# GEORGIAN MEDICAL MEWS

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# ЕЖЕМЕСЯЧНЫЙ НАУЧНЫЙ ЖУРНАЛ

Медицинские новости Грузии საქართველოს სამედიცინო სიახლენი

# **GEORGIAN MEDICAL NEWS**

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**GMN:** Georgian Medical News is peer-reviewed, published monthly journal committed to promoting the science and art of medicine and the betterment of public health, published by the GMN Editorial Board since 1994. GMN carries original scientific articles on medicine, biology and pharmacy, which are of experimental, theoretical and practical character; publishes original research, reviews, commentaries, editorials, essays, medical news, and correspondence in English and Russian.

GMN is indexed in MEDLINE, SCOPUS, PubMed and VINITI Russian Academy of Sciences. The full text content is available through EBSCO databases.

GMN: Медицинские новости Грузии - ежемесячный рецензируемый научный журнал, издаётся Редакционной коллегией с 1994 года на русском и английском языках в целях поддержки медицинской науки и улучшения здравоохранения. В журнале публикуются оригинальные научные статьи в области медицины, биологии и фармации, статьи обзорного характера, научные сообщения, новости медицины и здравоохранения. Журнал индексируется в MEDLINE, отражён в базе данных SCOPUS, PubMed и ВИНИТИ РАН. Полнотекстовые статьи журнала доступны через БД EBSCO.

GMN: Georgian Medical News – საქართველოს სამედიცინო სიახლენი – არის ყოველთვიური სამეცნიერო სამედიცინო რეცენზირებადი ჟურნალი, გამოიცემა 1994 წლიდან, წარმოადგენს სარედაქციო კოლეგიისა და აშშ-ის მეცნიერების, განათლების, ინდუსტრიის, ხელოვნებისა და ბუნებისმეტყველების საერთაშორისო აკადემიის ერთობლივ გამოცემას. GMN-ში რუსულ და ინგლისურ ენებზე ქვეყნდება ექსპერიმენტული, თეორიული და პრაქტიკული ხასიათის ორიგინალური სამეცნიერო სტატიები მედიცინის, ბიოლოგიისა და ფარმაციის სფეროში, მიმოხილვითი ხასიათის სტატიები.

ჟურნალი ინდექსირებულია MEDLINE-ის საერთაშორისო სისტემაში, ასახულია SCOPUS-ის, PubMed-ის და ВИНИТИ РАН-ის მონაცემთა ბაზებში. სტატიების სრული ტექსტი ხელმისაწვდომია EBSCO-ს მონაცემთა ბაზებიდან.

# WEBSITE

www.geomednews.com

# К СВЕДЕНИЮ АВТОРОВ!

При направлении статьи в редакцию необходимо соблюдать следующие правила:

- 1. Статья должна быть представлена в двух экземплярах, на русском или английском языках, напечатанная через полтора интервала на одной стороне стандартного листа с шириной левого поля в три сантиметра. Используемый компьютерный шрифт для текста на русском и английском языках Times New Roman (Кириллица), для текста на грузинском языке следует использовать AcadNusx. Размер шрифта 12. К рукописи, напечатанной на компьютере, должен быть приложен CD со статьей.
- 2. Размер статьи должен быть не менее десяти и не более двадцати страниц машинописи, включая указатель литературы и резюме на английском, русском и грузинском языках.
- 3. В статье должны быть освещены актуальность данного материала, методы и результаты исследования и их обсуждение.

При представлении в печать научных экспериментальных работ авторы должны указывать вид и количество экспериментальных животных, применявшиеся методы обезболивания и усыпления (в ходе острых опытов).

- 4. К статье должны быть приложены краткое (на полстраницы) резюме на английском, русском и грузинском языках (включающее следующие разделы: цель исследования, материал и методы, результаты и заключение) и список ключевых слов (key words).
- 5. Таблицы необходимо представлять в печатной форме. Фотокопии не принимаются. Все цифровые, итоговые и процентные данные в таблицах должны соответствовать таковым в тексте статьи. Таблицы и графики должны быть озаглавлены.
- 6. Фотографии должны быть контрастными, фотокопии с рентгенограмм в позитивном изображении. Рисунки, чертежи и диаграммы следует озаглавить, пронумеровать и вставить в соответствующее место текста в tiff формате.

