CHILDREN'S HEALTH EDUCATION ON PROTECTION FROM SUN EXPOSURE AND THE ASSESSMENT OF ITS EFFICIENCY

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BACKGROUND

- During the last decade the prevalence of skin cancer has increased worldwide, including Lithuania.
- Every year **1 800** of new cases of skin cancer are registered in Lithuania (2/3 women, 1/3 men), whereas the number of such cases in **1979** was only **705**.

- Of all the newly diagnosed malignant tumors in **2005**, **skin cancer** composed **69,7** cases for 100 000 in women and **47,5** in men;

  melanoma, accordingly, **8,7** and **5,2**.

BACKGROUND

- The relationship between the development of cutaneous melanoma and severe sunburns in childhood has been proven in a number of epidemiological studies.

- People who emigrated to regions with intensive sun being adults develop melanoma less frequently, than those who emigrated in their childhood, showed the studies performed in the USA, Australia, and Israel.

BACKGROUND

- 80% of lifetime sun exposure is experienced up to 18 years of age. Intensive sun exposure in childhood is a significant risk factor for developing skin cancer and melanoma in further life.

- Health education, including dissemination of knowledge on protection from harmful sun exposure, may help to avoid this unfavorable prognosis.

THE AIM OF THE PROGRAM "LET'S KNOW THE SUN BETTER"

To teach children, teachers, and parents suitable behaviour in the sun

OVERVIEW OF THE PROGRAM

- The **program "Let's know the sun better"** was created with respect to the recommendations of the educational program "Kidskin" created by the WHO and Cancer Council of Western Australia.

- Special material for teachers and children.

OVERVIEW OF THE PROGRAM "LET'S KNOW THE SUN BETTER"

The implementation of the program involved 4 lessons:

- The sun – a friend or an enemy?
- Let's know our skin
- Protection from harmful effects of the sun
- Consolidation of the skills during the physical activity lesson

  And a trip outside the city closing the school year – the verification of practical skills.

THE AIM OF THE STUDY

To assess schoolchildren's knowledge on the sun exposure and the peculiarities of their behaviour in the sun

OBJECTIVES

1. To provide knowledge on the positive and negative effects of the sun.
2. To increase children's, teachers', and parents' motivation to protect themselves from the harmful effect of the sun.
3. To acquaint schoolchildren with sun protection measures.
4. To develop sun protection skills.

METHODS

The effectiveness of the program was evaluated empirically through implementing it in two randomly selected Kaunas city secondary schools. These schools were referred as the experimental group.

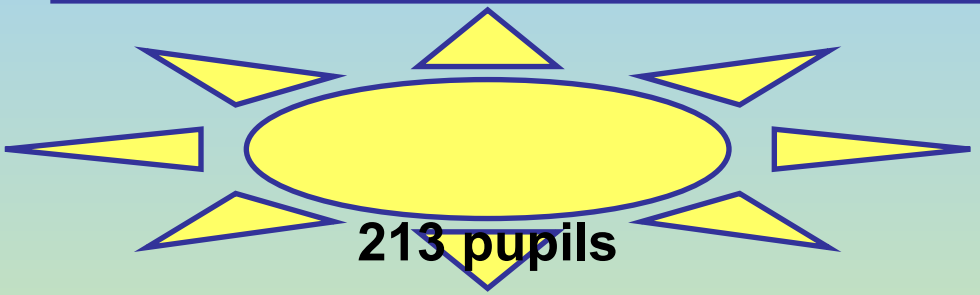
Another two secondary schools were randomly selected as a control group.

These schools were identical concerning the size and the form of education. The fifth grade pupils were invited to participate in the study.

METHODS

- The anonymous inquest of fifth grade pupils was performed in May before the summer holidays both in experimental and control schools.
- After the inquiry, the experimental group schoolchildren underwent four week classes within the framework of the program “Let’s know the sun better”.
- The second survey was carried out in September after summer vocations. The repeated survey of the same schoolchildren was performed.

THE SCHEME OF THE INVESTIGATION



Experimental group 106

Control group 107

113 boys

100 girls

THE SCHEME OF THE INVESTIGATION

I
The first survey of the study was performed prior to the beginning of summer vacations (n=213)

II
The second survey of the study was carried out during September after summer vacations (n=211)

THE RESULTS (I survey)

- The evaluation of the schoolchildren's sun-related knowledge, behavior, and patterns of sun protection at the beginning of the program showed a discrepancy between their knowledge and behavior.

- Most schoolchildren had sufficient knowledge about harmful effects of the sun, but their behaviour was contrary. For instance, **80.8%** of schoolchildren knew when solar intensity is the highest, but it was during these hours that they spent most time on the beaches.

