WHY TO SMOKE? WHY NOT TO SMOKE? MAJOR REASONS FOR CHILDREN'S DECISIONS ON WHETHER OR NOT TO SMOKE

Drahoslava Hrubá[1], Iva Žaloudíková[2]
[1]Department of Preventive Medicine, Faculty of Medicine, Masaryk University, Brno, Czech Republic
[2]Department of Psychology, Faculty of Education, Masaryk University, Brno, Czech Republic

SUMMARY

This study, aimed at the primary prevention of smoking behaviour in children and adolescents, attempts to find the main factors that distinguish smokers and non-smokers in the period of their first experimentation with cigarettes. There are only a few studies dealing with investigations into current motivations of teenagers as to whether or not to smoke. The programme entitled "Normal is not to smoke", using evaluation questionnaires given to children in the 3rd and 5th classes, also contains – among many other things – specifics on reasons children have for making the decision whether to become a smoker or non-smoker. The results are reported in this paper.

Methodology: Responses concerning potential inclination to smoking that were collected from children on the basis of questionnaires were categorized into the following groups: image, the influence of a role model, the effects of smoking, curiosity. Reasons for non-smoking were categorized into the following groups: health, aesthetic, economic, restrictive, other aspects. Children were also asked to describe smokers by using three pairs of opposite characteristics: education, success, wealth. The frequencies of answers were analysed for the whole set, for boys and girls and for children with different smoking behaviour; the differences were evaluated using the statistical programme EPI INFO, version 6.

Results: A total of 1153 children in the 3rd class and 799 children in the 5th class completed the questionnaire. Motivations for smoking were given by nearly 17% of children in the 3rd class and by nearly 27% of the same cohort in the 5th class. Aspects such as image (41.9% vs. 46.2%) were mentioned most frequently, by boys more frequently than by girls (OR 1.77; 95% CI 0.93-3.36; p=0.06), by children from smokers' families more frequently than by children from non-smokers' families (OR 1.33; 95% CI 0.69–2.57; p=0.3) and more frequently by children with repeated attempts to smoke (OR 3.93; 95% CI 2.32–6.65) or children who had only had a single smoking attempt (OR 3.18; 95% CI 1.52–6.75). Also the role of models (parents, relatives, friends) was often mentioned (12.9% in the 3rd class and 10.2% in the 5th class). Potential beneficial effects of smoking were expressed by 13% of children in the 3rd class and by 55% of children in the 5th class (p<0.0001). About 40 % of children considered smoking as effective coping with stress and about 20% of them declared smoking for mood improvement. Beneficial effects of smoking significantly more often described children with repeated smoking attempts (OR 2.91; 95% CI 1.73–4.89; p<0.001).

Children often linked smoking to the less educated and less successful social groups but also to the rich. In both investigations, health aspects were the most common reasons for choosing not to smoke (69.2% vs. 73.3%), being more frequently presented by girls and non-smokers. A significant shift in the negative aesthetic perception of smoking (14.1% in the 3rd class vs. 40.2% in the 5th class) and economic disadvantages of smoking (3.9% vs. 24.8%) was observed in the given period of time. Restrictive reasons were given only rarely by pupils in the 3rd class (0.7%), unlike pupils in the 5th class who feared the reaction of their parents (24.8%).

Conclusion: Our study provides an overview of current motivations in children aged 9 and 11 years that are crucial for their future smoking/non-smoking behaviour. The results of the study are important for developing a strategy for the primary prevention of smoking in school programmes and for introducing a general social approach to address the problem of the decreasing age of smoking initiation.

Key words: young schoolchildren, smoking behaviour, predictors, opinions

Address for correspondence: D. Hrubá, Department of Preventive Medicine, Faculty of Medicine, Masaryk University, Kamenice 5, 625 00 Brno, Czech Republic. E-mail: hruba@med.muni.cz

INTRODUCTION

This study focuses on the primary prevention of smoking behaviour in children and adolescents and attempts to find out the main factors that distinguish smokers and non-smokers in the period of their first experimenting with a cigarette. Most people have tried smoking and nearly all of them describe their first experiences with tobacco as negative. In spite of this, many of them will repeat smoking attempts and get used to adverse sensations; smoking will then give them satisfaction through the activation of the reward system in the brain.