В подписях к микрофотографиям следует указывать степень увеличения через окуляр или объектив и метод окраски или импрегнации срезов.

- 7. Фамилии отечественных авторов приводятся в оригинальной транскрипции.
- 8. При оформлении и направлении статей в журнал МНГ просим авторов соблюдать правила, изложенные в «Единых требованиях к рукописям, представляемым в биомедицинские журналы», принятых Международным комитетом редакторов медицинских журналов http://www.spinesurgery.ru/files/publish.pdf и http://www.nlm.nih.gov/bsd/uniform\_requirements.html В конце каждой оригинальной статьи приводится библиографический список. В список литературы включаются все материалы, на которые имеются ссылки в тексте. Список составляется в алфавитном порядке и нумеруется. Литературный источник приводится на языке оригинала. В списке литературы сначала приводятся работы, написанные знаками грузинского алфавита, затем кириллицей и латиницей. Ссылки на цитируемые работы в тексте статьи даются в квадратных скобках в виде номера, соответствующего номеру данной работы в списке литературы. Большинство цитированных источников должны быть за последние 5-7 лет.
- 9. Для получения права на публикацию статья должна иметь от руководителя работы или учреждения визу и сопроводительное отношение, написанные или напечатанные на бланке и заверенные подписью и печатью.
- 10. В конце статьи должны быть подписи всех авторов, полностью приведены их фамилии, имена и отчества, указаны служебный и домашний номера телефонов и адреса или иные координаты. Количество авторов (соавторов) не должно превышать пяти человек.
- 11. Редакция оставляет за собой право сокращать и исправлять статьи. Корректура авторам не высылается, вся работа и сверка проводится по авторскому оригиналу.
- 12. Недопустимо направление в редакцию работ, представленных к печати в иных издательствах или опубликованных в других изданиях.

При нарушении указанных правил статьи не рассматриваются.

# REQUIREMENTS

Please note, materials submitted to the Editorial Office Staff are supposed to meet the following requirements:

- 1. Articles must be provided with a double copy, in English or Russian languages and typed or computer-printed on a single side of standard typing paper, with the left margin of 3 centimeters width, and 1.5 spacing between the lines, typeface Times New Roman (Cyrillic), print size 12 (referring to Georgian and Russian materials). With computer-printed texts please enclose a CD carrying the same file titled with Latin symbols.
- 2. Size of the article, including index and resume in English, Russian and Georgian languages must be at least 10 pages and not exceed the limit of 20 pages of typed or computer-printed text.
- 3. Submitted material must include a coverage of a topical subject, research methods, results, and review.

Authors of the scientific-research works must indicate the number of experimental biological species drawn in, list the employed methods of anesthetization and soporific means used during acute tests.

- 4. Articles must have a short (half page) abstract in English, Russian and Georgian (including the following sections: aim of study, material and methods, results and conclusions) and a list of key words.
- 5. Tables must be presented in an original typed or computer-printed form, instead of a photocopied version. Numbers, totals, percentile data on the tables must coincide with those in the texts of the articles. Tables and graphs must be headed.
- 6. Photographs are required to be contrasted and must be submitted with doubles. Please number each photograph with a pencil on its back, indicate author's name, title of the article (short version), and mark out its top and bottom parts. Drawings must be accurate, drafts and diagrams drawn in Indian ink (or black ink). Photocopies of the X-ray photographs must be presented in a positive image in **tiff format**.

Accurately numbered subtitles for each illustration must be listed on a separate sheet of paper. In the subtitles for the microphotographs please indicate the ocular and objective lens magnification power, method of coloring or impregnation of the microscopic sections (preparations).

