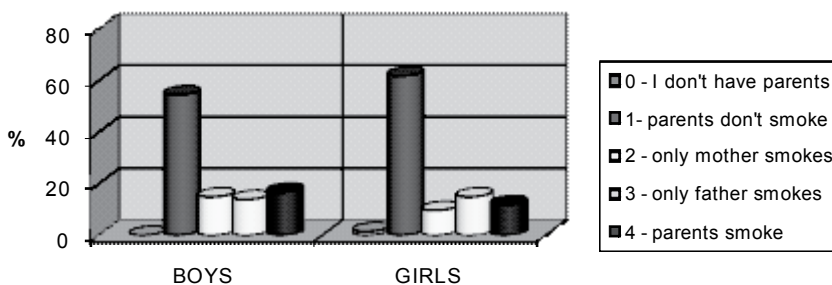
The research indicates that 25 % male and 41 % female students have attempted to smoke and that 8 % of male students and 13 % of female students smoke (Figure 1), mostly on special occasions only.

Figure 1: Do you smoke?



On average, male students started smoking at the age of 13 and female students at the age of 14. Both girls and boys started smoking out of curiosity and because of the influence of society. Almost one-half of the students who smoked have stopped smoking. Students stated that the main reason was the fact that smoking weakens their physical condition and negatively affects a good state of health. For the same reason, most of the questioned students do not smoke and think that smoking is unhealthy. There are quite a few students (8 % male, 11 % female) who are of the opinion that smoking is barely harmful for your health. Even though this percentage is low, we think that by no means it should happen that high school students not know smoking is harmful to their health.

Figure 2: Do your parents smoke?



The research indicates that a little less than half (45 %) of the male students' parents smoke, and with female students over one-third (38 %) of their parents smoke. Within parents who smoke, there is one third where only mothers smoke, one third where only fathers smoke, and one third where both parents smoke (Figure 2).

Table 1: Relations (crosstabs) among some questions in our questionnaire (male students)

	Do your parents smoke?	
	CC	Sig.
Are your parents divorced?	0.280	0.035
Do you think smoking is harmful to your health?	0.268	0.254
Have you ever smoked?	0.336	0.005
How many hours per week are you active in sport, including PE classes at school?	0.404	0.539

CC= Contingency coefficient

Sig.= Statistical significance

Table 2: Relations (crosstabs) among some questions in our questionnaire (female students)

	Do your parents smoke?	
	CC	Sig.
Are your parents divorced?	0.715	0.000
Do you think smoking is harmful to your health?	0.333	0.002
Have you ever smoked?	0.210	0.187
How many hours per week are you active in sport, including PE classes at school?	0.412	0.496

CC= Contingency coefficient

Sig.= Statistical significance

The results show (Table 1, Table 2) that the statistically significant number of parents who smoke is higher in families where parents are divorced (male: $p=0.035$; female: $p<0.001$).

The contingency coefficient also shows a statistically significant correlation ($p=0.002$) between the smoking of female students' parents and their opinion of smoking being harmful (Table 2).

A large majority of female students who think smoking is harmful have non-smoking parents. Female students who think smoking is barely harmful come from families where parents often smoke. The results indicate that over half of female students who smoke come from smoking families, while with male students who smoke, even three-fifths of their parents smoke. Crossing the variable "Do your parents smoke?" and "Have you ever smoked?" has shown a statistically significant correlation ($p=0.005$) with male students (Table 1). Children whose parents smoke have more often attempted to smoke than children whose parents do not smoke.

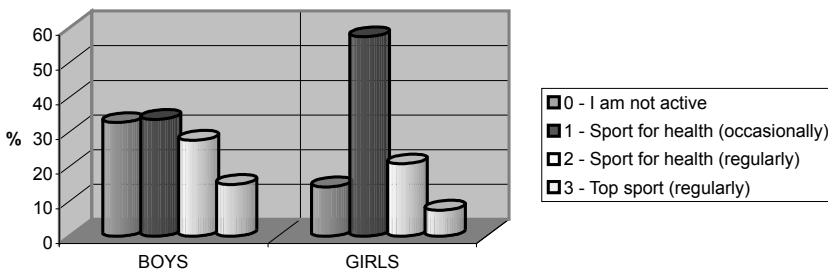
Fifteen-year-old students are hiding their unhealthy habit from their parents. Two-thirds of male (67 %) students' parents do not know their children smoke, while with female students, the percentage is even higher at 73%. Upon discovering that their children smoke, parents in most cases tried to turn children away from it, forbade smoking and also punished them, which is probably one of the worst methods of helping a child overcome an addiction.