Reasons for this different behaviour after the first experiments with tobacco are not easy to explain. Whether or not the person becomes a smoker can be determined genetically (1–4). Smoking helps the individual to cope with stress and is therefore associated with various social causes (5). Also infection or injuries can lead to morphological and functional changes in the brain, i.e. temporal-limbic dysfunction which is manifested by an epilepsy

spectrum disorder syndrome and occurs more frequently in smokers (6). Tobacco addiction is more likely to occur in psychiatric patients, particularly in those who have symptoms of depression and anxiety (7).

Attitudes of smokers towards smoking and towards lifestyle in general are formed in the course of life under the influence of family and society. These environments play an undeniable role that can be of key importance in some smokers (8). These attitudes form a social symbol – an image that is to be imitated (9). Knowledge and the subsequent modification of these attitudes is the fundamental principle of a strategy of primary preventive intervention programmes for children and youth (10).

The educational programme entitled "Normal is not to smoke" was created by medical and educational specialists and teachers for pupils in the 1st – 5th classes of primary schools. Its main goal is to improve the knowledge and affect the behaviour and attitudes of children towards major aspects of their lifestyle: diet, physical activities, non-smoking and interpersonal skills. Due to a relatively wide range of age of the target population (6–11 years), the programme is divided into two parts: the first part includes 15 lessons provided within 3 years. Children participating in this programme are accompanied by a squirrel named Vierka that represents a healthy life style. She tells the children fairy tales and uses animated puppets representing the human heart, lungs and teeth in order to explain the positive and negative effects of smoking, nutrition and physical activity/hypoactivity on these organs. The second phase, intended for pupils in the 4th and 5th classes, is aimed at refreshing and broadening knowledge about diet, movement, empathy and stress management. Children also learn about addiction through a fairy tale on the Faust theme about a fast and easy way of gaining problematic profits at the price of the loss of life in the seemingly-distant future.

The effectiveness of the programme is monitored in a cohort of both affected and control children twice per year: before the beginning of a series of 5 lessons, and 4 months after the last lesson. Some questions recur all the time, whereas new questions are added in higher classes when children have improved their reading and writing skills and are able to fill out questionnaires on their own and express their views in a broader context.

In the 3rd class, and again in the 5th class when the completion of questionnaires is individual and anonymous, children were also asked to write one to three reasons why they would possibly smoke and why they would not like to smoke. The results are summarized in this paper.

METHODOLOGY

The methodology of this study applies a part of a transtheoretical approach (details in Discussion).

Children in the 3rd class expressed their answers by means of free formulation to the two questions concerning reasons for smoking/non-smoking. Their answers were summarized in the following categories:

Why to smoke:

1. Image (to look cool, it is good, elegant, pretty, for a pretty – slim – figure).
2. To mimic a role model (father, friend, partner in love) or being forced (by friends).
3. Because of the effects (to cope with nervousness, stress, for a good mood, being addicted already).
4. Curiosity (why do people like smoking, why do so many people smoke).

Why not to smoke:

1. Health reasons (smoking is not healthy, I do not want to die of cancer, I want to live a long time).
2. Aesthetic reasons (smoking is disgusting, smokers smell unpleasantly, I do not like it).
3. Economic reasons (it is expensive).
4. Restrictive reasons (youth/children must not smoke, fears of parents' reaction).
5. Social reasons (loss of friends).
6. Other reasons (I could not do sports, I promised not to smoke, I do not want to be addicted).

It was not easy to give reasons for making a decision to smoke and most children did not answer this question. Hence, the questionnaire intended for the 5th class was extended with a choice of possible answers to this question with the possibility of adding freely formulated answers that would express the respondents' views. The same approach, including a choice of possible answers, was also applied to the question investigating the child's reasons for becoming a non-smoker in the questionnaire for the 5th class. Since the children were allowed to give more than one answer, the sum of frequencies of answers exceeds the number of respondents.