- 7. Please indicate last names, first and middle initials of the native authors, present names and initials of the foreign authors in the transcription of the original language, enclose in parenthesis corresponding number under which the author is listed in the reference materials.
- 8. Please follow guidance offered to authors by The International Committee of Medical Journal Editors guidance in its Uniform Requirements for Manuscripts Submitted to Biomedical Journals publication available online at: http://www.nlm.nih.gov/bsd/uniform\_requirements.html http://www.icmje.org/urm\_full.pdf
- In GMN style for each work cited in the text, a bibliographic reference is given, and this is located at the end of the article under the title "References". All references cited in the text must be listed. The list of references should be arranged alphabetically and then numbered. References are numbered in the text [numbers in square brackets] and in the reference list and numbers are repeated throughout the text as needed. The bibliographic description is given in the language of publication (citations in Georgian script are followed by Cyrillic and Latin).
- 9. To obtain the rights of publication articles must be accompanied by a visa from the project instructor or the establishment, where the work has been performed, and a reference letter, both written or typed on a special signed form, certified by a stamp or a seal.
- 10. Articles must be signed by all of the authors at the end, and they must be provided with a list of full names, office and home phone numbers and addresses or other non-office locations where the authors could be reached. The number of the authors (co-authors) must not exceed the limit of 5 people.
- 11. Editorial Staff reserves the rights to cut down in size and correct the articles. Proof-sheets are not sent out to the authors. The entire editorial and collation work is performed according to the author's original text.
- 12. Sending in the works that have already been assigned to the press by other Editorial Staffs or have been printed by other publishers is not permissible.

Articles that Fail to Meet the Aforementioned Requirements are not Assigned to be Reviewed.

#### ᲐᲕᲢᲝᲠᲗᲐ ᲡᲐᲧᲣᲠᲐᲓᲦᲔᲑᲝᲓ!

რედაქციაში სტატიის წარმოდგენისას საჭიროა დავიცვათ შემდეგი წესები:

