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ANALYSIS OF THE RESULTS OF THE QUESTIONNAIRE OF ORTHODONTISTS AND CHILDREN DENTISTS OF POLTAVA-CITY ON THE OPTIMIZATION OF ORTHODONTIC AIDS FOR CHILDREN

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ABSTRACT

Introduction: In the course of the study, we identified high prevalence rates of orthodontic pathology and identified organizational aspects regarding the provision of orthodontic care for children, and identified the need for their optimization.

The aim: The purpose of the study was to analyze the results of the questionnaire of orthodontists and children's dentists, who provide dental care to the children of the Poltava region, about the importance of optimization of orthodontic care for children and improving the knowledge of doctors about the risk factors for the onset of orthodontic pathology.

Materials and methods: Methods: Sociological (questionnaire), medical-statistical, bibliosemantic. We analyze 39 questionnaires, which filled out by orthodontists and children's dentists who provide dental care to children of the Poltava region.

Results: A questionnaire was conducted for 39 children's dentists of different specialties, and the subject for study of which was the knowledge of doctors about the risk factors for the occurrence of orthodontic pathology; the opinion of specialists on optimization of the system of prevention, dyspanserization, screening and sanitary-education work. The results of the questionnaire were processed with using of statistical methods and analyzed.

Conclusions:

1. Most doctors consider the most important influencing risk factors that relate to behavioral, informational and medical-demographic, that is, those that are managed.
2. Most doctors determine the existing system of orthodontic care as ineffective, recognize the effectiveness of a joint prevention, dispensary and screening program; consider it advisable to create a single electronic medical card for the child from birth; the level of awareness of the population is low; it is expedient to involve in the preventive and sanitary-educational work of dental hygienists to reduce the burden on doctors.
3. In the training of students and interns in the specialty "Dentistry", more attention should be paid to the study of the risk factors of the occurrence of orthodontic pathology and the importance of primary prevention and dyspansery control to reduce its level.

KEY WORDS: orthodontic care, risk factors, awareness, prevention, dispensary

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INTRODUCTION

At the stage of reforming of the healthcare sector in today's socio-economic conditions in Ukraine there are significant difficulties in organizing of the provision of orthodontic care for children and adults due to the lack of a legal regulatory framework and clear principles for functioning in modern conditions, lack of budget funding and the required number of skilled staff (doctors and dental technicians), outdated and insufficient material and technical base, low standards of living of the population [1, 2].

It is also relevant to improve the reporting system of medical dental institutions of state and non-state ownership in order to obtain full and reliable information about their activities that are necessary for an adequate assessment of the situation with dental health of the adult and infant population of Ukraine, the appropriate planning and organization of the dental service. A diverse reforming process of the dental service, the lack of modern regulations - the main reasons for the receipt of regions of insufficiently reliable data. There is a lack of information from non-governmental organizations. This does not allow health authorities to have an adequate understanding of the situation in the field of dental care. In connection with this, there is an urgent need to develop and implement new principles for the organization and planning of all types of dental care, including orthodontic [3, 4].

Nowadays, it is extremely important to determine the place of orthodontic care in the system of pediatric service, and the development of a comprehensive system of prevention and early treatment of it [5]. To eliminate most of the dental anomalies it is necessary that the dentist-pediatrician in the organized children's collectives systematically carries out the preventive work with the active assistance of parents, relatives, teachers who involved in the upbringing of children [6]. Often, the tooth-jaw pathology is combined with another pathology of the oral cavity, as well as other organs and systems [7, 8, 9]. The combination of pathologies always leads to complicated disorders in the

child's body, so early detection, prevention and the correct approach to treatment are of great importance in orthodontic practice. Timely removal of tooth-jaw abnormalities is the prevention of both local and general disorders of the body, in this regard, orthodontic service is of great social importance.

According to WHO standards, sanitary education is a basic part of prevention. Therefore, it is necessary to pay more attention to the knowledge of dental practitioners and other specialists regarding modern methods and ways of preventing of tooth-jaw pathology. This in turn requires the revision of curricula and programs for dental practitioners. In addition, it is necessary to increase the level of knowledge of parents and teachers about methods of prevention of dental disease [10].

