



Original Contribution

MULTIDISCIPLINARY APPROACH IN OPHTHALMOPEDIATRIC PRACTICE – ACTUAL STATE AND OPPORTUNITIES

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ABSTRACT

World experience shows the importance of screening for early detection of visual impairments in childhood. Timely detection and correction of the visual problem are a condition for normal physical and psychological development, socialization and good quality of life. The care over children's eye health in Bulgaria is responsibility of the GP's and pediatricians. The process of prophylaxis of children's vision requires a multidisciplinary approach with participation of various specialists, every one with a specific role.

PURPOSE: The aim of current study is to survey the opinion of ophthalmologists about conducting activities for prevention of children's eye health by a multidisciplinary team.

METHODS: Sociological and statistical methods have been applied. An empirical sociological study was conducted for the period October 2020 - March 2021. The study is aimed at 50 ophthalmologists from medical institutions for inpatient and outpatient care in the region of Varna.

RESULTS: The majority of ophthalmologists (64%) have a positive attitude towards preventive activities by a multidisciplinary team. They state high confidence in competence (78%) and assess the professional multifunctionality (56%) of the other specialists of children's eye health in the team.

CONCLUSION: The research confirms the need for a multidisciplinary approach and clear team roles. Ophthalmologists demonstrate a positive attitude towards conducting activities for the prevention of children's eye health by a multidisciplinary team of specialists. They express trust and share an opinion on the wide range of functions that nurses, medical opticians and optometrists can perform in the team.

Key words: ophthalmologists, multidisciplinary team, children's eye health, prevention

INTRODUCTION

Early childhood is associated with bigger risks for maldevelopment, as the visual system is morphologically and functionally immature. During this short period, normal conditions for the development of the child's vision must be provided. World experience shows the importance of screening for early detection of visual impairments in childhood. Timely detection and correction of the visual problem are a condition for normal physical and psychological development, socialization and good quality of life. (1, 2)

Based on the knowledge of the physiological features of the child's eye health, its intensive development and limited time for adequate reaction, contemporary world standards for prevention determine:

- early first examination;
- periodic monitoring and evaluation of visual function;
- initiation of treatment when the deviation is detected, regardless of early age. (1, 2)

Multidisciplinary team unites specialists of different professions, who enhance the contribution of each profession, without overlapping, in order to improve patient care. (3) Multidisciplinary approach in the prevention of children's vision requires a participation of

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various eye specialists, every one with a specific role, different levels of competence, knowledge and skills. There are eye health specialists of four professions in our country - ophthalmologists, ophthalmic nurses, medical opticians and optometrists, which can collaborate in a multidisciplinary team (MDT) for preventive and educational activities (**Figure 1**). This became possible due to the innovative practice of Medical University - Varna to implement training in new specialties.

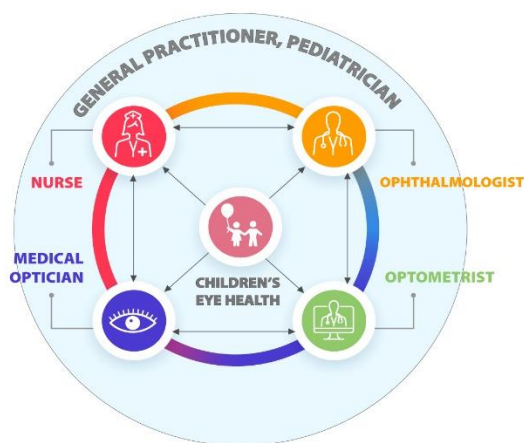


Figure 1. Author's model of multidisciplinary team for prevention of children's eye health

There is no national program for prevention of children's eye health in Bulgaria. The care over children's health is responsibility of the GP's and pediatricians.

PURPOSE

The aim of current study is to survey the opinion of ophthalmologists about conducting activities for prevention of children's eye health by a multidisciplinary team.