Students get most of the information about harmful effects of smoking in school (36 % male, 28 % female); they get some information in the media, such as radio and TV (18 % male; 24 % female) and magazines (16 % male; 11 % female). Only 13% male students and 20% female students obtained most of their information about smoking being harmful at home, from their parents. Approximately one third of male and female students are not interested in finding out

about smoking at all. Those who are interested would prefer to get such information in school (25 % male; 28 % female). School teachers should invite parents, various societies, and volunteers etc. to cooperate, and extend the publicity among journalists, radio and TV stations, the internet etc. However, teenagers should undoubtedly get the information about smoking being harmful at home, too.

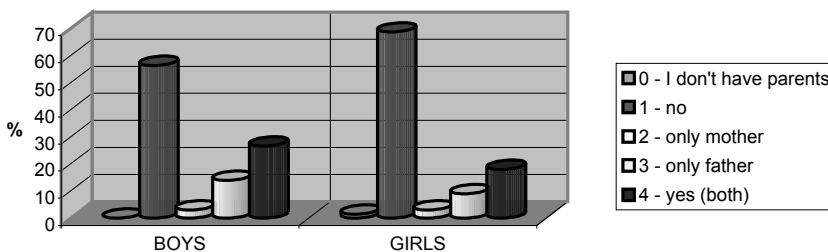
The results have shown that 74.3% of male and 66.4% of female students are active in sport. Male students mostly practice football, volleyball, and cycling, whereas female students mostly practice general aerobics, cycling, and basketball. The majority of students practice sport recreationally and irregularly (34 % male and 58 % female students). Fifteen percent of male students and 8% of female students practice sport competitively (Figure 3).

Figure 3: How often are you active in sport?



The research indicates that there are fewer parents than children who are active in sport. Over one-half of male students (54%) have parents who do *not* practice sport at all. There are less than one third of families where both parents are active in sport, and there are 13.9% cases where only the fathers are active in sport. With female students, there are even more families and parents who do *not* practice sport: over two-thirds (69%). There are 17.9% of families where both parents are active in sport, and 9% of cases in which only fathers are active in sport (Figure 4).

Figure 4: Are your parents active in sport?

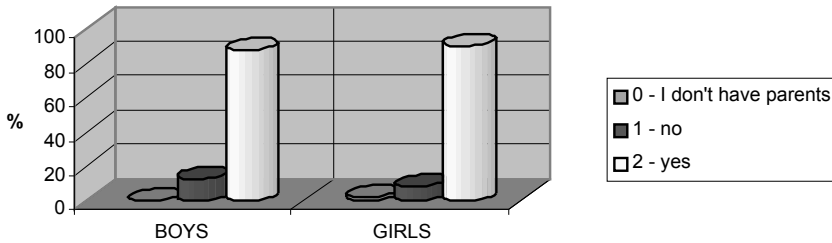


The research results have shown that 83% of female students' parents who do not smoke are active in sport. With male students, the percentage of such parents is lower but two-thirds is still rather high. Even though this research does not indicate a statistically significant correlation between the smoking of parents and the sport activity of their children, we can still ascertain that students whose parents do *not* smoke are more active in sport than students whose parents smoke.

Undoubtedly, there are far too few parents who are active in sport (almost 90%), and yet they encourage their children to take up sport activities. Unfortunately, there are some parents who

actually discourage sport activities: 13% with male students and 8.2% with female students (Figure 5).

Figure 5: Do your parents suggest that you to be active in sport?



Nearly two-thirds of non-smoking parents encourage their daughters to do sport, and a little over one-half of male students' parents do so with their sons.

DISCUSSION

Even though the results of the WHO study show that in Slovenia 23% of boys and girls at the age of 15 smoke (Drole, 2005b), this research indicates that in Ljubljana high schools, the percentage is much lower – 8% male and 13% female students smoke. We must emphasize though that the selected sample of subjects studied here is *not* a representative one for Slovenia. Similar research studying children a year younger (Videmšek, Karpljuk, Štihec, & Debeljak, 2004) has shown that 11.5% students smoke. These results are quite similar to those nearly 20 years ago, where Debeljak and Kalan (1987) established that 8% of boys and 14% of girls aged 14 smoked.

