Original Articles

ANALISIS IN BASIC EDUCATION SCHOOL CHILDREN OF KNOWLEDGE ON TOBACCO CONSUMPTION

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SUMMARY

Introduction. Tobacoo addiction has been increasing in adolescents, with a starting age 12-14 yr old Objetive: To identify cultural and family factors related to tobacco smoking, besides knowledge on complications, health risks and perspectives to tobacco consumption among basic school age children. Design.   coss   sectional   community   survey   in   schools Frame   of   Reference.   children   population   in   basic   education Participants. Children 6 to 12 yo, primary education with school grade according to age. Interventions.   Prestructured   questionnaire   exploring   smoking   habits   in relatives   and   socio-familiar   environment,   perspective   for   consumption, knowledge   about   health   risk   and   complications   due   to   tobacco   consumption. Results. 434 students were interviewed, 45% of uncles, 42% of fathers and 15 of mothers are smokers. 94.23% said that an "adequate" age to start tobacco use was 18 yo, 41 (9.44%) said they are going to smoke when they grow up, 82.9% have seen tobacco (cigarretes) TV ads, 65.4% have received inhome information on tobacco adiction, 90.8% affirms that tobacco smocke is harmful, 65.2 % that it produces respiratory disease, 61.5% heart disease. Conclutions. In this study was observed the existence of family habits tham may influence family members in the development of tabaquism. The knowledge of health risks are important, the majority thinks that tobacco smoke is bad for the health of different organs and systems. it's necessary a direct intervention in this school stage to cut the tobacco use epidemics

Key words. addictions, health damages, tabaquism, tobacco

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INTRODUCTION

The abuse of substances like tobacco has worried parents, doctors, public health professionals, educators and politicians, mainly because it has increased in adolescents, all have wondered if it is by curiosity or sensation to experiment or is it rebellion or just recreation. The fact is that the starting age has diminished to 12-14 yo.[1] The rate of smokers has increased in a worrysome way in both genders mainly in school age children and adolescents, in 1998 it was found in the USA that the higher the school year the higher the proportion of smokers, so in 8th grade, 19.1% was a smoker, 10th grade 27.6% and 12th grade 35.1%

It has also been observed that age is related in a direct way with the proportion of smokers, in adult smokers 90% initiated during adolescency. Based in this situation primary, secondary and tertiary prevention programs have been implemented in the communities[1-3]

In Chile, tobacco consumption incremented between 1994 and 1996, stabilized in 1998[4]; in Mexico the performed surveys have revealed a prevalence of 25% of smokers in urban populations from 12 - 65 yo, 20% are ex-smokers and 55% non-smokers.

The prevalence in Mexico is 69% for men and 31% for women. 9% of smokers are under 18 yo. In Mexico City at junior and high school level (12 -18 yo) an important increment has been observed, in 1991 it was reported that 46.5 % of students were smokers, but in 1997 increased to 55.4% ; being almost the same in both genders[5].

Few studies exist that demonstrate, on one hand, the knowledge of the children on the health risks due to the consumption of tobacco, and on the other hand, that relate the ignorance of these risks to a greater tobacco consumption or beginning of the consumption to a smaller age. Thus, it is necessary to get these data to initiate a long term intervention project,in that risk group,

to diminish the epidemic of tobacco consumption. With this justification a study was planned, with the objective of identifying, in school age children attending a basic public education school, the cultural factors and family environment related to tobacco consumption, as well as the knowledge that they have on the complications and the health risk that implies to initiate the consumption of tobacco at an early age. Under the hypotheses that is probable the existence of factors in the family environment that may be related to the frequency of tobacco consumption, in addition that the students have little knowledge on the risks that the beginning of tobacco consumption at an early age implies, which could be related to its early practice, because of litle or no access to information.

MATERIALS AND METHODS

A study was designed: observationaL, descriptive, no comparative (unisample),prospective,croos-sectiona, Type community survey in school premises. It was done in children 6 - 12 yo chronological age, attending to a public elementary school, classified by school grade, the application of the data collection tool to children was performed by the investigators with the help and support of the school faculty, in the period of one week and within the normal schedule of activities. exploring variable demographic like age, school grade, residency, as well as existence of smokers in the family, in addition the related ones to the knowledge they have on damages to the health by tobacco, if smoke causes damage and injury to diverse organs and systems; finally the perspective on why the population consumes tobacco and if it is necessary to do so, in order to have social acceptance

The target population was made up of children 6 to 12 years of chronological age, of all school grades attending to a public elementary school Centro Escolar de Chiautempan, Tlaxcala, México, with school grade accordingly to the chronological age and able to answer the questionnaire, special education children and children with learning problems were not included in this study.