METHODS

Sociological and statistical methods have been applied. An empirical sociological study was conducted for the period October 2020 - March 2021, after obtaining approval from the Commission on Ethics of Research of the Medical University - Varna (protocol №96 / 24.09.2020). The study was aimed at 50 ophthalmologists from the city of Varna on the territory of the following research centers: Specialized Eye Hospital – Varna, Medical Eye Center – Varna, Medical Eye Center “Assoc. Prof. Dr. Evgenia Kontrova 2015”, Medical Eye Center “St. Nikolay Chudotvoretz”. For the purpose of the quantitative survey, a questionnaire for conducting a standardized interview was developed to study the opinion of doctors, working in ophthalmological practice on the professional activities of the multidisciplinary team for prevention of children's eye health. The questionnaire contains 10 questions, structured into the following groups:

- First group - examine the interaction between medical specialists in the multidisciplinary team;
- Second group - study the main activities of medical specialists in the prevention of children's eye health;
- Third group - study the professional competence of medical specialists to perform preventive activities;
- Fourth group - study the barriers to preventive activities in the country.

The data acquisition and statistical analysis was conducted with the statistical program SPSS IBM (Statistical Package for Social Sciences), v. 19.0.

RESULTS

The surveyed doctors represent 40.98% of the ophthalmologists practicing in Varna. The average age of the respondents is 42.5 years and the age range is between 26 and 75 years. The largest relative share of doctors is with professional experience between 1 and 5 years (**Table 1**).

Table 1. Duration of the professional experience of the ophthalmologists in the study

Duration of the professional experience of ophthalmologists	N	Percentage share (%)	Cumulative share (%)
1-5 years	15	30%	30%
6-10 years	10	20%	50%
11-20 years	5	10%	60%
21-30 years	11	22%	82%
more than 30 years	9	18%	100%
Total	50	100%	

According to the survey, the majority of ophthalmologists (68%) have participated in preventive program for children's vision. According to the respondents, the traditional team "doctor-nurse" is significantly inferior to

multidisciplinary team: 64% of surveyed doctors say that prevention should be a professional activity of various medical specialists in eye health, united in a multidisciplinary team (**Figure 2**).

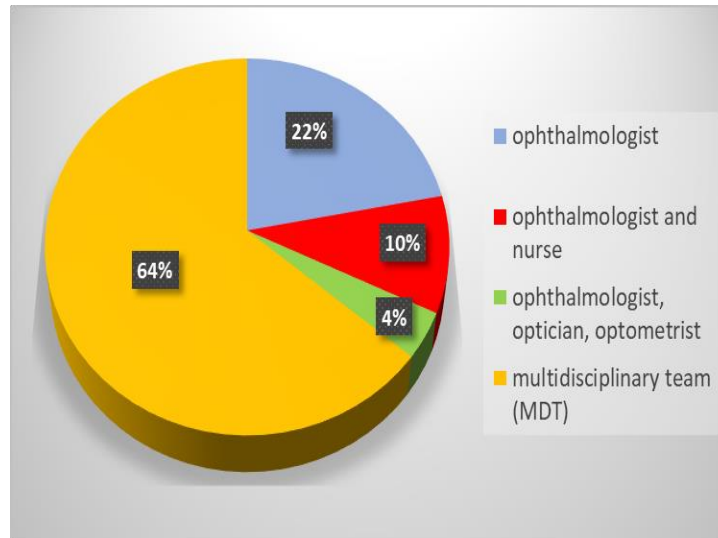


Figure 2. Ophthalmologists' assessment about the specialists for prevention of children's eye health

A very large number of ophthalmologists (86%) express a desire to participate in the MDT for the prevention of children's eye health. Regarding the assessment of ophthalmologists about the activities to be performed by the other specialists in MDT, a larger proportion of respondents believe that they should participate in the full range of activities (**Figure 3**). Only 12% of the

respondents still give preference to the traditional activities (assisting the doctor in examining and recording results). The statistical analysis did not establish a statistically significant correlation between the duration of the ophthalmologist's professional experience and the indicated range of activities of the nurse, the medical optician and the optometrist in the team ($C = 0.233$; $p = 0.103$).