The questionnaire used in the 5th class asked children in which group of people there is currently the highest number of smokers, offering a choice of six possible answers and one free formulation to express an individual opinion. The sequence of the answers offered, consisting of 3 pairs of opposites, was chosen in such a way that they did not exclude one another at first sight; the set of opposite characteristics was listed in a table after evaluation of the results.

Frequencies of individual categories were analysed for the whole set (both intervened and control schools), as there were no significant differences between these groups. The analysis was made also for boys and girls, for children from smokers' and non-smokers' families (in the 3rd class) and for children who had experimented with smoking and those who had not smoked. Respective differences were statistically evaluated using the Mantel-Haenszel test and Yates-corrected test in the programme EPI INFO, version 6.

RESULTS

A total of 1,153 children (the number of boys and girls was nearly the same) completed the questionnaire in the 3rd class before the beginning of a series of lessons. Less than 45% of the children came from smokers' families and more than 13% of the children had had a first experience with smoking (Table 1). When the investigated cohort of children entered the 5th class, only 799 questionnaires were completed since some of the schools (particularly control schools) withdrew from the longitudinal study due to the replacement of teachers with new ones.

The question concerning reasons for smoking was answered in the 3rd class only by 191 pupils (16.6% respondents); other pupils left this question unanswered or wrote "I will not smoke,

Table 1. *The basic characteristic of the sample*

	3rd class	5th class
Total number of chidlren	1153	799
Boys	49.8%	51.3%
Girls	49.4%	48.7%
Missing data	0.8%	0.0%
Never smoked	86.6%	71.0%
Experimented	13.3%	28.8%
Missing data	0.1%	0.2%
Non-smoking family	53.9%	no identificated
Smoking family	44.8%	no identificated
Missing data	1.3%	

Table 2. *Reasons for decission TO SMOKE (% of answers)*

	3rd class	5th class
N of answers	191=16.6%	212=26.5%
Image	41.9	46.2
Benefitial effects	13.1	55.1
Imitation of model	12.9	10.2
For information about smoking	15.2	0.0

I do not want to smoke". The questionnaire for the 5th class was therefore extended with another option "there is no reason," which was used by 73.5% of respondents and the frequency of pupils responding increased to 99.5%. This answer was chosen by a significantly higher number of children who had not smoked (79.6%), or had had only a single smoking attempt (73.2%), as compared to children who had smoked repeatedly (42.9%; p<0.0001). Such answers were excluded from descriptive analysis and a distribution of 212 other answers (26.5% of a total number) was evaluated (Table 2).

The positive enhancement of image as the reason for smoking was most frequently given by pupils in the 3rd class (almost 42% of children), by boys more frequently than by girls (OR 1.77; 95% CI 0.93–3.36; p=0.06) (Fig. 1), by children from smokers' families more frequently than by children from non-smokers' families (OR 1.33; 95% CI 0.69–2.57; p=0.3) and more frequently by children experimenting with smoking (OR 2.63; 95% CI 1.34–5.19; p=0.002) (Fig. 2). This motivation was also strong in children in the 5th class (almost 50% of children) (Table 2), with a similar frequency for boys and girls (p=0.7) (Fig. 1). A significant difference (p<0.001) in the frequency of answers was found between a group of children with repeated attempts to smoke, and non-smokers (OR 3.93; 95% CI 2.32–6.65) or children who had only had a single smoking attempt (OR 3.18; 95% CI 1.52–6.75) (Fig. 2).

Potential beneficial effects of smoking were expressed by 13% of children in the 3rd class who answered the question (Table 2). Surprisingly, the expectation of pleasant effects as a reason for smoking was described by girls more frequently than by boys (OR 1.73; 95% CI 0.69–4.35; p=0.2) (Fig. 1), by children from smokers' families (OR 2.17; 95% CI 0.86–5.49; p=0.09) and by non-smokers (OR 2.60; 95% CI 0.79–9.44; p=0.08) (Fig. 2). However, the respective differences were not significant.