THE AIM

The purpose of the study was to analyze the results of the questionnaire of orthodontists and children's dentists, who provide dental care to the children of the Poltava region, about the importance of optimization of orthodontic care for children and improving the knowledge of doctors about the risk factors for the onset of orthodontic pathology.

MATERIALS AND METHODS

Methods: Sociological (questionnaire), medical-statistical, bibliosemantic. We analyze 39 questionnaires, which filled out by orthodontists and children's dentists who provide dental care to children of the Poltava region.

RESULTS

According to the qualification category, the doctors were distributed as follows: with the highest category - 18 (46.2%), with the first - 7 (17.9%), with the second - 3 (7.7%) and without category - 11 (28.2%). Postgraduate education have: clinical residency - 3 (7.7%), graduate school - 2 (5.1%), doctorate - 1 (2.6%), specialization - 15 (38.5%), retraining - 6 (15.4%), internship - 11 (28.2%), not having postgraduate education - 1 (2.6 %).

We have grouped the risk factors in the following categories: on behavioral and informational, medical-demographic, organizational, socio-economic and environmental factors. The answers of orthodontists and children's dentist regarding the influence of factors are given in the tables.

As can be seen from table number I, according to the opinion of the vast majority of doctors (from 74,4 to 92,3%), almost all behavioral and information risk factors have a significant influence on the forming of orthodontic pathology (except for father's smoking, which is considered by only 38.4% of physicians and insufficient sanitary-and-hygienic awareness of parents - 59.0%).

Of the medical and demographic risk factors, all physicians recognized the heredity as a weighty factor (100%), the presence of early removed teeth through the caries - 94,9%; the majority of doctors (from 69.2 to 84.6%) consider the presence of caries (complicated caries), complications during parturitions, the diseases transmitted by a child (79.5%), the presence of endocrine pathology in a mother, mother's illness during pregnancy , complications, the presence of stress during pregnancy, professional harm to the mother during pregnancy. Other risk factors consider it weighty by the smaller number of physicians (from 28.2 to 59.0%) (Table II).

From organizational factors, the prevailing number of physicians (from 79.5 to 87.2%) highlights the importance of presence an orthodontist (specialist), providing doctors with orthodontists, work on prevention, medical examinations, dispensary, hygienic education, late untimely review by a dentist, and others (staffing of health care institutions by doctors, secondary and junior medical personnel, provision of health care institutions with equipment, medicines, tools, staffing, personnel qualification) consider it weighty by the smaller number of physicians (from 56.4 to 61.5%) (Table III).

From the socio-economic factors, the majority of doctors consider as significant only the cost of orthodontic services (69.2%) and the distance of the necessary medical institution (74.4%), while other (the composition and social structure of the family, living conditions, financial support of the family, education and place of work (position) of parents) were considered as significantly influenced from 20.5 to 41.0% of physicians (Table IV).

From environmental factors, the content of microelements in drinking water is considered to be a significant risk factor for 71.8% of physicians, and other factors (type of water supply, atmospheric and radiation pollution, pesticide load) from 38.5 to 51.3% of physicians (Table V).

In the continuation of the analysis of the need for optimization of the dental orthodontic industry, we conducted a survey of orthodontists regarding their assessment of the organization of the dental orthodontic service. The questions were structured according to the main directions:

1. Prevention.

- The importance of conducting medical examinations by a pediatric dentist-therapist for the detection of orthodontic pathology was assessed as follows: very effective - 9 (32.1%), effectively - 25 (64.1%), little effective - 4 (10.3%), ineffective - 1 (2.6%).
- The question is whether the existing system of prevention of orthodontic pathology is effective: yes, it`s effective - 13 (33.3%); yes, but it`s little effective - 21 (53.8%); no, it`s ineffective - 5 (12.8%).
- Do changes in the system of prevention of dental anomalies require: 28 (71.8%) doctors gave a positive answer, 11 (28.2%) - negative.
- Are there preventive measures that are not used but necessary: 16 (41,0%) respondents answered - yes, no - 23 (59,0%).
- Is it expedient to introduce mandatory five-minute exercises for myogymnastics for the correct formation of the maxillofacial area in organized children's teams: yes, this will improve the quality of medical care 33 (84.6%), nor is it appropriate - 6 (15.4 %)