Most male and female students started smoking out of curiosity and because of the influence of society. They want to know how a person feels when smoking. At the same time, they want to be liked, or do not want to be an exception among others. They are all convinced they do not want to “show off” in front of those who do not smoke, and they do not think having a cigarette in your mouth makes you look more mature. Within the group of female students who want to experience such feelings, nearly half of the parents smoke, while in the group of male students, there are nearly as many as three-quarters of such parents. Children are curious by nature; therefore, the first cigarette they have may not be a reflection of their parents' behaviour. Despite that, we should be cautious since some research showed that 8 out of 10 curious children have a second cigarette and they are well on the way to a cigarette becoming an indispensable thing in their lives (Kujala, Kaprio, Sarna, & Koskenvuo, 1998). Pečjak and Mohorko (1995) are of the opinion that young people gradually move from preparation and experiments, to occasional usage to the stage of becoming regular smokers. The process normally takes one year, while DiFranza et al. have shown that symptoms of nicotine dependence can develop even more quickly after the initiation of smoking. .

Male and female students who stopped smoking stated that the main reason was the fact that smoking weakens their physical condition, negatively affects their state of health and because it is harmful. In the public opinion survey (Drole, 2005a), 44% of people think that the most efficient method of reducing smoking is the promotion of a healthier way of living. The worst

proven methods are warnings printed on cigarette packages; only 7% people questioned think this is an effective measure.

We cannot be pleased with the results of this research because too many parents, who should be a good example to their children when fighting against smoking, smoke. The students we have questioned are in a very sensitive developmental phase: one in which they develop self-esteem. Also, too few parents are active in sport. What is encouraging, though, is that young people do try to stop smoking and that the two values that they rank highest in their life are sport activities and good state of health. Parents undoubtedly greatly influence their children in respect to being active in sport and the way their children spend their free time. We should, therefore, motivate parents more in that respect. It is not enough to educate children only, parents should be educated as well; they should be good examples with regards to sport activities as well as in regards to smoking and other unhealthy habits. Not only does passive smoking increase the potential health risk (causing children get asthma or other chronic lung diseases), even healthy children grow up having a lower lung capacity. Physical examinations and lung capacity measurements of young athletes have shown worse results on average in those children who come from a smoking environment (Kopriva, 2002).

The results of this research have shown the majority of parents encourage their children to be active in sport; however, they should themselves become good examples for their children. They should demonstrate a rich, physically active family life without cigarettes.

When striving to reduce smoking behaviour among the youth, we should primarily influence children's peers and families. It is essential to know how to approach young people, what messages to give them and how to influence their families. It is necessary to find a way or a method that young people can identify with (Ivelja, 2004).

Based on observing the 'Law for a limited use of tobacco products', supervised by the health care inspectorate in the period 1997-2001, 2,167 checkups have been carried out in primary schools and only 372 in high schools (Turk, 2002). The results or measures taken afterwards are as follows: in primary schools, 39 written orders, eight fines and not one felony was been reported. In high schools, six 6 written orders, 12 fines, and three felonies were reported (Turk, 2002). The school teachers manage to prohibit smoking in and around the institutions; however, they have no influence whatsoever as to what is happening in the after-school hours.

Permissive attitudes towards smoking in a family, where some of the parents also smoke, are likely to cause children to start smoking. Experts recommend (Stergar, 2004) that parents start talking about smoking to their children when they are five- or six-years old, since many children have their first cigarette before they are 11. By then, they should be appropriately familiarized with smoking being unacceptable and harmful. Parents should tell their children how to turn down a cigarette if offered and yet remain a "hero". They should talk about commercials, publicity, the "true" messages, and wrong beliefs about smoking among young people (relaxation, body weight control, less harmful light cigarettes, mature appearance, better digestion etc.). Their educational attempts will certainly be more successful if their behaviour supports what they are saying.

"Sport without cigarettes" should become a rule and a part of the ethics of all who practice sport. Much attention is devoted to achieving a better physical shape, with which the problem of smoking is also related. Furthermore, young people can significantly be motivated and convinced to join sport.

The most convincing are also medical reasons for not smoking and the reasons pertaining to one's general appearance (Lejuez et al., 2003).