For this study, all the target population was included in a non probabilistic non conventional sample As part of the validation, the study was applied to a first group, used as a pilot group, to evaluate the possible faults of the questionnaire. The authorization, the collaboration and participation of the teachers of the selected school was obtained. The groups where the tool was applied were determined, The application of the survey was programmed in a such way not to disturb the normal activities in the school. An evaluation of the tool application and questionnaires was performed with the intention of not altering the registry and capture of them. Already obtained, the data base was made in Epi Info 2003, a computational program, for statistical analysis of descriptive type, univaried contrasting the differences of some of the most important variables, with non parametric Chi square test, with alpha level of significance 0.05. Data is presented in out frames with absolute numbers and percentages obtained for each of the studied variables.

RESULTS

The total number of questionnaires was 434, the proportion by sex was similar 214 (49.30%) female and 220 (50.70%) male, The distribution by age, was similar between 7 and 11 y.o., between 17.1 y 18.7% for each age group, although in both ends the number of interviews were smaller, 5.8% in the 6 yr and 3.6% for the 12 yr.

Regarding family habits it was observed that smoker relatives, are in first place uncles by the maternal side of the family 194 (44.7 %), followed by paternal uncles 184 (42.4%), third place was for parents 181 (41.7%), in lesser proportion grandparents, brothers and cousins. (table 1)

One question to the children was, which is the most adequate age to start smoking, the greater proportion responded

25 years old, 117 (26.95%), followed by the age of 30 year old 106 (24.42%) and in third place was 18 years old with 103 (23.73%), after 20 years old 83 (19.12%), it stands up that altogether 94.23% of the children consider the age to start smoking after 18 year old. (table 2)

When making the analysis of the number of positive answers to different questionings about concepts the children have, related to tobacco consumption; like why people smoke, the repercussions of smoke on the health; the information given by visual, auditory and written mass media, as well as the information provided at home, school, and socialization aspects related to tobacco consumption; it was observed in descendent order, in first place, that 394 children (90.8%) said that tobacco smoke is harmful; 360 (82.9%) affirmed to have seen cigarette advertisements in commercial television; 284 (65.4%) said they have received at home information about tobacco consumption; 283 (65.2%) thinks that smoking causes respiratory disease; 267 (61.5%) consider that smoking causes hearth disease; 228 (52.5%) thinks that smocking causes cerebral disease. 40 (9.2%) students, said that those who smoke are less likely to get sick. In the same way, only 21 (4.8%) children said that those who smoke live longer. To smoke by imitation, to have friends or to be accepted in peer groups, were not considered important in a great proportion of the interviewed students. (table 3)

Regarding the question: are you going to smoke when you grow old? 42 (9.6%) of the students answers were affirmative, 250 (57.6%) had a negative answer and an interesting aspect is, the one related to the undecided answer from a third part of the children, 142 (32.7%), the answer was that they didn't know if they were going to smoke or not.

When we related the 42 children that said they were going to smoke with the affirmative answer of tobacco consumption by the mother a

Table 1

Proportion of familiar antecedents of smoking

Variables with affirmative answers	TOTAL	
	N°	%
Your maternal grandfather smokes	101/434	23.27
Your maternal grandmother smokes	22/434	5.06
Your paternal grandfather smokes	106/434	24.42
Your paternal grandmother smokes	32/434	7.36
Your maternal uncles smoke	194 /434	44.70
Your paternal uncles smoke	184 /434	42.39
Your mother smokes	63/434	14.51
Your father smokes	181/434	41.70
Yours cousins smoke	87/434	20.04
Your siblings smoke	31/434	7.14
You will smoke when you gorw up	41/434	9.44

Table 2

Answer to the question at what age you think that you will begin to smoke?

Begining Age (years)	Total	
	N°	%
10	5	1.15
12	7	1.61
15	13	2.99
18	103	23.73
20	83	19.12
25	117	26.95
30	106	24.42
Total	434	100.00

coincidence was found in 23.8%.

The contrasted differences with the non-parametric chi square test, with Yates correction revealed a result equal to 15.0 with a p = 0.0001075, very significative in favor of the differences, indicating the probability that if the mother is a smoker, her children think on start smoking in the future.

