

## CHILD'S EYE HEALTH PREVENTION IN BULGARIA - CURRENT ISSUES

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**Abstract:** The care for children's eyesight protection and keeping is a part of the strategy for the children's health protection. Child's excellent vision is extremely important for his or her good physical and psychical development, social adaptation, formation of the entire personality. **The purpose** of this study is parents' health culture necessary for keeping the children's sight in a good state. **The object** of this study is how to provide health education. A thorough analysis has been made on the literature ranging over that problem using the sociological research methods, as following: documentary and inquiry ones; a comparative analysis method. The inquiry was conducted in the month of March - April in 2016. The participants in that research were some accidentally selected parents in the Region of Burgas and parents of pupils attending *Mihail Lakatnik* Primary Base School in the town of Burgas. **The results** obtained from the above said inquiry defined negative health behaviors on the part of the predominant group of parents towards the preventive cares for children's eye health protection. Regardless of the existing *Vision 2020 – The Right to Sight Program*, a lack of an adequate collaboration has been evidenced among parents, outpatients' assistance specialist, ophthalmologists, health care professionals, teachers.

The analysis of the results obtained by the research have demonstrated the necessity to improve parents awareness and raise their responsibility towards children's eyesight protection and to plan and conduct a series of preventive activities with the purpose of non admission of eye diseases development and traumatic lesions occurrence.

**Key words:** health care, prevention, children's eye health

### INTRODUCTION

Excellent vision is crucial for child's good physical, mental and emotional development, learning ability and subsequent personal and professional development.

Protection of Child's vision is a priority of many international organizations and programs such as the global initiative Right to Sight VISION 2020, a joint programme of the World health organization. The most recent action plan "Universal Eye Health: A global action plan 2014 – 2019" (GAP) aims "To reduce avoidable visual impairment as a global public health problem and secure access to rehabilitation services for the visually impaired" <sup>(1,2)</sup>.

3,5% of the children worldwide are living with blindness, 80% of them are in the poorest parts of the planet. Gilbert Kocur's studies show that incidence of children's blindness in Europe varies between 1/10 000 and 4/10 000 (Kirilova, 2015). Main causes of children's blindness vary depending on the socio-economic development, availability of primary health care and vision care.

<sup>1</sup> <http://www.iapb.org/vision-2020>

<sup>2</sup> <http://www.iapb.org/advocacy/who-action-plan>

According to WHO, between 30% and 45% of children need eyeglasses and about 5% of children have a serious eye problem.

According to the world standards children should be examined by an eye specialist as new-borns, on the third month, on the third year, when starting school, and afterwards annual preventive examinations need to be performed. Eye diseases are age dependant. A number of eye diseases can be corrected if detected on time, but the chances for correction gradually disappear with age. Screening is essential for early detection of visual deficits. As defined by the World Health Organization (WHO), screening is the (hypothetical) detection of unmanifested diseases through tests and procedures that can be quickly implemented. In order to be successful, screening should be organized, it should cover a considerable number of healthy people, at a certain age, who could be at risk, and it also has to ensure equal access and uniform coverage of all patients undergoing the screening test.

Child's vision problems become more relevant given the serious penetration of new technologies in children's everyday activities, related to learning and free time. Children whose parents have vision problems require more frequent examinations and closer attention by healthcare specialists (Dzhelebov et al, 2006).

In Europe national screening programs on child's vision are implemented in Great Britain, Germany, France, Sweden, and Israel. Worldwide such programs are implemented in the United States, Canada, Australia, Japan and some countries in Asia, Africa and South America.

In Bulgaria there are no programs for prevention of child's vision. At present, the general practitioner (GP) who carries out the preventive examinations according to the standards under the Ordinance № 39 from 2004 (updated in November 2014) of the Ministry of Health is responsible for children's eye health. A child is directed to

a specialist ophthalmologist only when a visual disorder is detected. The Ordinance does not include prevention of child's vision at age of 1 to 6 years, which is critical to the vision development, vision disorders and their treatment.

According to the research done by Y. Kirilova the frequency of child's amblyopia in preschool and school age in Bulgaria is significantly higher than it is in many countries in Europe, Asia and North America (from 4.61% to 9.53%). The author states that 95% of the children included in the survey have not been examined by an eye specialist, and visual disorders were not diagnosed during the preventive examinations by the general practitioner (Kirilova, 2015).

