

## Evaluation of the Smoking Prevention Program in Kindergartens

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The aim of the present paper is to discuss the results of the evaluation of The Smoking Prevention Program in Kindergartens. The research was conducted according to the research plan; therefore the present paper summarizes and discusses the results of the study only, and does not go into the details of the methods and procedure.

Prior to the introduction of the method, a pilot testing was conducted.

The interview with the participants of the experimental group was conducted three times: before the introduction of the program, right after the program and 3 months after the program. Similarly, in the control group, the second interview was two weeks after the first one, and the third interview was 3 months after the first one. The parents of the children and the kindergarten teachers were asked to complete a questionnaire.

### Results

#### *Participants*

*Experimental group:* n=149, mean age 74.5 months (SD=7.6)

*Control group:* n=138, mean age 73.6 months (SD=7.67)

The calculated required sample size was n=216, so the total sample size of n=287 was sufficient to obtain results with satisfactory statistical power.

*Stratified sampling* was used as a sampling method, which enabled us to have participants representing the whole country, and all different types of towns and villages.

The parents of the children had a mean age of 35 years in both groups. There was a greater proportion of smokers among the parents in both groups (42.5% in the experimental group and 45% in the control group) than the average in Hungary (36%).

#### *Interview with the children*

Attitudinal changes: children showed *increased sensitivity and refusal to smoking equipment* (cigarettes) after the program, and this change proved to be long-term, as it was present 3 months after the program as well. The change was the result of the program, as there were significant differences between the experimental group and the control group.

Behavioural skills: as for behavioural skills, ability to *reduce passive smoking in a theoretical situation* improved after the program, and the effect was present 3 months later as well. The change was the result of the program, as there were significant differences between the experimental group and the control group. However, the ability to *reduce passive smoking in*

*their own lives* has not changed: children did not report higher level of attempts to reduce passive smoking in the situations they were asked. It means that children became more aware of the need of reducing passive smoking, but in the given situations they did not act according to this knowledge.

Knowledge about smoking: Results show that in all the measured areas children's knowledge increased after the program. Short-term *consequences* of smoking were more easily remembered *with the help of environmental stimuli* (cough), knowledge about the long-term consequences of smoking increased, too. Children's knowledge was easily activated by direct questions as well. These changes were partly the result of the program: there was significant difference between the experimental group and the control group in the exercises which used environmental stimuli and an indirect way of asking about the consequences of smoking. In the case of the direct question ("What happens to adults if they smoke every day?"), however, there was no significant difference, only tendency, but this is because the results of the control group were very high too (86% of the control group mentioned at least one long-term consequence of smoking, and this increased at the second and third time). It means that children have a high level of theoretical knowledge, which can be relied on when the program is administered at kindergartens.

Symbols and equipment of the program: Understanding of the cherry symbol was measured in two ways: whether children realize its connection with smoking and the quality of explanation they give when asked to explain the symbol. A higher percentage of children in the experimental group realized that the symbol is about smoking, but there was a difference between the experimental and control groups, although not significant, before the program as well, so the difference between the experimental and the control group can only partly be attributed to the program. This difference may be due to a higher level of presence of the topic of smoking in the kindergartens where the program had been administered before. Children showed a deeper understanding of the cherry symbol after the program, though a baseline tendency towards difference between the two groups was present here too. But the difference between the two groups became significant after the program, so this change is the result of the program.

As for the experiment with the *smoke suction pump*, results showed that the pump was not used in every group. Kindergarten teachers chose not to use it, because they did not want to have smoke in the children's room or because they thought children are too young to have this kind of demonstration. However, those children who saw the demonstration remembered it very well right after the program, and 3 months later as well. It means that the equipment

itself is effective, but a greater emphasis should be placed on explaining this equipment and its importance to kindergarten teachers.

Children were asked about the tale of the program, and most of them (85%) remembered it 3 months after the program. The connection between the tale and smoking was remembered in a lower percentage of the children (65%).

All in all, the results of the interview with the children are encouraging; the results of the program are evident in most of the exercises. In those cases, where there is no significant difference, the reason is the high level of the results of the control group.

A very important finding is that there is no difference between the results of the children in the different parts of Hungary, and in different kinds of towns or villages, contrary to the control group where such differences were present. It means that the program can be used everywhere with the same results.

### ***Kindergarten teachers***

Kindergarten teachers are satisfied with most parts of the program (the only exception is the smoke suction pump; some kindergarten teachers did not think it to be useful).

Another result worth mentioning is that the opinion of the kindergarten teachers of the experimental group about smoking became more negative during these 3 months, contrary to the kindergarten teachers of the control group.

### ***Parents***

There was a high proportion of smokers among parents. However, parents were aware that smoke disturbs children, and they do not have a positive opinion about smoking.

Parents had a good opinion about the program, and they discussed it with their children. They remembered the symbol of the program, and they liked it.

Some parents reported that as a result of the program, they smoked less and not in the presence of their children. In a few cases, the family members of the children quit smoking after the program.

### **Summary**

Results of the evaluation show that the program is effective in reaching long-term changes in the attitude towards and knowledge about smoking. It also became evident that children have a high level of previous knowledge about smoking, especially about the consequences of smoking, which can be relied on when administering this program. The program can be administered with the same beneficial results in the different regions of the country. There should be placed greater emphasis on the behavioral aims of the program.