There is probably no boy who would not want to be admired by others for the way he looks. Being tall, having broad shoulders, a muscular chest – this is the image almost every young boy dreams of. Scientists have, however, proved that smoking in the early ages impedes physical development and growth. It has been proven that individuals who started smoking early have smaller lungs volume than non-smokers. The effects of smoking are thus just the opposite of what young people would like to achieve. The behaviour of young girls is even less understandable when they want to prove their equality to boys having a cigarette in their mouths. Abusing their own health, smelly clothes and hair, bad breath – all of these are the characteristics men least expect from an attractive young woman. Everybody fighting against smoking should take advantage of these facts (Videmšek, Štihec, Karpljuk, & Debeljak).

One public opinion survey (Drole, 2005a) has shown that in addition to promoting a healthier way of living, reminding people of the expense of cigarettes, smoking restrictions in all public places, separate non-smoking and smoking places in bars, and high fines for those who violate the law are the most efficient methods of restricting smoking.

The fight against smoking continues and is seeking new methods that would enable a more healthy way of life among young people. Schools are currently participating in various projects with which young people are being motivated to promote sport and not smoking. Joining in this fight are also medical and other institutions pertaining to preventive and curative treatments (Kopriva, 2002). PE teachers should also get involved. In cooperation with parents, they could well use sport to restrain smoking and build upon a relationship towards sport activities.

Smoking is harmful and what is even worse, it quite quickly addicts a “beginner”, and long-time smokers have great difficulty in giving up this unhealthy behaviour. Presently, there are a number of established methods for giving up smoking, including acupuncture, nicotine bandages and chewing gum, hypnosis and others. The criticism, prevention, and prohibition of smoking among young people are undoubtedly means that can help reduce smoking. However, we are of the opinion that young people will be turned away from smoking by means of planning a qualitative way of life.

People who are adequately occupied are most likely to fulfil their needs by taking part in appropriate activities and this way do not feel the need for any kind of substitutes (Brown, Lejuez, Kahler, Strong, & Zvolensky, 2005).

We are of the opinion that the most important factor influencing the decrease of smoking behavior is providing appropriate and adequate activities for young people in their spare time. Spare time that should be properly conducted and planned; it should be filled with activities that would fully engage each young individual. Sport activities certainly find place among them.

REFERENCES

- Brown, R. A., Lejuez, C. W., Kahler, C. W., Strong, D. R. & Zvolensky, M. J. (2005). Distress tolerance and early smoking lapse. *Clinical Psychology Review*, 25 (6), 713–733.
- Debeljak, D. & Kalan, M. (1987). *Poskus odkrivanja odnosov med športno dejavnostjo in kadilskimi navadami 14-letnih učencev in učenk* [An attempt to discover relations between sport activity and smoking habits among 14 year old school children]. Unpublished bachelor's thesis, Ljubljana: Fakulteta za šport.