Health awareness of parents for maintaining their children's vision in good condition is the aim of this study. Subject of the study is the implementation of health education. Analysis of relevant literature on the problem is made and methods of sociological research are used: documentary and questionnaire methods; comparative analysis. Questionnaire survey was conducted in March- April 2016. Participants in the study were parents, randomly selected from the Burgas region and parents of students from the Mihail Lakatnik Elementary School in Burgas. The survey was developed by a specialist ophthalmologist.

## SUMMARY

The study involved 113 parents of children aged 3-18 years. The age structure of children is presented in **Table 1**:

91.15% of the surveyed parents live in Burgas, and 8.85% are from different villages in the region. Children are presented almost equally in gender: 51.33% boys and 48.67% girls.

The inherited refraction abnormalities of examined children show that in 37, 17% of the cases one of the parents wear glasses, and in 9.73% of the cases both parents wear glasses (53.10 % have refraction abnormalities).

23.01% of the parents answer affirmative to the question if their children have been prescribed glasses, 76.99% gave a negative answer. Parents whose children have been prescribed glasses indicate that 76.92% of the children wear them regularly, 19.23% sometimes, and 3.85% do not wear them.

The survey clearly shows that 14.16% of children have not had a preventive eye examination by the general practitioner. The comparative analysis of the preventive examinations by age groups is shown in **Figure 1**:

The questionnaire includes questions to parents related to the healthy lifestyle of their children, helping them to maintain good vision. Use of glasses with UV-protection, the duration of use of various kinds of electronic devices and physical activity of children are examined. It is found that only 33, 63% of the children have been provided with quality sunglasses by their parents, and 76, 99% do not use sunglasses with UV- protection.

Parents responses to the question "How much time does your child spend per day before the screen of various electronic devices (computer, tablet, phone, TV)? ", are divided as follows: "no use" - 0,96%; "Less than 1 hour" - 6, 19%; "1-2 hours" - 20,35%; "3:00" - 33,63%; "4-5 hours" - 22.12%; "Over five hours" - 16.81%. The comparative analysis by age group show that parents do not monitor their children's use of modern electronic technology, which can result in the occurrence of various kinds of diseases and visual impairments (see **Figure 4**):

Less favourable are the survey results concerning the preventive eye examination by a specialist - an ophthalmologist. One third of the parents state that their children have not had specialised eye examination so far (see **Figure 2**).

The compliance with the WHO standard to carry preventive examination once a year was checked. Results are alarming. Only 36.28% of the surveyed parents indicate that their children have had eye examinations "once a year" or "more than once a year", and 23.9% of the children "have not had preventive examinations so far." The distribution of parents' responses according to children's age is given in **Figure 3**:

Analysis of the results reveals reduced physical activity of children - 30.98%. 18, 59% of these are not engaged in sports or any other physical activity, and 12.39% do sports "less than once a week." 22.12% of the parents state that their children do sports or have some physical activity every day (see **Figure 5**):

### **Conclusions:**

- Majority of parents do not carry out quality eye health prevention of their children in accordance with the approved international standards;
- Necessary conditions are not provided for the children to build knowledge and skills for a healthy lifestyle ensuring prevention of vision damages;
- Irregular eye prevention creates risks for the harmonious physical, psychological and emotional health of children and their personal development.

## CONCLUSION

Ordinance № 39 for mandatory preventive examinations should include the specialised ophthalmological examinations for all age groups in accordance with the WHO standards, and regular screening programs for Child's vision protection have to be promoted.

Children's eye health care requires efficient intersectoral cooperation - parents, specialists in outpatient care, ophthalmologists, health professionals and teachers (Popova, 2015). To increase the health awareness (Terzieva, 2013a), (Terzieva, 2013b) and motivation of parents for proper prevention of vision, modern, complete and accurate information about the importance of eye care prevention and the need to ensure a healthy lifestyle for children shall be provided.

Lecturers from the Health Care Department and students specialising in nursing produced a brochure for the protection of children's vision. An information campaign for prevention of children's eye health is planned to start at the Mihail Lakatnik Elementary School in Burgas, together with professors from the

department, students, health professionals and parents.