The analysis with the same previous procedure applied to the fathers, gave as a result in first term coincidence between the children that are going to smoke with the father smoker, of 12.2%. contrasting the differences between those who are going to smoke and those who are not going to smoke, with the fathers smokers and non-smokers results in chi square of 2.17 with p = 0.14, there are statistically no significant differences, there is no relation between the fact that the father smokes and the children think about doing it in the future (table 4).

From other results when contrasting the probable age of beginning tobacco consumption, with information obtained in television, there are not differences in any of the age groups, chi square of 10.4 and p = 0.58. in ratio the obtained result was, chi square of 15.69 and p = 0.20; in newspapers chi square of 8.03 and p = 0.78, there are statistically no significant differences either.

DISCUSSION

An emergent problem, of world-wide repercussion is the epidemic of tobacco consumption, has been associated with violent behavior, like carrying of weapons and corporal fights, in addition to the relation with the consumption of other drugs[6].According to the findings of the study the students of basic education, have sufficient knowledge, on the complications and damages to the health related to the tobacco consumption; with positive tendency, more of 90% considers that tobacco smoke causes damage, and more than half that causes diseases, which constitutes a field of fertile work, where educative factors can be seeded, reinforcing these concepts, to face the serious social problem that tabaquism constitutes.

Table 3

Affirmative answers found in the different variables of the study

Number of affirmative answers	TOTAL	
	N°	%
Smoke for nerveousness	163/434	37.6
Smoke to look good	47/434	10.8
Smoke to feel important	85/434	19.6
Smoke when they are sad	115/434	26.5
Smoke when happy	92/434	21.2
Those who smoke get sick less	40/434	9.2
Those who smoke live longer	21/434	4.8
Smoking is harmful	394/434	90.8
Smoking causes brain diseases	228/434	52.5
Smoking causes cardiac disease	267/434	61.5
Smoking causes respiratory disease	283/434	65.2
Smoking causes hypertension	204/434	47.0
Cigarrete ads are in TV	360/434	82.9
Cigarrete spots are in radio	228/434	52.5
Cigarrete advertising is in newspapers	162/434	37.3
Ads tell that is good to Smoke	24/434	5.5
Schools give information onSmoking	232/434	53.5
Home information about Smoking	284/434	65.4
They smoke by imitation	23/434	5.3
It is importatn to Smoke	20/434	4.6
Dead relatives due to Smoking	94/434	21.7
It is necessary to smoke to have friends	10/434	2.3
Smoking for peer acceptance	13/434	3.0

Table 3. This picture shows the results to the questionings of why people smoke, also about the repercussions that tobacco cnsumption causes to the health; information about smocking present in mass media, TV, radio and press, site of received information home or school and the relation socialization-smoking

It has been tried in many ways to revert the tendency of tobacco consumption with control through official organisms, nongovernmental organisms, foundations etc, like in México5, nevertheless the advance is short. Massive and intensive publicity, with great financial resources, is perhaps the more important of factors that favors the consumption, with the kind of images presented in visual communication media, that in the reality they lack proper control due to the lack of laws on the matter, and even some controversies have favored the tobacco companies[7,8].

In contrast, in this work, communication mass media do not seem, according to the results, being important factors related to tobacco consumption, however we must have in mind that this is only the perspective that the children have, not the fact that they are tobacco consumers, which could change the concept. these same elements must be look for in adolescents who already initiated the tobacco consumption; in order to be able to affirm categorically that the media does not influence in the early beginning and the intensity of the tobacco consumption. On the other hand it has been proposed to apply policies to protect the children, as passive smokers, by the atmosphere of smoke that is created around them, and the effect of nicotine on growth and development. and on the other side, to provide detailed information to the public to protect it from incorrect information[7-11].

In this sense, it calls the attention that the relatives of the interviewed children, are important smokers, which could be in relation to frequent exposure, probably nonpermanent, to tobacco smoke. And it stands out, the fact that the children with smoker mother, have greater probabilities of smoking.

One of the strategies to fight the tobacco epidemic is to promote health education to the most vulnerable age group, the group in scholastic age, before adolescence, in those who preventive work becomes necessary to delay the beginning of the addiction to tobacco consumption. It is necessary, to grant information to students because of the

possibility that the incidence of smokers at an early age increases. In this stage of the life, they are more sensible to the visual information which influences not only in that they begin early in the tobacco consumption, but that it extends until the adult age. More than to insist on the total prohibition of the sale or the general marketing of tobacco products, the approach must be towards prevention[8,12,13].