- 1. სტატია უნდა წარმოადგინოთ 2 ცალად, რუსულ ან ინგლისურ ენებზე,დაბეჭდილი სტანდარტული ფურცლის 1 გვერდზე, 3 სმ სიგანის მარცხენა ველისა და სტრიქონებს შორის 1,5 ინტერვალის დაცვით. გამოყენებული კომპიუტერული შრიფტი რუსულ და ინგლისურენოვან ტექსტებში Times New Roman (Кириллица), ხოლო ქართულენოვან ტექსტში საჭიროა გამოვიყენოთ AcadNusx. შრიფტის ზომა 12. სტატიას თან უნდა ახლდეს CD სტატიით.
- 2. სტატიის მოცულობა არ უნდა შეადგენდეს 10 გვერდზე ნაკლებს და 20 გვერდზე მეტს ლიტერატურის სიის და რეზიუმეების (ინგლისურ,რუსულ და ქართულ ენებზე) ჩათვლით.
- 3. სტატიაში საჭიროა გაშუქდეს: საკითხის აქტუალობა; კვლევის მიზანი; საკვლევი მასალა და გამოყენებული მეთოდები; მიღებული შედეგები და მათი განსჯა. ექსპერიმენტული ხასიათის სტატიების წარმოდგენისას ავტორებმა უნდა მიუთითონ საექსპერიმენტო ცხოველების სახეობა და რაოდენობა; გაუტკივარებისა და დაძინების მეთოდები (მწვავე ცდების პირობებში).
- 4. სტატიას თან უნდა ახლდეს რეზიუმე ინგლისურ, რუსულ და ქართულ ენებზე არანაკლებ ნახევარი გვერდის მოცულობისა (სათაურის, ავტორების, დაწესებულების მითითებით და უნდა შეიცავდეს შემდეგ განყოფილებებს: მიზანი, მასალა და მეთოდები, შედეგები და დასკვნები; ტექსტუალური ნაწილი არ უნდა იყოს 15 სტრიქონზე ნაკლები) და საკვანძო სიტყვების ჩამონათვალი (key words).
- 5. ცხრილები საჭიროა წარმოადგინოთ ნაბეჭდი სახით. ყველა ციფრული, შემაჯამებელი და პროცენტული მონაცემები უნდა შეესაბამებოდეს ტექსტში მოყვანილს.
- 6. ფოტოსურათები უნდა იყოს კონტრასტული; სურათები, ნახაზები, დიაგრამები დასათაურებული, დანომრილი და სათანადო ადგილას ჩასმული. რენტგენოგრამების ფოტოასლები წარმოადგინეთ პოზიტიური გამოსახულებით tiff ფორმატში. მიკროფოტო-სურათების წარწერებში საჭიროა მიუთითოთ ოკულარის ან ობიექტივის საშუალებით გადიდების ხარისხი, ანათალების შეღებვის ან იმპრეგნაციის მეთოდი და აღნიშნოთ სუ-რათის ზედა და ქვედა ნაწილები.
- 7. სამამულო ავტორების გვარები სტატიაში აღინიშნება ინიციალების თანდართვით, უცხოურისა უცხოური ტრანსკრიპციით.
- 8. სტატიას თან უნდა ახლდეს ავტორის მიერ გამოყენებული სამამულო და უცხოური შრომების ბიბლიოგრაფიული სია (ბოლო 5-8 წლის სიღრმით). ანბანური წყობით წარმოდგენილ ბიბლიოგრაფიულ სიაში მიუთითეთ ჯერ სამამულო, შემდეგ უცხოელი ავტორები (გვარი, ინიციალები, სტატიის სათაური, ჟურნალის დასახელება, გამოცემის ადგილი, წელი, ჟურნალის №, პირველი და ბოლო გვერდები). მონოგრაფიის შემთხვევაში მიუთითეთ გამოცემის წელი, ადგილი და გვერდების საერთო რაოდენობა. ტექსტში კვადრატულ ფჩხილებში უნდა მიუთითოთ ავტორის შესაბამისი N ლიტერატურის სიის მიხედვით. მიზანშეწონილია, რომ ციტირებული წყაროების უმეტესი ნაწილი იყოს 5-6 წლის სიღრმის.
- 9. სტატიას თან უნდა ახლდეს: ა) დაწესებულების ან სამეცნიერო ხელმძღვანელის წარდგინება, დამოწმებული ხელმოწერითა და ბეჭდით; ბ) დარგის სპეციალისტის დამოწმებული რეცენზია, რომელშიც მითითებული იქნება საკითხის აქტუალობა, მასალის საკმაობა, მეთოდის სანდოობა, შედეგების სამეცნიერო-პრაქტიკული მნიშვნელობა.
- 10. სტატიის ბოლოს საჭიროა ყველა ავტორის ხელმოწერა, რომელთა რაოდენობა არ უნდა აღემატებოდეს 5-ს.
- 11. რედაქცია იტოვებს უფლებას შეასწოროს სტატია. ტექსტზე მუშაობა და შეჯერება ხდება საავტორო ორიგინალის მიხედვით.
- 12. დაუშვებელია რედაქციაში ისეთი სტატიის წარდგენა, რომელიც დასაბეჭდად წარდგენილი იყო სხვა რედაქციაში ან გამოქვეყნებული იყო სხვა გამოცემებში.

აღნიშნული წესების დარღვევის შემთხვევაში სტატიები არ განიხილება.

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# Содержание:

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# WORKSHOP AS A PRACTICE-ORIENTED METHOD OF TEACHING DENTISTS: INTRODUCTION TO EDUCATIONAL PROGRAMS FOR WORKING WITH CHILDREN WITH AUTISM SPECTRUM DISORDERS (ASD)

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#### Abstract.

This article addresses the pressing issue of providing dental care to children with Autism Spectrum Disorder (ASD) and emphasizes the need for an innovative approach in the training of dental professionals. The intensive course we have developed for practical training, based on the use of clinical cases and patient management algorithms for ASD, represents an important step toward improving the quality of dental care. During their education in medical universities, students master various types of simulations, which allow them to integrate theoretical knowledge with practical skills. However, given the dynamic nature of medical practice and societal needs, continuous updating of this knowledge is essential. We present a "portrait" of a dentist working with children with ASD, which includes a list of criteria in line with current medical standards and innovations. The key aspects of our approach include adherence to WHO standards and the "Health for All" principle, highlighting the dentist's responsibility to society; the development of communication skills necessary for effective interaction with children facing communication challenges; the use of clinical cases in the educational process, which promotes the formation of a comprehensive approach to organizing patient appointments and treatment based on successful interactions with patients.