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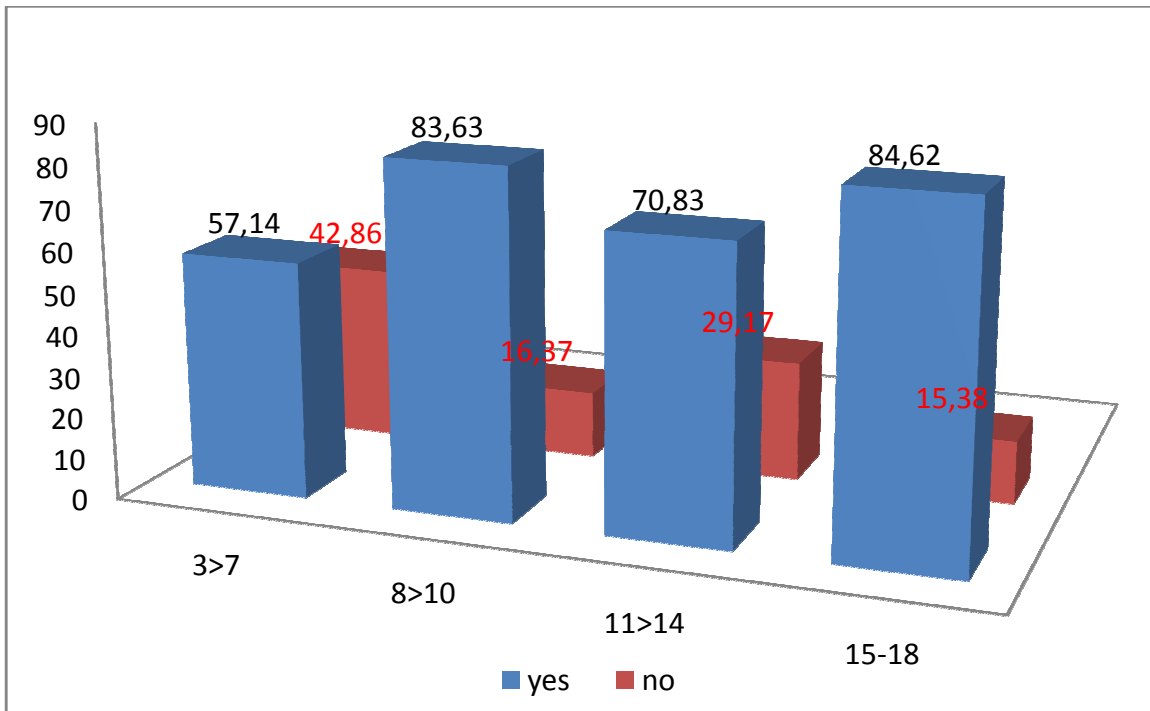
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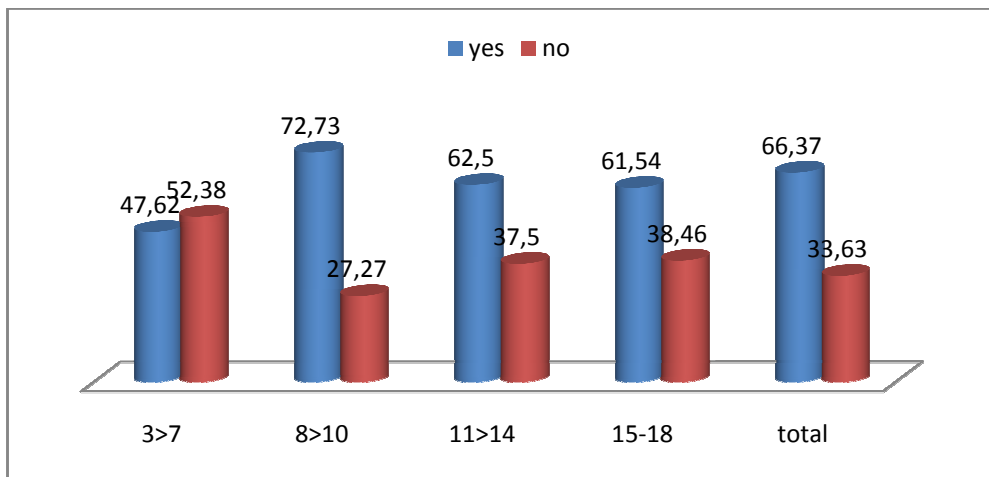
**Table 1. Age structure of children**

Age structure	3-7	8-10	11-14	15-18	total
numbers	21	56	26	10	113
percent	18,57%	49,56%	23,02%	8,85%	100%