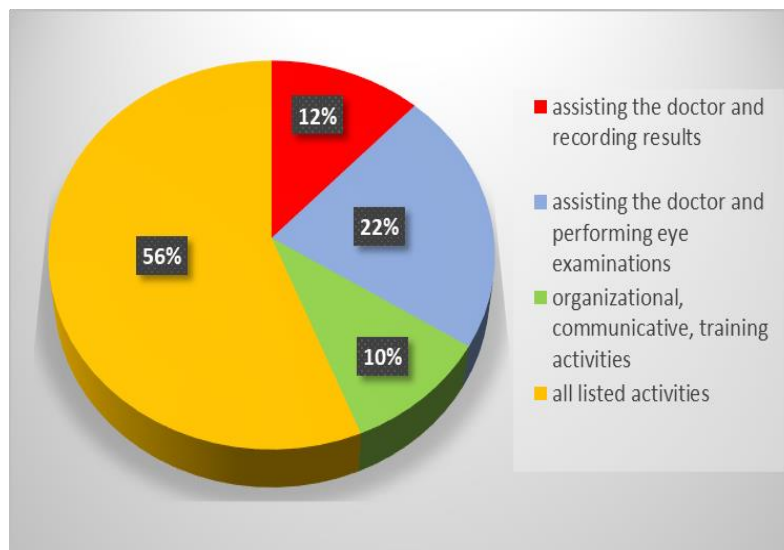


Figure 3. Ophthalmologists' opinion about the activities of the other specialists in the multidisciplinary team

The share of ophthalmologists, who trust the results of the activities of other specialists in the team, if they are familiar with their professional competence and skills, is high (78%). The statistical analysis revealed a weak statistically significant negative correlation between the duration of the professional experience of the ophthalmologist and his confidence in the activities of other specialists in MDT: longer professional experience directly correlates with a lower degree of confidence in the results of

ophthalmological examinations by nurses, medical opticians and optometrists in the team ($C = -0.364$; $p = 0.009$).

Analyzing the survey data, we found that according to ophthalmologists, the barriers to preventive activities in the country are a set of three factors: limited preventive activities by NHIF, lack of funds for annual prevention programs and insufficient number of medical specialists in pediatric eye health (**Figure 4**).