**Key words.** Children, autism, teeth, caries, dentistry, hygiene, training, workshop, dental environment.

#### Introduction.

Autism Spectrum Disorders (ASD) represent a group of complex, disintegrative developmental disorders characterized by an inability to communicate and interact socially, as well as a tendency toward stereotypical behaviors (Suetenkov D.E., et al., 2020) [1]. For dental professionals, it is crucial to consider the clinical manifestations of ASD in children. Three diagnostic criteria for ASD can be identified before the age of three [2]. The first criterion, social interaction impairment, includes the absence of gaze, facial expressions, and gestures during communication, as well as a lack of interest in peers' feelings and hobbies. The second criterion involves qualitative impairments, such as delays in speech development, difficulties in initiating and maintaining conversations, speech stereotypy, echolalia (both immediate and delayed), and a lack of engagement in play. The third criterion is limited and repetitive patterns of behavior, interests, and activities, which includes a strong attachment to routines, reflected in heightened interest in specific toys and repetitive limb movements [1]. In the realm of professional education, the shift toward subject-oriented methods is driven by modern transformations, as informatization and technological advancements demand fundamentally new knowledge and skills that the traditional educational model cannot provide [3]. Among these requirements, an emphasis on process-oriented activities, quality management, autonomy, and responsibility are critical [4], as acquiring practical experience is essential for achieving professionally and socially significant competencies [5]. As an outcome, the development of an intensive workshop for dental professionals focused on providing dental care to children with ASD is of central importance in the current context. The practice-oriented approach (POA) is becoming increasingly relevant in light of state policies and standards that emphasize the preparation of highly qualified specialists. Today, specialists must possess not only professional skills, but also personal qualities dictated by current labor market demands. Given the growing need to expand the application of POA in dental education programs, particularly in working with children with ASD, it is important to note that the ultimate result of this approach is the formation of a behavioral model for the dentist. This model evolves through the implementation of professional activities that must be effectively mastered during practical training sessions and algorithms. The use of modern teaching methods helps to develop and practice the skills and abilities necessary for a comprehensive approach to the prevention of dental anomalies in children with autism spectrum disorders (ASD)

Thus, the creation of a practice-oriented intensive for dentists not only addresses contemporary challenges but also ensures the improvement of competencies and the quality of dental care (QDC) for children with ASD.

Objective of the Study: The aim of the study is to develop a workshop as a practice-oriented intensive course for dental professionals, focused on providing care to children with Autism Spectrum Disorder (ASD), with the goal of improving the training of specialists by emphasizing simulation practices and modern teaching methods in universities.

## Materials and Methods.

A comprehensive approach was used in this study, including a literature review on teaching methods related to practice-oriented learning for dental professionals in medical universities, with a focus on dental care for children with ASD. The PubMed, Scopus, and Google Scholar databases were utilized to search for relevant articles from the last 10 years. The effectiveness of the implemented teaching methods was assessed at several medical universities. As part of the practical sessions, students underwent training in providing dental care, including theoretical lectures and practical workshops. Within the intensive practical course, clinical cases were developed and introduced, reflecting reallife situations that specialists may encounter in providing dental care to children with ASD. These cases were used to stimulate discussions and group analyses, fostering deeper understanding

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and the development of practical skills. The effectiveness of the training was evaluated through questionnaires, assessments of academic performance, and feedback from instructors.