More than a four-fold increase in the frequency of answers stating that the expectation of beneficial effects is a reason for smoking was revealed for children in the 5th class (p<0.0001), where this answer was chosen by 55% of children from a group who responded to this question (Table 2). Both boys and girls considered smoking an effective means to cope with stress (32% vs. 43%; p=0.04) rather than a means for mood improvement (22%, vs. 14.4%; p=0.06) (Fig. 1). As with the previous reason, views on the beneficial effects of smoking also differed significantly in children with repeated smoking attempts as compared to children with a single attempt (OR 2.34; 95% CI 1.17–4.72; p<0.01) or no attempt (OR 2.91; 95% CI 1.73–4.89; p<0.001) (Fig. 2).

Reasons indicating smoker role models occur at a similar rate in the 3rd and 5th class. Curiosity as a reason for smoking was stated by children in the 3rd class (Table 2), whereas in the 5th class this reason was only given by children who had attempted to smoke or in connection with the question investigating the circumstances of the first smoking attempt.

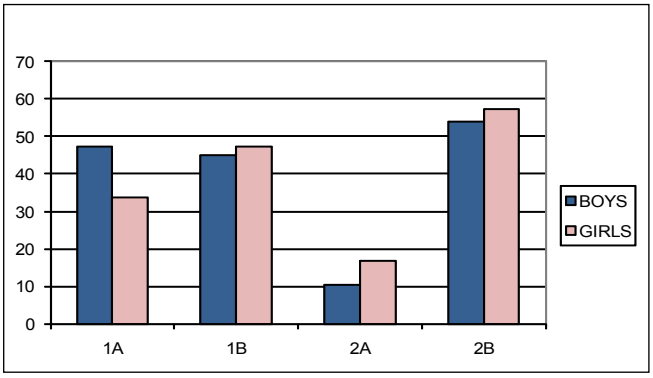

Fig. 1. *Frequency of reasons for smoking – sex differences between boys and girl.*

1A – image, 3rd class, 1B – image, 5th class, 2A – mood´s effects of smoking, 3rd class, 2B – mood´s effects of smoking, 5th class

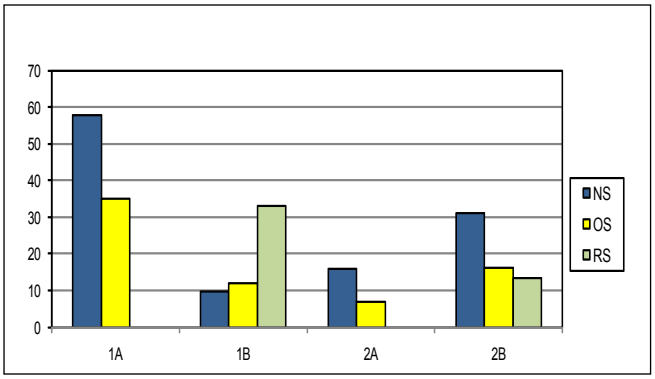

Fig. 2. *Frequency of reasons for smoking – behavioral differences between never smokers (NS); once smoking children (OS); repeatedly smoking children (RS)*

1A – image, 3rd class, 1B – image, 5th class, 2A – mood´s effects of smoking, 3rd class, 2B – mood´s effects of smoking, 5th class

The question concerning the reasons why not to smoke was answered by all children in the 3rd and 5th class. Pupils often chose more than one option from the offered answers. The most frequent reason for a decision not to smoke was either fear of a disease (cancer, in most cases), or a wish to be healthy and live a long life, as given by two thirds of children in the 3rd class and almost three quarters of children in the 5th class. The frequency of these answers increased between the 3rd and 5th year non-significantly (Table 3). Boys in the 5th class cited these reasons less frequently than girls (OR 0.66; 95% CI 1.17–2.40; p=0.011) (Fig. 3). For younger children (in the 3rd class), the frequency of answers did not differ between groups of children from smokers' and non-smokers' families, or between experimenting smokers and non-smokers. On the other hand, children in the 5th class who had repeatedly attempted smoking mentioned health reasons for non-smoking significantly less frequently than non-smokers (OR 0.35; 95% CI 0.22–0.55; p<0.001) and children with a single attempt of smoking (OR 0.40; 95% CI 0.22–0.72; p=0.01) (Fig. 4).