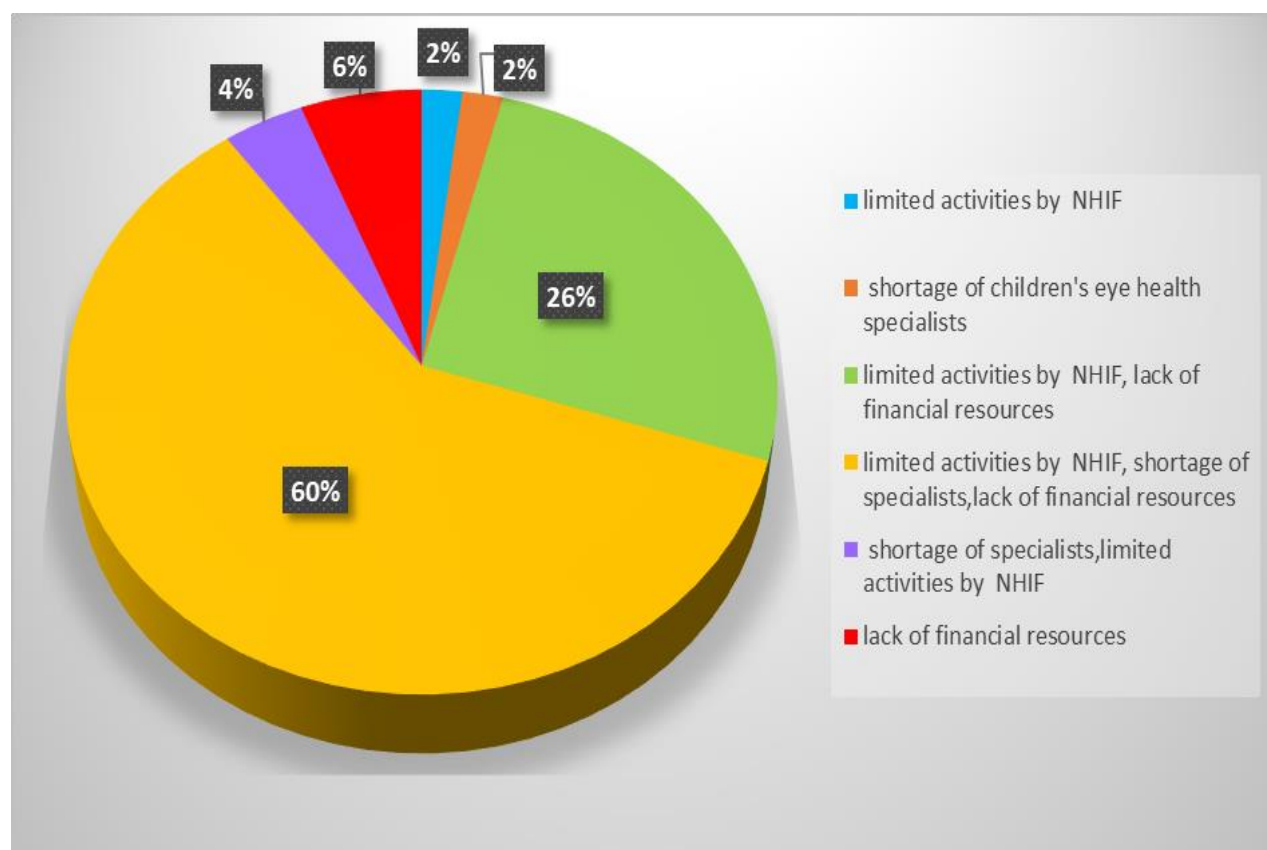


Figure 4. Ophthalmologists' assessment about the barriers to preventive activities in the country

Examining the issue of theoretical training of medical professionals, needed to perform preventive activities, we found that according to the majority of ophthalmologists (76%) the knowledge acquired during basic education is insufficient. There logically follows the question of ways to improve the knowledge and skills of medical professionals in the team (**Figure 5**).

According to ophthalmologists, a small relative share (12%) of the specialists in the team do not update their knowledge. This is in discord with the concept of continuing professional development and lifelong learning, embedded in national and European strategies.