There is a very serious and severe problem when considering that tobacco is a substance that does not produce addiction, therefore its sale or its consumption does not have to be prohibited in a legal way, the International Agency for Research on Cancer has been able to demonstrate an increase of passive smokers, in 16%, of risk to develop Cancer[11], the investment in investigation by one side and in publicity by the other, in order to promote consumption, is far superior to the resources counted to promote health[11], mainly in developing countries, as it happens in Mexico, specifically. In Canada, it was demonstrated, that the prices of cigarettes are associated in direct way with the probability of being nonsmoker and in inverse reason with the amount smoked for adults of both sexes. Also the municipal restriction limiting to smoke in public was associated positively with nonsmokers and negatively with the amount smoked for women but not for men. These results indicate that different strategies must be planned for men and women by the type of answer are due to look for health education programs and restrictions to smoke in public[12]:

In other studies, the arguments for or against the regulations are, in more than 60%, non-related to science and only 39% argue scientific reasons[13-15].

The students interviewed showed the probability of smoking in another stage of their life, in a low proportion,, but this proportion must be added to the undecided, it is to say that those whose answer was that they did not know if they were going to smoke in the future, then this group, that can be called vulnerable, must be put under specific programs of health promotion, as it happens in some countries, few programs are directly included in the school's academic programs, in a revision of

such aspects made in 1997, of literature in the last 11 years, concludes that although in some sites the programs including the principles of the letter of Ottawa have been developed, a complete evaluation has not been made in a systematic way that includes not only the process and results in the short term, but the results in the long term, and better yet, the impact of such programs in the starting age for tobacco consumption as well as alcohol and other drugs[16-26].

In conclusion, based on the observed results and the looked for objective; in school children attending a public basic education center, the knowledge they have over complications and health risks that implies tobacco consumption at an early age, are sufficient. Besides, the knowledge in tobacco consumption are similar in the different school grades, although it seems that the higher the school grade, higher knowledge. Cultural and family environment factors related to tobacco consumption were also observed, above all intrafamilial smoking. In a more detailed way, the fact of having smoker relatives, gives the impression that is more related to the probability of tobacco consumption by the children

The probability of tobacco consumption in the interviewed children, taken after the affirmative answer over tobacco consumption in the long term, is almost 10%, which is related to findings in other studies. A relevant aspect is the perception of the age to start smoking, the majority (94.22%) thinks that it should be after 18 y.o.; As far as de answer to the question that if tobacco smoke is harmful, more than 90% say yes, at which of the different organs and systems, in descendent order, all above 50% are: Respiratory system, Cardiovascular, Neurological and Hypertension.

With respect to the influence of mass media, stands out the fact that a great part of the children, mentioned TV spots about tobacco (82.9%), half of them mentioned radio commercials and a third part mentioned written media.
A call for attention that in the two sites of great relevance for the formation or education in the children, home and school, between the third and

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Table 4
Findings in children who said they were going to smoke related to parents who smoke

Will you smoke when you grow up?		Mother smokes		X^2	p	Father smokes		X^2	p
		Yes	No			Yes	No		
	Yes	15	27			22	20		
	No	48	344			159	233		
	Total	63	392	15	.0001	181	253	2.17	0.14

the half part of the children did not have information on tobacco consumption.

The children in this study related the cause to smoke with states of mood, their perception is that is done mainly, by restlessness, to be sad or to be glad, in descendent order, In relation to social acceptance of tobacco consumption, the children's perception is not clear, only 15.0% for imitation, in order to have friends, etc.

Finally, within the important proposals an integral educative process is considered, to teach with the example, to avoid the tobacco consumption of the parents, mainly at home, to engage in a dialog with the children at that level, about the risks of tobacco consumption. It is necessary, a project of intervention in the community, to the families of course, that includes information about the health risks involved, giving them in that way support elements to educate the children It is necessary of course, a project of educative intervention, indispensable, to be developed for the teachers in basic level, even since the education of the teachers (bachelor's degree) about the risks to the health that tobacco consumption implies, promote the inclusion in the basic level curricula an specific course on tobacco, so the teacher may address this topic seriously

Mass media, mainly TV, are important promoters of tobacco consumption, therefore, the community must promote a change of schedule of tobacco advertising to a time when minors are less likely to watch TV.

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