Three times more children in the 5th class emphasized aesthetic reasons, as compared to the previous survey (p<0.001) (Table 3). Whereas at a younger age there was no difference in the frequency of answers between boys and girls or between children from smokers' and non-smokers' families or between smokers and non-smokers, children in the 5th year were rather divided in this sign. This reason was given by less boys than girls (OR 0.57; 95% CI 0.42–0.78; p=0.002) (Fig. 3), by less non-smokers than by children with a single attempt at smoking (OR 0.35; 95% CI 0.22–0.56; p<0.001) and by less non-smokers than children who had smoked repeatedly (OR 0.09; 95% CI 0.04–0.21; p<0.00001) (Fig. 4).

A significant six-fold increase was found between the 3rd and 5th class in the frequency of economic reasons: from less than 4% to almost 25% (p<0.001). However, most children had still not perceived the economic aspect of smoking (Table 3). The high price for cigarettes as a motivation for non-smoking was given more frequently by boys than by girls (OR 1.67; 95% CI 1.17–2.40; p=0.003) (Fig. 3), by children with a single attempt at smoking (OR 1.57; 95% CI 0.98–2.51; p=0.048) and particularly by children who smoked repeatedly, as compared to non-smokers (OR 2.04; 95% CI 1.25–3.31; p=0.002) (Fig. 4).

Reasons named as "restrictive reasons" were formulated by children in the 3rd year as follows: "Children should not be allowed to smoke" and occurred only sporadically whereas in the 5th year almost one quarter of respondents specify these reasons and express them as "fear of the reaction of parents" (Table 3). No differences were found in the frequency of answers between boys and girls (Fig. 3), and between non-smokers and children with a single attempt to smoke (Fig. 4). However, children who smoked repeatedly were twice as likely to choose this answer than non-smokers (OR 2.32; 95% CI 1.44–3.73; p=0.005) or children with a single attempt at smoking (OR 2.33; 95% CI 1.23–4.40; p=0.0003) (Fig. 4).

The term "social reasons" included fear in children of a negative reaction from their peers, whom they would lose as friends by becoming smokers. This sign also showed a significant increase in frequency of choice in the 5th class as compared to the 3rd class (p<0.00001) (Table 3). The answer was chosen by boys more frequently than by girls (Fig. 3), and less frequently by repeated smokers than by children who had not smoked. However, respective differences were not statistically significant (Fig. 4).

Freely-formulated answers were included within "other reasons" and consisted of the following sentences: "I could not do sports", "I promised not to smoke", "I do not want to be addicted", or "Not interested". Their frequency was non-significantly lower in the 5th class than in the 3rd class (Table 3).

Upon categorization of the most frequent distribution of smokers in different social groups, frequency of the choice of answers corresponded to social reality in pairs characterizing education and success: children were likely to place smokers as less educated rather than educated people (a three-fold difference; p<0.0001) and as unsuccessful rather than successful people (a four-fold

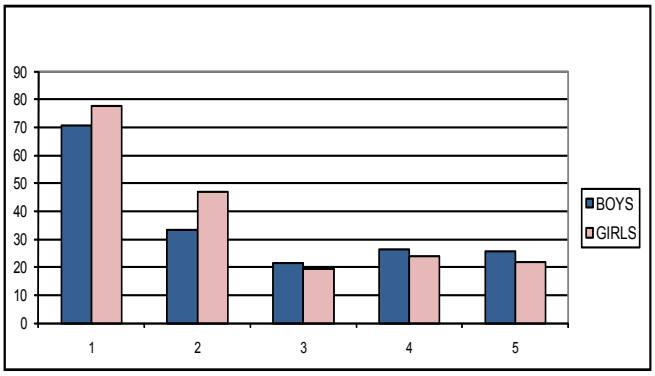

Fig. 3. *Frequency of reasons for no-smoking – sex differences between boys and girls, 5th class*