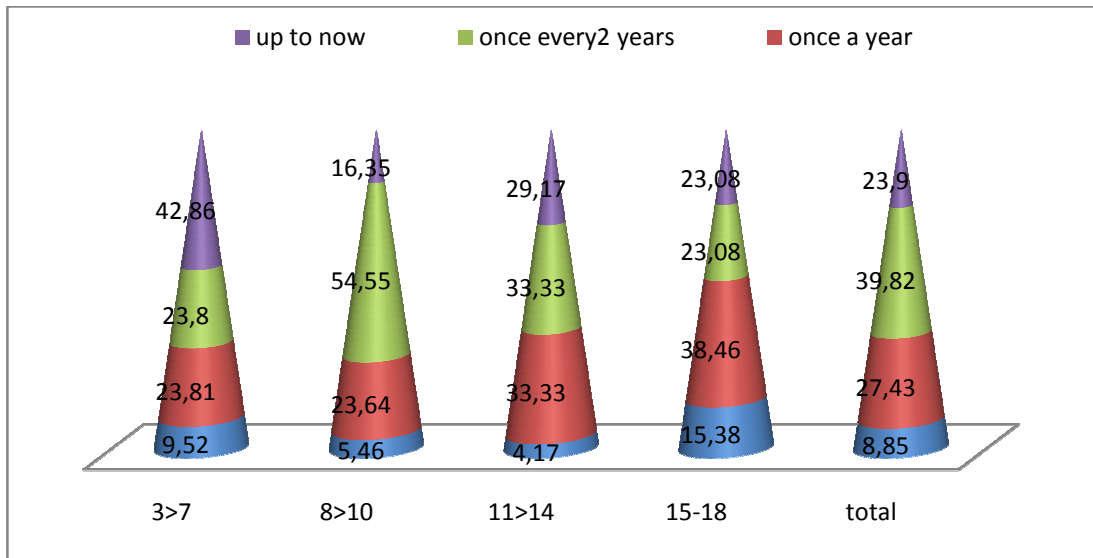
**Fig.1. Eye prevention examination with G.P.**  
( age groups -%)



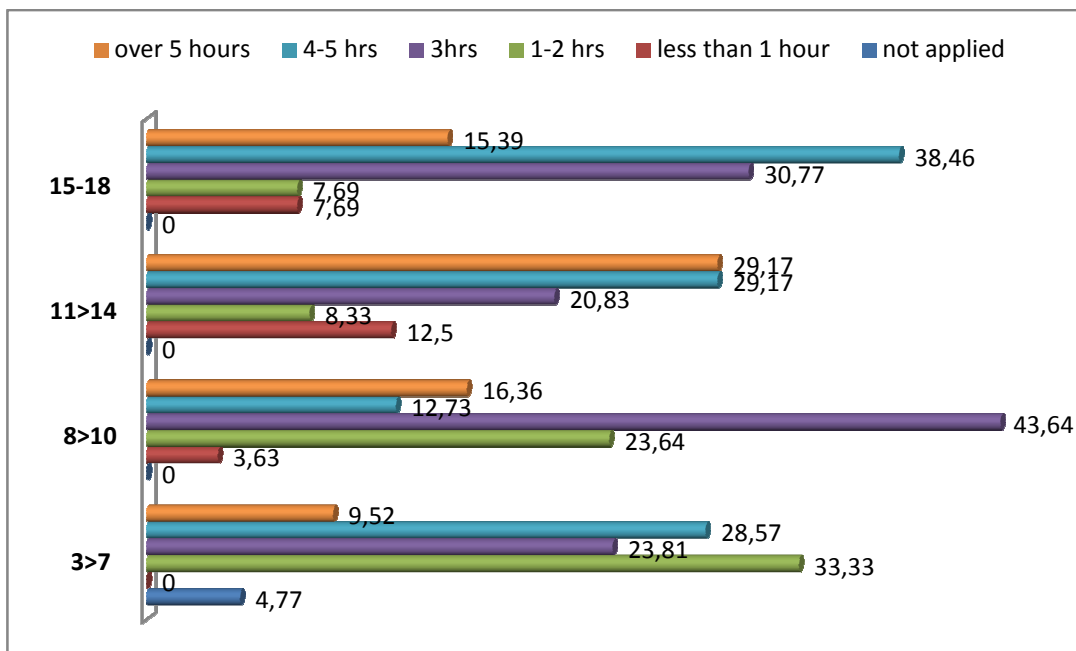
**Fig.2. Eye prevention examination with ophthalmologist**  
(age groups - %).



**Fig.3. Frequency of eye examinations**  
 (age groups - %)



**Fig.4. Electronic devices application per day**  
 (age groups - %)



**Fig.5. Physical activity of children**