- DiFranza, J. R., Savageau, J. A., Fletcher, K., O'Loughlin, J., Pbert, L., Ockene, J. K., et al. (2007). Symptoms of Tobacco Dependence After Brief Intermittent Use (The Development and Assessment of Nicotine Dependence in Youth – DANDY). *Archives of Pediatrics & Adolescent Medicine*, 161 (7), 704–710.
- Drole, P. (3.8.2004). *Med mladimi imamo največ kadilcev in nezadovoljnih z lastno težo* [Most smokers and those unhappy with their weight are among young people]. *Dnevnik*, 210, p. 2.
- Drole, P. (15.1.2005a). *Slovinci so za trdo roko* [The Slovenes vote for a firm hand]. *Dnevnik*, 14, p. 2.
- Drole, P. (15.1.2005b). *Kadilcem sovražno ozračje* [A hostile environment for smokers]. *Dnevnik*, 14, p. 2.
- Ivelja, R. (4.9.2004). *Šolarji živijo nezdravo* [School children live unhealthy lives]. *Dnevnik*, 290, p. 3.
- Kogovšek, T. (1999). *Navade, razvade in razširjenost uporabe drog med osmošolci na Ljubljanski osnovni šoli* [Habits, bad habits and drug usage among eighth grade pupils at a Ljubljana primary school]. Unpublished bachelor's thesis, Ljubljana: Fakulteta za šport.
- Kopriva, S. (2002). *Vpliv kajenja staršev na razvoj bolezni dihal otrok* [The effect of smoking parents on respiratory organs disorders of their children]. http://med.over.net/zasvojenost/vpliv_kajenja_otroke.htm.
- Kujala, U. M., Kaprio, J., Sarna, S., & Koskenvuo, M. (1998). Relationship of Leisure-Time Physical Activity and Mortality. *JAMA*, 279 (6), 440–444.
- Kujala, U. M., Kaprio, J., & Rose, R. J. (2007). Physical activity in adolescence and smoking in young adulthood: a prospective twin cohort study. *Addiction*, 102 (7), 1151–1157.
- Lampret, T. (19.11.2004). *Obraz kajenja sta bolezen in smrt, ne glamur* [The pictures of smoking are disease and death, not glamour]. *Dnevnik*, 317, p. 2.
- Lejuez, C. W., Aklin, W. M., Jones, H. A., Richards, J. R., Strong, D. R., Kahler, C. W., & Read, J. P. (2003). The balloon analogue risk task (BART) differentiates smokers and nonsmokers. *Experimental and Clinical Psychopharmacology*, 11 (1), 26–33.
- Mednarodni dan UICC brez cigarete [The UICC day without a cigarette]. (2002). In *Zbornik VI. nacionalne konference o nekajenju "sprememba je nujna" in mednarodni dan UICC brez cigarete* (p. 26–35). Ljubljana: Društvo za promocijo in vzgojo Slovenije.
- Primic-Žakelj, M. (2002). Mednarodna liga za boj proti raku in njen dan za cigareto manj [UICC and a day without a cigarette]. V *Zbornik VI. nacionalne konference o nekajenju "sprememba je nujna" in mednarodni dan UICC brez cigarete* (1–3). Ljubljana: Društvo za promocijo in vzgojo Slovenije.
- Pečjak, J. & Mohorko, D. (1995). *Zbogom cigareta! Priročnik o tem, kako postanete in ostanete nekadilec* [Goodbye cigarette! A manual on how to become and remain a non-smoker] Ljubljana: self publishing.
- Shapiro, S. (1994). *Smoking*. New York: Soros Foundations.
- Stergar, E. (2000). *Kako pomagati kadilcem, da prenehajo kaditi* [How to help smokers to give up smoking]. *Zdrav dih za navdih* (Glasilo društva pljučnih bolnikov Slovenije), 10 (3), 14.
- Stergar, E. (2004). *(Ne)kajenje med mladimi je velik problem* [(Non-)smoking is a big problem among youth]. *Vita*, 10 (43), 5–6.
- Sullivan, K. (2004). *How to help your overweight child*. London: Rodale international Ltd.
- Turk, J. (2000). *Lepota gibanja* [The beauty of exercising]. Ljubljana: Društvo za zdrave srca in ožilja.
- Turk, J. (2002). *Spoštovanje tobačnega zakona v Sloveniji* [Obeying the tobacco law in Slovenia]. http://med.over.net/zasvojenost/spostovanje_zakona_kajenje_slovenija.htm.

Videmšek, M., Karpljuk, D. & Debeljak, D. (2003). Sport Activities and the Smoking Habits of 14 Year-Old Male and Female School Children. *International Journal of Physical Education*, 40 (2), 64–69.

Videmšek, M., Štihec, J., Karpljuk, D. & Debeljak, D. (2003). Sport activities and smoking habits among the youth in Slovenia. *The acta universitatis Palackianae Olomucensis magazine Gymnica*, 33 (2), 23–28.

Videmšek, M., Videmšek, P., Štihec, J. & Karpljuk, D. (2004). Sports activity and eating habits of 14 year-old male and female pupils. *Kinesiologia Slovenica*, 10 (2), 65–77.

Wellman R. J., DiFranza, J. R., Savageau A. J., & Dussault, G. F. (2004). Short term patterns of early smoking acquisition. *Tobacco Control*, 13 (3), 251–257.

Zaletel-Kragelj, L. (2004). Kajenje med odraslimi prebivalci Slovenije [Smoking among Slovene adults]. *Vita*, 10 (43), 3–5.

Završnik, J. & Pišot, R. (2005). *Gibalna/športna aktivnost za zdravje otrok in mladostnikov* [Physical/sport activity for the health of children and adolescents]. Koper: Annales.