#### Results

The creation of an "accessible dental environment" should become a key element in the organization and provision of quality dental care (QDC). Special attention is given by researchers to the preparation for dental appointments for children with ASD, and there are existing recommendations for dentists treating children with ASD [1], which have partially influenced the development of our dental care management algorithm for children with ASD (2024) [6]. An analysis of contemporary domestic and international literature shows that the prevalence of dental caries among children with health limitations (HL) in the preschool age ranges from 88-93%, while among school-aged children, it varies between 54-99% [7-8]. According to WHO data, the European region shows a significant prevalence of 33.6% dental caries in permanent teeth among the population, corresponding to nearly 335 million people [9]. The prevalence of dental caries among younger children and school-aged children remains high [10-19]. The prevalence of early childhood caries among boys and girls aged 12-23 months and 24-35 months is influenced by the child's gender. Statistically significant differences in caries intensity (CPI) were found in different age groups, with older age groups showing higher caries intensity [20].

The implementation of a practice-oriented approach (POA) is supported by positive results from employer surveys, where employers noted the high preparedness of bachelor's and master's graduates for analytical work, their communication skills, ability to work in teams, and willingness to self-develop. Furthermore, reaccreditation confirmed the alignment of educational programs with ENQA and ECBE standards [21].

Children with Autism Spectrum Disorder (ASD) do not appear physically different from other children and have a normal life expectancy. However, their ability to socialize is significantly impaired, as evidenced by the symptoms of the underlying condition [22]. Based on an analysis conducted by Kazakh researchers (2023), it was concluded that the challenges of socialization and learning for children with ASD are similar to the difficulties faced by dentists when providing care for this group of children. It is noted that early autism occurs in 1 in 100 children, and its prevalence continues to grow [23]. In Russia, ASD is considered one of the most common pathologies among young children. Specialists are developing comprehensive models that integrate various technologies and methods to support children with ASD, focusing on positive socialization [24]. Among the key issues identified by Kazakh researchers is the lack of live communication and educational environments, which is also relevant for dental appointments for children with ASD. Practice-oriented education (POE) is seen as an effective approach for developing competencies in specialists in the fields of education and healthcare [25].

Thus, the analogy between socialization problems and dental care highlights the necessity of implementing practiceoriented methods in the training and preparation of specialists for working with children with ASD.

An urgent task for the higher professional education system for medical specialists, including those in dentistry, within the framework of multi-level education, is the introduction of forms and methods of POE aimed at assimilating theoretical knowledge directly in the process of acquiring professional skills and actions. Practice-oriented forms of educational activities are key elements in consolidating theoretical knowledge and acquiring professional skills [26]. The formation of a responsible and professionally competent personality capable of self-determination and self-realization is the main goal of medical dental education [27].

A dentist is required to demonstrate professionalism and high moral and ethical qualities, intelligence, deep professional knowledge, and practical experience [28-40]. The concept of modernizing medical education initially included the introduction of new, activity-oriented state educational standards [41]. A modern dentist in the 21st century must possess skills and qualities that ensure not only the quality of medical care (QMC) but also the safety of patients, especially those such as children with ASD. In this context, the importance of creating the "portrait" of a dentist can be justified by several key components, based on the research by Yelovikova T.M. et al. (2019). Fundamental aspects of successful dental practice include:

- Proper documentation management (digitization). Documentation should include information on the specific needs of such patients, enabling a higher level of individualized care. This not only ensures legal protection for both the dentist and the patient but also establishes a critical approach for children with ASD, ensuring special care and additional consultations.
- Dentists must be prepared to perform various dental procedures, which requires continuous professional skill updates. This is particularly important when working with children with ASD, who may have specific needs regarding anesthesia methods and treatment approaches.
- Participation in advanced training courses and seminars allows dentists to stay current with the latest developments in pediatric dentistry and psychology.
- The ability to detect disease symptoms and diagnose accurately is a critical aspect of dental practice. In this context, dentists need to be familiar not only with dental pathologies but also with comorbid medical conditions that could affect the health of children with ASD.
- It is equally important to emphasize the role of an interdisciplinary approach, where the dentist collaborates with other specialists, such as educators and psychologists.
- The use of diagnostic algorithms requires awareness of international disease classifications, enabling the dentist to consider a wide range of conditions that may affect the health of children with ASD. Adequate treatment, therefore, requires not only dental knowledge but also a general understanding of medical principles [27].