1 – keeping health, 2 – aesthetic, 3 – economic, 4 – restrictions, 5 – sociability

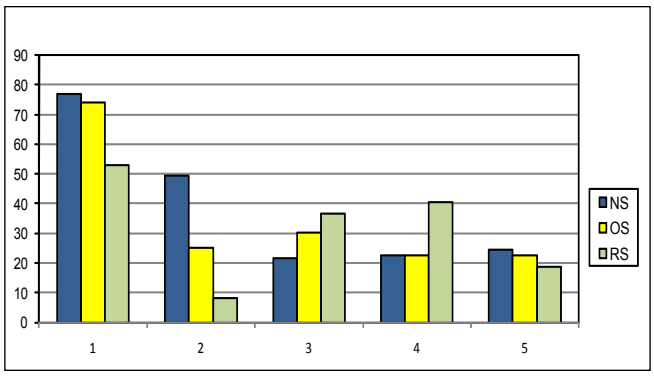

Fig. 4. *Frequency of reasons for no-smoking – behavioral differences between never smokers (NS); once smoking children (OS); repeatedly smoking children (RS), 5th class*

1 – keeping health, 2 – aesthetic, 3 – economic, 4 – restrictions, 5 – sociability

Table 3. *Reasons for decission TO DO NOT SMOKE (% of answers)*

	3rd class	5th class
Keeping health	69.2	73.3
Aesthetic	14.1	40.2
Economic	3.9	24.8
Restrictions	0.7	24.8
Socialibity	0.5	23.3
Others	9.8	6.4

difference, $p<0.00001$). Differences between boys and girls were not statistically significant. Although the ratio of frequencies of such opposite categories was somewhat lower in children who smoked repeatedly, it showed the same trend and the difference in the frequency of answers remained statistically highly significant ($p<0.01$) (Table 4).

The frequency of answers concerning the relationship between smoking and wealth is in contrast to this finding. In all individual analysed groups of children (except for the groups with a single attempt at smoking), smokers were described more frequently as rich rather than poor (with a statistical significance of $p<0.05$; or with $p<0.01$ in a group of repeatedly smoking children).

Freely formulated answers included in the characteristics marked as "others" often included homeless people, members of the Roma ethnic group, children and adolescents, "fools" or "all" people (Table 4).

DISCUSSION

Current investigation into the causes of the beginning of smoking focus mainly on the analysis of demographic, psychological and social factors (11–15). On the other hand, there are only sporadic studies investigating current reasons why children start to smoke (16–18).

The methodology of this study applies one part of a transtheoretical approach which was developed for change in risk behaviour and which is most frequently used for intervention during addiction treatment of smokers (19). Two of 12 proposed scales of decision-making activated in certain phases of changes in behaviour were selected. They seemed suitable to characterize an opposite trend in behaviour change, i.e. from non-risk (non-smoking) to risk (smoking) behaviour. The range of advantages associated with smoking was formulated for children as reasons stating "why I would like to smoke" whereas the range of disadvantages of smoking was formulated as reasons stating "why not to smoke".

Our study showed that most children of school age – more than 80% of 9-year-old pupils and three quarters of 11-year-old pupils – do not elicit any reasons that would lead them to a decision to become smokers. It should be emphasized that the reasons for smoking were given by 57% of children who smoked repeatedly, by 27% of children with a single attempt at smoking, and by only 16% of children who had not smoked (based on the data collected from those who answered this question).

It follows from the analysis of answers provided that the most frequent motivation influencing potential smoking behaviour in school children of younger age is the opinion that smoking enhances the attractiveness of an individual. Obviously, this is a result of direct and indirect advertising which deceitfully present smokers as the young, cool, cheerful, friendly, happy heroes of children's dreams. Role models such as children's smoking parents and other close relatives, to whom approximately 75% of participants in our study are exposed from early childhood, also contribute considerably to the formation of positive associations with smoking in children (20).