Table I. Behavioral and information risk factors of the orthodontic pathology

	Weighty absolute (%)	Imponderable absolute (%)
Low level of sanitary and hygienic awareness of parents	23 (59,0)	16 (41,0)
Low awareness of parents about the risk factors for orthodontic pathology	32 (82,1)	7 (17,9)
Artificial feeding	35 (89,7)	4 (10,3)
Nutrition of a baby	32 (82,1)	7 (17,9)
Using of a nipples	29 (74,4)	10 (25,6)
Mother's smoking during pregnancy	33 (84,6)	6 (15,4)
The nature of mother's nutrition during pregnancy	30 (76,9)	9 (23,1)
Smoking of a father	15 (38,4)	24 (61,5)
Mother's alcohol abuse during pregnancy	36 (92,3)	3 (7,7)
Drug use during pregnancy	36 (92,3)	3 (7,7)

Table II. Medical-demographic risk factors of the orthodontic pathology

	Weighty absolute (%)	Imponderable absolute (%)
Demographic situation	11 (28,2)	28 (71,8)
The presence of caries (complicated caries)	35 (89,7)	4 (10,3)
Heredity	39 (100,0)	0 (0)
Complications during parturitions	32 (82,1)	7 (17,9)
Diseases transmitted by a child	31 (79,5)	8 (20,5)
The presence of early removed teeth through the caries	37 (94,9)	2 (5,1)
Disease of the mucous membrane, periodontal disease	27 (69,2)	12 (30,8)
Number of children in the family	12 (30,8)	27 (69,2)
Age of parents	19 (48,7)	20 (51,3)
The presence of endocrine pathology in the mother	33 (84,6)	6 (15,4)
Mother's disease during pregnancy	33 (84,6)	6 (15,4)
Complications, the presence of stress during pregnancy	31 (79,5)	8 (20,5)
The regime of work and rest during pregnancy	23 (59,0)	16 (41,0)
Gynecological diseases during pregnancy	20 (51,3)	19 (48,7)
Professional harm to the mother during pregnancy	32 (82,1)	7 (17,9)

Therefore, pediatric dentists supports the conduction of the preventive measures, but they believe that not all steps in it are necessary. Pay special attention to the creation of a general prevention system, which would bring together teachers and doctors.

2. Dispensary and screening.

- The necessity of conducting the dispensary examination of children with orthodontic pathology was estimated as follows: very necessary -14 (35.9%), required -18 (46.2%), not decisive - 4 (10.3%), not needed - 3 (7.7%).
- The quality of the examination of children with tooth-maxillary anomalies was assessed as high - 2 (5.1%) specialists, sufficient - 24 (61.5%), low - 8 (20.5%), extremely low - 5 (12, 8%).
- Effectiveness of clinical examination for reducing the incidence of orthodontic pathology was estimated: very effective - 4 (10.3%), effective - 16 (41.0%), average efficiency - 10 (25.6%), low efficiency - 9 (23,1%).
- The need for screening (active detection of tooth-abdominal anomalies and risk factors) was assessed as follows: extremely necessary - 21 (53.8%), necessary - 12 (30.8%), not decisive - 6 (15.4%).
- The need to create a single screening program in collaboration with pediatricians, family doctors and general dentists was appreciated: 35 (89.7%) recognized the need for improving the quality of medical care, 4 (10.3%) - argue that this is not appropriate.

According to the results of the survey, the recognition by doctors of the effectiveness of the prophylactic examination, as well as screening, for children with orthodontic pathology.

3. Assessment of the level of public awareness about the risk factors for orthodontic pathology by orthodontists and pediatric dentists.