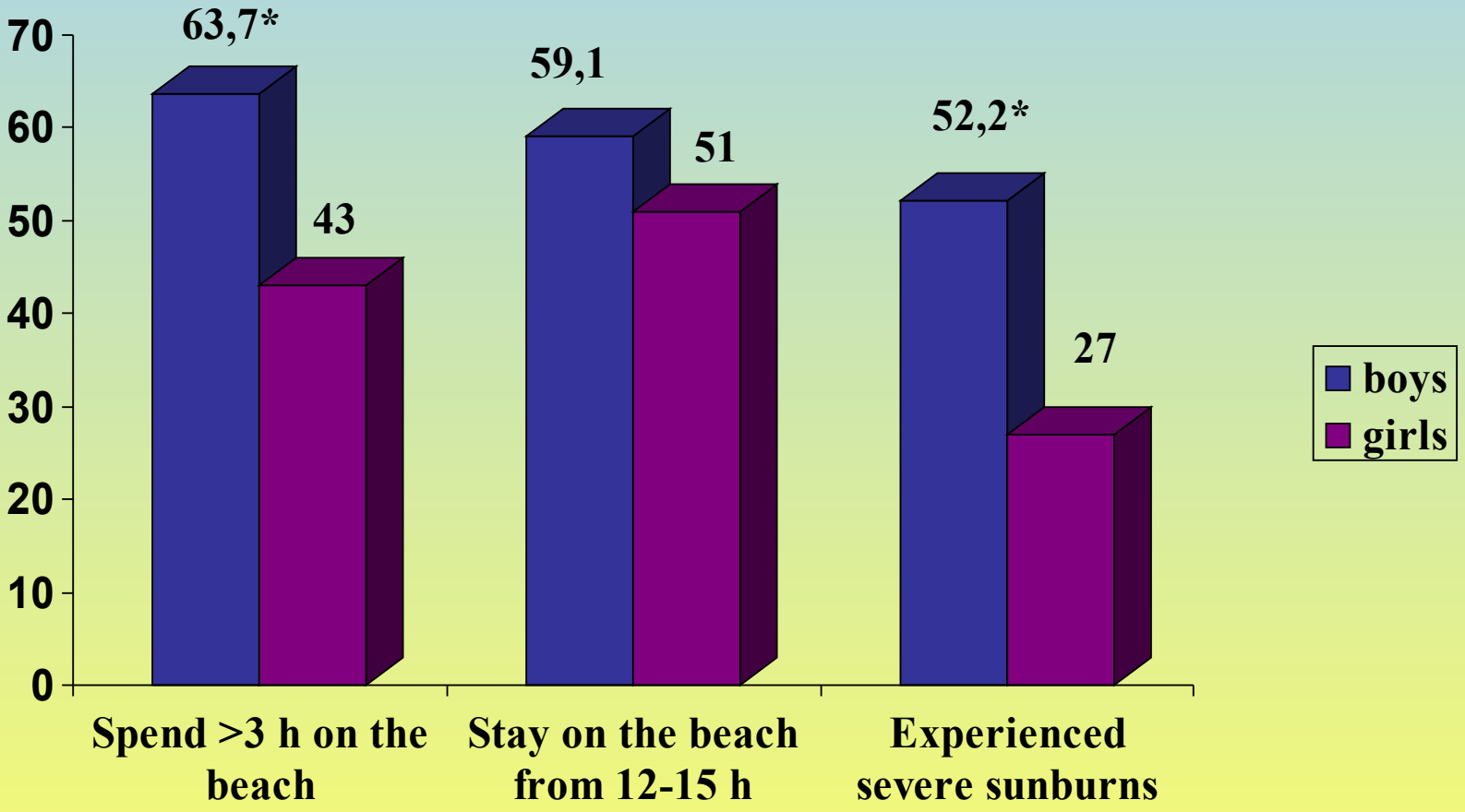
KNOWLEDGE OF CHILDREN ABOUT THE HARM THE SUN MAY CAUSE

- **66,7 %** knew, that prolonged staying in the sun may result skin cancer.
- **39,1 %** thought, that being tanned is healthy.

THE RESULTS (I survey)

- More than eighty (81.2%) percent of the questioned children annually camp at lakes or at the seashore, and visit beaches.
- More than half (54%) of all the children spend three and more hours on the beach, this tendency being more frequent among boys than among girls.
- In 93.9% of cases children stay on the beaches from 11 am till 3 pm, when the sunlight is the strongest and more dangerous; 40% of the schoolchildren had experienced severe sunburns – boys twice as frequently as girls (52.2% and 27.0%, respectively; $p<0.05$).