The perception of smoking as a pleasant, cheerful, and cool activity expresses explicit attitudes that are considered the most common cause of intergenerational transmission between parents and children. However, relationships are not unambiguous since the pubertal and adolescent age is characterized by negativism and rebelliousness, and children may accept attitudes that are opposite to those of their parents (21).

In this connection, answers given by children to the question 'to which social group do smokers usually belong?' may seem to be in contrast to the statement above. Most children characterized smokers as less educated and less successful individuals; a large number of children describe them as homeless people or members of the Roma ethnic minority. In contrast to this is the opinion that smokers are rich rather than poor people. We may only speculate about the reasons why children separate education and success from wealth. It is possible that children are influenced by smoking celebrities known from political, sports or cultural areas for whom the legality of how they acquired their wealth is rather questionable, and to whom the majority of society gives only little reputation or casts doubts on their success. It is also possible that children consider tobacco products as non-essential goods which only rich people rather than poor people can afford.

One remarkable finding is that the number of pupils who expressed the opinion that smoking helps to cope with stress and improves mood increased significantly between the 3rd and 5th classes. Apart from advertising, this is attributed to children's individual observations of their smoking relatives and to the correct perception of situations at which adults usually light up a

Tab. 4. *Which people usually smoke – frequencies of children' opinions (%)*

Characteristic	Total	Boys	Girls	Smoked		
				Repeatedly	Once	Never
High educated	13.5	12.9	4.6	16.2	12.9	13.0
Low educated	39.2	41.1	36.7	34.3	46.6	38.6
Rich	37.5	40.0	36.1	46.5	30.2	37.5
Poor	32.4	33.7	30.1	38.4	35.3	30.5
Successful	12.4	13.4	11.5	15.2	16.4	10.7
Unsuccessful	49.0	46.1	52.1	40.4	50.0	50.7
Others	18.8	17.9	21.2	21.2	20.7	19.9

cigarette. Whereas this motivation was mentioned by more children of younger age who had not smoked, the frequency of this answer in a group of repeated smokers was twice as high as that in a group of non-smoking children in the 5th class. It is assumed that whereas first attempts to smoke are perceived as disgusting, repeated smoking leads to adaptation to the acute phase of toxic effects associated with exposure to nicotine and carbon monoxide and that smoking gives an expected reward to children-smokers.

Our study did not enable us to conduct more detailed investigation of children's social conditions, particularly those that might lead to chronic stress. The distribution of children living in complete families with biological parents (approximately 72%), in single-parent families (approximately 11%) and in families reconstructed with one non-biological parent (approximately 17%) was similar in non-smoking and smoking children. Most frequently, smoking children had parents with basic school education and some of them had parents with university education. However, this fact does not shed any light on the psychosocial bonds in families or on the potential chronic stress environment of the children.

Nevertheless, one of our previous studies that focused on children of older school age revealed a close correlation between smoking behavior in children and the prevalence of negative forms of home upbringing over positive encouraging stimulations, and their bad school results and dislike of school (22). Similar correlations between the occurrence of emotional and behavioural problems and smoking by children of pubertal and adolescent age was reported in a number of studies from different countries (for example 23–27). The biologically plausible explanation of the correlations found is that children are looking for substitutional initiators of the release of dopamine in the absence of natural stimuli (28).

The results of our study on the current motivation of children to non-smoking were compared with a similarly designed study entitled German SToP ("Sources of Tobacco for Pupils" – 18) including 707 adolescents aged 12–15 years, i.e. pupils of the 7th – 9th classes. The conclusion of the study is in good agreement with our findings indicating that the main reasons for a decision not to smoke were fears of diseases such as cancer and a wish to stay healthy, which was more frequently reported by girls and non-smokers.

Authors of the Liverpool Longitudinal Study of Smoking also surveyed children repeatedly, first at the age of 9 and later at the age of 11. When surveyed for the first time, respondents stated very frequently that smoking is unhealthy, particularly for children, whose "bodies are smaller" than the adult's body. In the second survey, the same respondents characterized the differences between children and adults by degree of responsibility and the physical maturity of individuals. They said that those who are "mature" have their smoking behaviour under control and are able to face potential harmful consequences and therefore there should be no objections to their smoking behaviour. Such "mature" individuals occur not only among adults but also among children and youth. The opinion that smoking may be a part of adult life can be a reason that some children postpone experimenting with cigarettes till a later age, whereas other children consider smoking to be a visible demonstration of their desire for early entry into the adult world (29).