Table III. Organizational risk factors of the orthodontic pathology

	Weighty absolute (%)	Imponderable absolute (%)
The presence of an orthodontist (specialist)	33 (84,6)	6 (15,4)
Provision by doctors orthodontists	31 (79,5)	8 (20,5)
Work on prevention, medical examinations, dispensary, hygienic education	31 (79,5)	8 (20,5)
Staffing of medical institutions by doctors, secondary and junior medical personnel	23 (59,0)	16 (41,0)
Provision of medical facilities with equipment, etc.	24 (61,5)	15 (38,5)
Personnel structure, degree of personnel qualification	22 (56,4)	17 (43,6)
Untimely (late) review by a dentist	34 (87,2)	5 (12,8)

Table IV. Socio-economic risk factors of the orthodontic pathology

	Weighty absolute (%)	Imponderable absolute (%)
Composition and social structure of the family	14 (35,9)	25 (64,1)
Living conditions	8 (20,5)	31 (79,5)
Financial support of the family	16 (41,0)	23 (59,0)
Cost of orthodontic services	27 (69,2)	12 (30,8)
Distance of the necessary medical establishment	29 (74,4)	10 (25,6)
Level of education and place of work (position) of parents	11 (28,2)	28 (71,8)

Table V. Environmental risk factors of the orthodontic pathology

	Weighty absolute (%)	Imponderable absolute (%)
Type of water supply	20 (51,3)	19 (48,7)
The content of microelements in drinking water	28 (71,8)	11 (28,2)
Atmospheric and radiation pollution	20 (51,3)	19 (48,7)
Pesticide load	15 (38,5)	24 (61,5)

- The level of knowledge of the population about risk factors, ways and methods of treatment of orthodontic pathology was estimated as follows: high - 4 (10.3%), medium - 9 (23.1%), low - 18 (46.2%), very low - 8 (20.5%); about means of prevention, ways of forming a healthy lifestyle: high - 2 (5,1%), medium - 14 (35,9%), low - 19 (48,7%), very low - 4 (10,3%) .
- Is it expedient to involve dental hygienists in preventive and sanitary-educational work to reduce the burden on doctors: yes 34 (87.2%), no 5 (12.8%).
- Asked about the need for changes in the provision of orthodontic care - 21 (53.8%) suggested adding measures that are not enough to optimally function the service, 18 (46.2%) decided that there was no need to change anything.

In the distribution of responding physicians in terms of their experience, they revealed significant differences only in the answers to the question whether the work on prevention, medical examinations, dyspanserization, hygiene education (OR 8,6 [CI 1,4-51,7], p = 0,016) and mother's nutrition during pregnancy (OR 5.5 [CI 1.1-27.3], p = 0.038). That is, more experienced physicians whose seniority exceeds 10 years attach more importance to the alimentary factor for the incidence of orthopedic care and better understand the importance of preventive and dispensary work to reduce dental morbidity.

CONCLUSIONS

1. According to the results of the questionnaire, the majority of doctors (74,4-92,3%) consider important factors influencing the risk of orthodontic pathology, which are attributed to behavioral and informational, that is, the negative influence of which may be reduced by sanitary and educational work. Also, the most significant risk factors were identified: the presence of early removed teeth through the caries (94.9%), presence of caries (complicated caries) (89.7%), complications during parturitions (82.1%) , complications, the presence of stress during pregnancy (79.5%), which coincides with the results of our own research. Heredity was recognized as a major risk factor for all physicians (100%), and while

this risk factor is unmanageable, it is possible to reduce the negative impact by early observation (screening) and detecting orthodontic pathology.

2. Analyzing the results of the questionnaire of orthodontists and children`s dentists in order to optimize the organization of orthodontic care, the following was shown: doctors support preventive measures, but consider the existing system to be ineffective; they pay attention to a general prevention system that could combine the influence of teachers and doctors; recognize the application of health-saving technologies; recognize the effectiveness of the preventive examination, as well as screening, to reduce the level of orthodontic pathology; consider it advisable to create a single electronic medical card for the child from birth; the majority of them consider the low level of awareness of the population about the risk factors, ways and methods of treatment of orthodontic pathology, means of prevention, ways of forming a healthy lifestyle; it is expedient to involve in the preventive and sanitary-educational work of dental hygienists to reduce the burden on doctors.
3. In the training of students and interns in the specialty "Dentistry", more attention should be paid to the study of the risk factors of the occurrence of orthodontic pathology and the importance of primary prevention and dyspansery control to reduce its level.

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