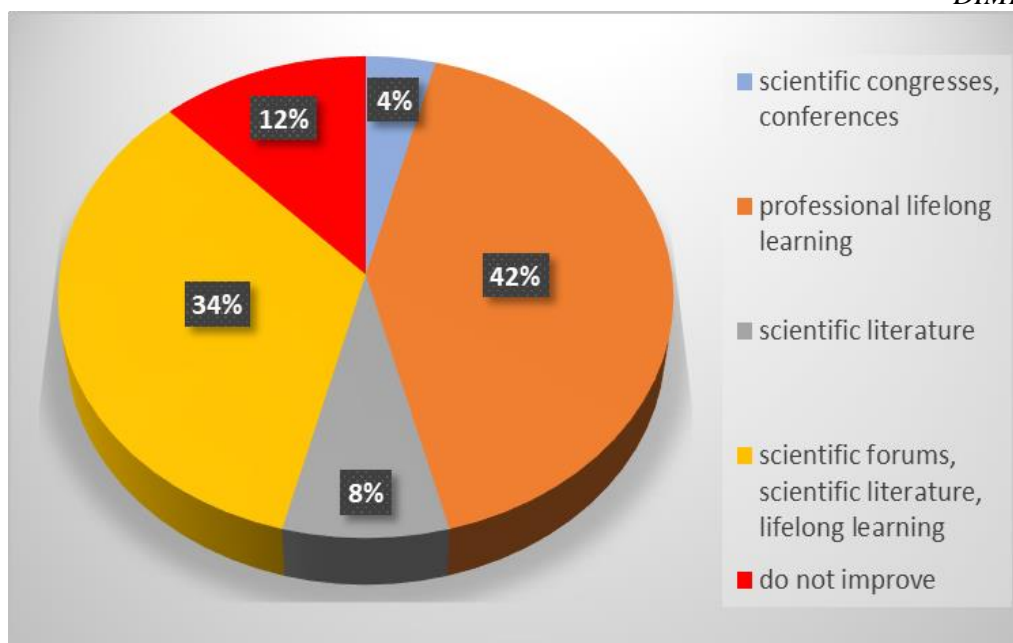


Figure 5. Evaluation of ophthalmologists about approaches for professional self-improvement of the specialists from the team

DISCUSSION

Scientific publications on the topic of teamwork in the provision of ophthalmic health services support the results of our study namely the prevalence of the multidisciplinary team over the traditional (ophthalmologist-nurse) one. (3, 4)

Qureshi (2014) shares the view that the MDT for eye health is composed of an ophthalmologist, a nurse and an optometrist. Each team member has unique skills, perspective and energy. According to the author, teamwork requires effort to establish a culture of relationships and values in the team at the time of formation: "good leadership" to ensure focus on goals and "good team members" to ensure effective functioning. (5) A good leader provides vision, goals, models attitudes, behavior, relationships, team's development. Transformational leadership is increasingly needed to raise the motivation and satisfaction of specialists in the team. (5, 6) Good team members are highly competent and diligent, motivated to improve and develop, supporting the leader and trusting each specialist in the team. (7) A basic principle in ophthalmic MDT is the delegation of tasks to each specialist according to the spectrum of his competence. (5-7)

The functioning of ophthalmic MDT is accompanied by some difficulties. In the 90s of the last century, there already was a tendency to reducing the number of ophthalmological structures (departments, clinics). (8) There is also a strong downward tendency in the numbers of ophthalmologists and nurses specializing in the ophthalmopediatric health. (9) These circumstances require the proactiveness of the ophthalmology team manager to retain qualified ophthalmologists and ophthalmic nurses. (10)

Each member of the team brings with them a different set of values, personal experiences, social competence, beliefs. In the scientific literature there are opinions about different perceptions of teamwork by team members. In the 1990s, Campbell-Heider and Pollack (1987) discussed social and cultural factors that hindered interaction within the team. While physicians perceive teamwork as a hierarchical activity, nurses seek solidarity and equality in the team. The nurse perceives teamwork as an opportunity to expand her role and to gain autonomy. (11) It is assumed that the nurse's expectations for change owing to broad competence and

educational degrees do not always manage to overcome the deep-rooted hierarchical barriers. (12) According to other authors, 70% of adverse events in practice are due to deficits in communication and cooperation between team members. (13) The thesis is also supported by Saint-Pierre et al. (2018), according to whom the relationships between specialists in the medical team have a direct impact on clinical outcomes and the quality of care. The authors found that non-hierarchical interaction, good communication and collaboration directly influence the effectiveness of MDT. (4)

Atwal and Caldwell (2005) conducted a study on the multidisciplinary teams of the National Health Service in the United Kingdom and identified problems related to the shortage of interprofessional cooperation. The authors found that most nurses did not present problems and did not express opinions even on basic issues. Lack of collaboration, organizational and hierarchical barriers hinder team communication and efficiency. (13) Nurses, opticians, optometrists and doctors are trained in different ways and they demonstrate different styles of interaction. Overcoming team barriers is a prerequisite for improving team efficiency. Each member of the MDT must be aware of his own autonomy, as well as appreciate every person's important contribution to the success of the team. Baek et al. (2019) define the important role of the team leader in creating relationships of trust, which affects the professional satisfaction and dedication of the specialists in the team. (14)

The change in attitudes and the building of bridges of mutual trust are completely possible and adequate to the multifunctionality of the modern nurse. Some physicians attach great importance to the role of the nurse for team cohesion, thanks to the ability to support and communicate with all professionals. According to other authors, the improvement of trust and communication on the specialist-parent-child axis is due to the nurse. (15) The contribution of the nurse to the improvement of the team environment due to the development of nursing science and the growing share of nurses with master's and doctoral degrees is also appreciated. (16) Optometrists and opticians, who received current training and professional qualification in

the new specialties for the country, can be highly competent professionals in their field of activity.