BEHAVIOUR OF SCHOOLCHILREN IN THE SUN



**p<0.05 compared with girls*

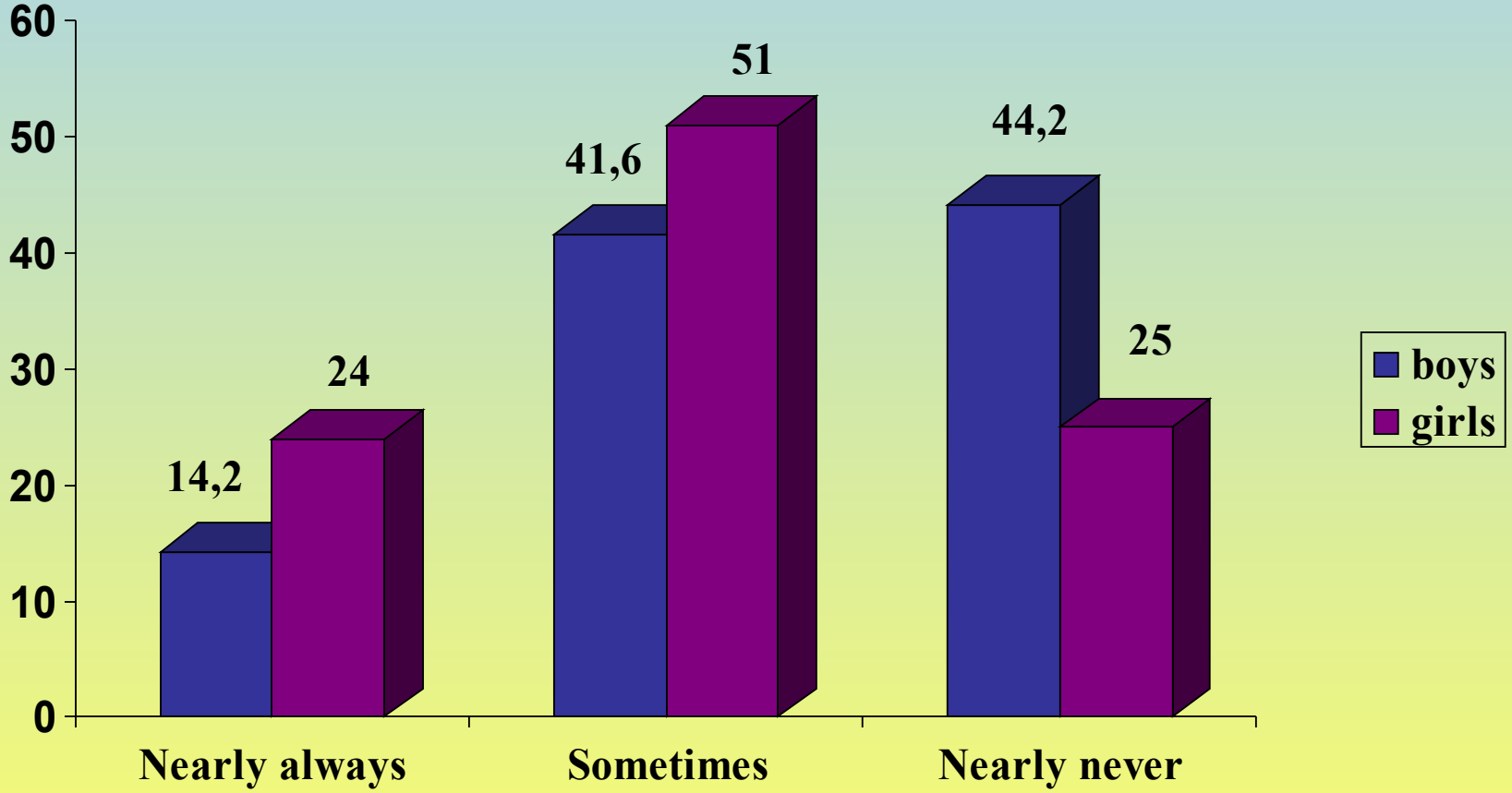
THE RESULTS (I SURVEY)

Schoolchildren do use the sun protection measures, but not always in the right way:

- Frequently children do not wear clothes except bathing suits. Long sleeved shirts were worn only in 4.7% of the cases.
- Most frequently worn headgear was a baseball cap and only every tenth child wore wide brimmed sunbonnet.
- 58% of schoolchildren wore sunglasses, but more than half of them did not know, whether their sunglasses had UV filters.
- Girls used sunscreens more often than boys, but only 7.3% of children knew how to use them properly.