In available scientific literature, we found psychological and social case studies in adolescents and young adults which also confirm that health was a primary factor for making the decision to smoke or not (16, 17, 30).

A comparison of answers from our pupils of the 5th class with those in the StoP study showed similar frequencies of aesthetic, economic and restrictive reasons for non-smoking. Authors of the StoP study were surprised by the low frequency of economic motivations for non-smoking (20.8%) and restrictive reasons (less than 10%) although the tax on tobacco products in Germany has increased ten times over the last 15 years and bans on smoking in public places are already in effect. They explained this finding by speculating that young people, particularly non-smokers, have only a little experience with the increasing price of cigarettes and with the consequences of violating bans on smoking.

We can accept this hypothesis. Participants in our study, who are younger than those in the German cohort, buy tobacco only sporadically (less than 10% of repeat smokers), since they usually get it from their parents or relatives (up to 80% in the 3rd year, 30% of children in the 5th year) or from their friends (rarely in the 3rd class, 58% of smoking children in the 5th class). Smoking by children and youth is generally tolerated in Czech society. Bans on smoking are only applied in school rules. Parents of pupils under 15 often refuse treatment of their children for proven addiction to smoking (31).

Our previous study that included the same age group as the StoP study investigated the level of weekly pocket money. It was found that smokers included most children who were given at least 50 CZK (approximately 2 €), which was more than the average price of a pack of cigarettes at that time. Among children with a higher amount of pocket money, 20% smoked regularly and 22% smoked occasionally, whereas only 1.5% and 6% of children with a lower amount of pocket money smoked regularly or occasionally (22). Taxes on tobacco products have also increased in the Czech Republic but this increase is slower compared to the increase in the average salary. So the relative price of cigarettes is actually lower than it was before the social transformation of the 1990s. We therefore assume that our results are not in contradiction with WHO strategies, according to which a continuous increase of taxes on tobacco is one of the most effective measures to prevent smoking (32).

Targeting school education in non-smoking is a primary preventive factor in a society where approximately 30% of adults smoke, two thirds of children under 10 are exposed to smoking role models in their parents and grandparents, and up to 75% of children meet smoking members of their "broader" family (15, 20). A consistent non-smoking environment in schools combined with educational programmes has a principal, exponential effect on children, as it decreases the availability of tobacco, peer pressure and positive attitudes towards smoking. Children obtain information on the health risks associated with smoking, the economic costs, and the social consequences of smoking in modern society (33). All these aspects are included in the programme entitled "Normal is not to smoke" for pupils in the 1st – 5th classes of primary schools, which is connected with programmes for kindergartens entitled "We do not want to smoke", "I will not smoke and I know why" and with the programme "Smoking and me" for pupils in the 6th – 9th classes of primary schools.

The only factor that limits the results of our study is that the monitored cohort was selected deliberately (based on the schools' interest to participate in the educational programme "Normal is

not to smoke" and the schools' willingness to cooperate in the project) rather than in a representative manner. This shortcoming is partially mitigated by the fact that cooperating schools are located in places with different urbanization: large cities, district towns, and villages. We cannot even exclude that children would share opinions when filling in the questionnaires although teachers were asked to ensure conditions similar to those during school exams (silence, prevention of copying). Whenever there is an obvious match for some questions, which is found when the data are entered in the computer programme that is done by one person, the answers are excluded from further processing.

CONCLUSION

This paper, which deals with the current factors influencing the attitudes of school children towards smoking and their decision on whether or not to smoke, presents the partial results of our study. The study is unique as it investigates age groups of children between the 9th and 11th year, i.e. in a period before first smoking attempts in most children, and describes initial experimenting with smoking. The results of this study help to understand different factors which play a role in the innovation of existing approaches to the primary prevention of the spread of a smoking pandemic.

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