The results of our study demonstrate that ophthalmologists trust the professional expertise of MDT members. The four specialties in the team do not have a competitive relationship and can work in symbiosis and synergy in order to fully care for children's eye health.

CONCLUSIONS

Our research confirms the need for a multidisciplinary approach and clear team roles. Ophthalmologists demonstrate a positive attitude towards conducting activities for the prevention of children's eye health by a multidisciplinary team of specialists. They express trust and share an opinion on the wide range of functions that nurses, medical opticians and optometrists can perform in the team. The practical application of the multidisciplinary approach will contribute to improving the access of the population to ophthalmological health care and will provide comprehensive care for children's eye health, based on modern standards and competencies of all medical professionals, involved in MDT: ophthalmologists, nurses, optometrists, and medical optician.

REFERENCES

1. Pizzarello, L., Aboise, A. et al. VISION 2020: The Right to Sight - A Global Initiative to Eliminate Avoidable Blindness. *Archives of Ophthalmology*, 122: 615–620, 2004.
2. Boydzieva, M., Barbukova, A., Boydziev, D., et al. Effectiveness of the screening program for preserving childhood vision in the region of Varna. *Bulgarian Review of Ophthalmology*, 63(1):13-20, 2019.
3. Lockhart, L. Everybody wins with multidisciplinary teams. *Nursing Made Incredibly Easy*, 13: 54–55, 2015.
4. Saint-Pierre, C., Herskovic, V., Sepúlveda, M. Multidisciplinary collaboration in primary care: A systematic review. *Family Practice*, 35:132–141, 2018.
5. Qureshi, M. Teamwork for eye care. *Community Eye Heal.*, 27: 21–23, 2014.
6. Steaban, R. L. Health care reform, care coordination, and transformational leadership. *Nurs. Adm. Q.* 40, 153–163, 2016.
7. Weaver, T. E. Enhancing multiple

- disciplinary teamwork. *Nurs. Outlook* 56, 108-114.e2, 2008.
8. Hennelly, M. The importance of ophthalmic nurses: an ophthalmologist's view. *Comm Eye Heal.* 33, 55, 2020.
 9. Czuber-Dochan, W. J., Waterman, C. G., Waterman, H. A. Trends in the nature of provision in ophthalmology services and resources and barriers to education in ophthalmic nursing: 3rd national UK survey. *Nurse Educ. Today* 26, 191–199, 2006.
 10. Nancarrow, S. A. et al. Ten principles of good interdisciplinary team work. *Hum. Resour. Health* 11, 19, 2013.
 11. Campbell-Heider, N., Pollock, D. Barriers to physician-nurse collegiality: An anthropological perspective. *Soc. Sci. Med.* 25, 421–425, 1987.
 12. Corrigan, E. Nurses as equals in the multidisciplinary team. *Hum. Fertil. (Camb)*. 5, S37-40, 2002.
 13. Atwal, A., Caldwell, K. Do all health and social care professionals interact equally: A study of interactions in multidisciplinary teams in the United Kingdom. *Scand. J. Caring Sci.* 19, 268–273, 2005.
 14. Baek, H., Han, K., Ryu, E. Authentic leadership, job satisfaction and organizational commitment: The moderating effect of nurse tenure. *J. Nurs. Manag.* 27, 1655–1663, 2019.
 15. Kodjebacheva, G. D., Maliski, S., Coleman, A. L. Use of eyeglasses among children in elementary school: Perceptions, behaviors, and interventions discussed by parents, school nurses, and teachers during focus groups. *Am. J. Heal. Promot.* 29, 324–331, 2015.
 16. McCrae, N. Whither Nursing Models? The value of nursing theory in the context of evidence-based practice and multidisciplinary health care. *J. Adv. Nurs.* 68, 222–229, 2012.