DEPENDENCY OF SUNSCREEN USAGE (%) ON SCHOOLCHILDREN'S SEX

p<0.05

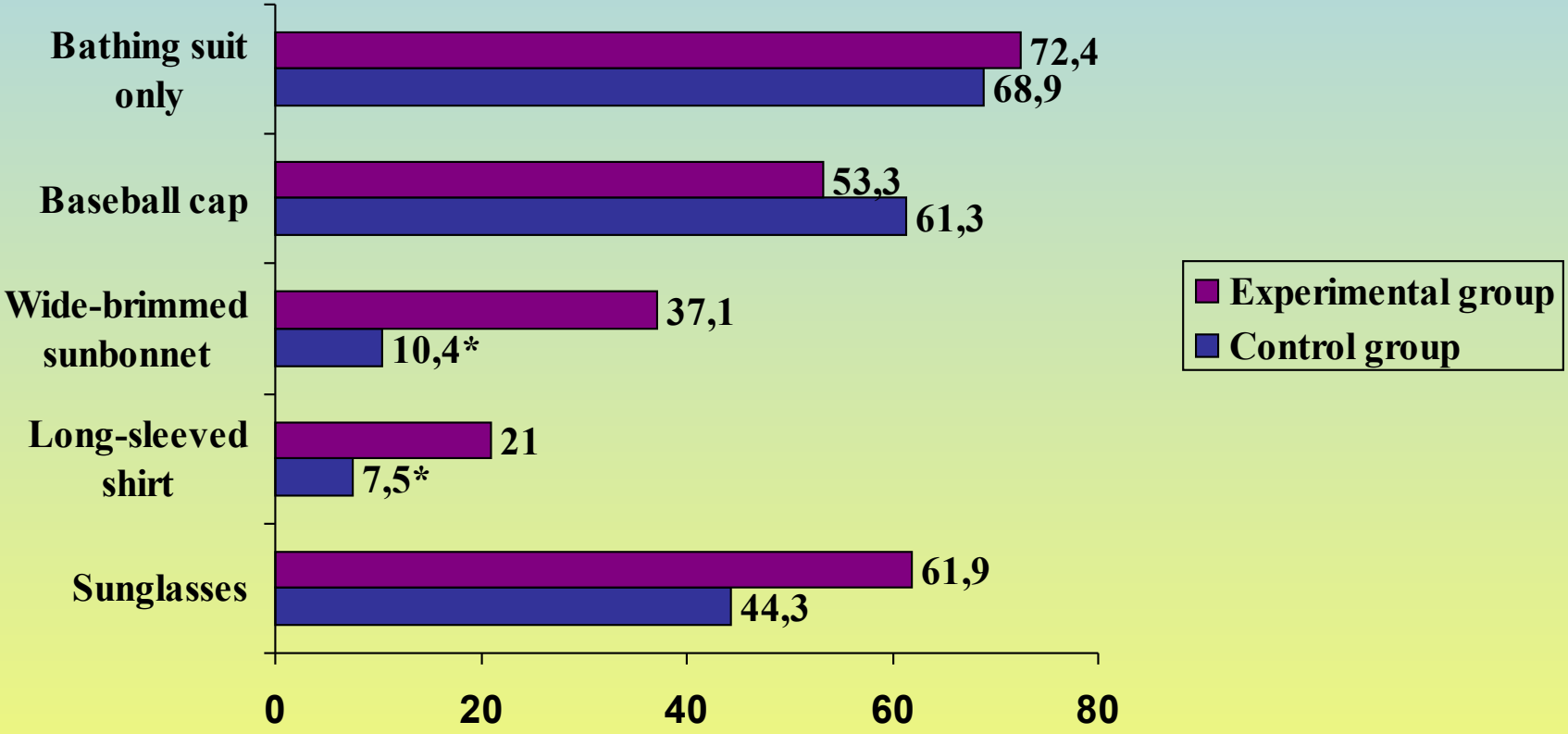


THE RESULTS (II SURVEY)

- The way schoolchildren spent their summer vocations was nearly the same: 94.3% of the experimental and 89.6% of the control group spent vocations at lakes and near the seashore.

- During the period of the highest sun intensity, 41.0% of the children from experimental group and 55.7% from the control group spent three or more hours on the beaches ($p < 0.05$).

COMPARISON OF CHILDREN'S CLOTHING ON THE BEACHES BETWEEN THE EXPERIMENTAL AND THE CONTROL GROUPS



**p<0.05 compared with the experimental group*

CONSLUSIONS

- 5th and 6th grade pupils' knowledge about sun protection is poor and their behaviour in the sun is not safe. The analysis of the results of the first survey showed that schoolchildren's, especially boys', behaviour in the sun was careless.

- The implementation of the educational program "Let's know the sun better" improved the schoolchildren's knowledge and ways on protection from harmful effects of the sun.

CONSLUSIONS

- As a result of teaching the behaviour of experimental group in the sun during the summer vocation was safer than that in the control group.

- It is recommended to include topics about the harmful effects of the sun and sun protection measures into the secondary school curricula. These questions should be addressed before summer vacations.


Thanks for
attention