Considering the above, it is clear that dentists must implement POA in their practice. This approach involves active interaction with patients and their families, considering individual needs and requirements, as well as educating parents and caregivers on how best to care for the oral health of their children. Creating a comfortable and safe environment for treating children with ASD requires particular attention to their emotional state and needs. Thus, the "portrait" of a modern dentist includes not only high professional skills and knowledge but also a deep understanding of the needs of various patient categories, such as children with ASD.

Simulation-based learning combines two approaches: practical exercises on phantom simulators and training on dental stations, allowing for the recreation of various clinical situations. These methods not only help develop practical skills but also contribute to finding solutions for organizing dental care for children with ASD [42]. The competency-based approach in dental training emphasizes the dentist's ability to adapt to various clinical situations, including those involving children with ASD. It is essential for a dentist to develop the readiness to account for the individual needs of such patients [43-45]. The use of phantom models in dental education helps reduce errors during dental examinations, primarily due to the reduction of stress in the learning process. This is especially important when working with children with ASD, as stress can negatively impact the doctor-patient interaction. A key condition for forming professional competence in future dentists is the realization of intra- and inter-subject connections, which brings the educational process closer to real-world professional activities [46], a fact confirmed by practice.

According to our research in 2024, it is proposed to introduce workshops aimed at raising awareness within the dental community about adapting dental care for children with ASD. This teaching format offers a practical and effective approach within educational programs, enabling participants (regardless of age, professional experience, or whether they are interns or residents) to not only acquire theoretical knowledge but also engage in practical skills development.

Scientific Justification and Benefits of Workshops. In our view, a workshop should be organized as an intensive practical session, guided by three stages that ensure effective learning and practical knowledge application.

# Stage I: Practice-Oriented Approach (POA) and Interactivity and Engagement (I&E).

Workshops provide an opportunity to immediately apply theoretical knowledge in practice, enhancing the participants' ability to absorb the material. Participants can directly apply newly acquired skills in real clinical situations, using preprepared clinical cases that take into account age-related and clinical forms of caries, as outlined in the ICD-10. This increases their preparedness. The workshop format implies active participation from all attendees, promoting the exchange of experiences and ideas. Oral discussions in small or large groups, with assigned mentors and opponents for critical feedback, enable deeper analysis of each case. This creates an atmosphere of collaboration, crucial in a field that requires creative approaches to treating children with ASD. According to the Working Educational Program (WEP), a seminar (workshop) is planned, focusing on the analysis of clinical cases involving children with ASD. The workshop will include an in-depth examination of the factors contributing to dentofacial anomalies at different age stages. This will be followed by a discussion on methods for engaging parents in the development of healthy habits. At the conclusion of Stage I, participants will interpret and develop recommendations aimed at improving educational programs for parents.

# Stage II: Flexibility and Activity (F&A).

Workshops can be tailored to the specific needs of participants, allowing them to focus on relevant issues and problems. For dental professionals working in inclusive practice settings, it is particularly important to address the challenges of treating children with ASD, as requirements can vary depending on individual patient characteristics.

At this stage, the outcome of the workshop includes the creation of specific methods, such as the implementation of a developed algorithm for interdisciplinary cooperation when organizing dental care. This includes the initial consultation with parents of children with ASD, communication with parents, engaging with the child along with a speech therapist and neurologist, and conducting an initial examination using the Frankl Scale to assess the child's emotional state. Applying adaptive dental practices and preventive measures creates an environment that supports the practical application of knowledge in professional activities. At this stage of the intensive course, another seminar will be held to analyze clinical cases, focusing on various etiological factors affecting the oral health of children with ASD. Stage II of the workshop will include group work, where participants will assess the quality of life of children with ASD based on the presence or absence of harmful habits. The session will conclude with a discussion of strategies to mitigate the negative impact of harmful habits on health. Additionally, the next task involves studying the organization of public health services, evaluating programs for detecting harmful habits, and implementing specialized dental offices. The role of non-governmental organizations (NGOs) in improving healthcare will also be examined. The seminar (workshop) will include clinical case analysis and an examination of successful international dental initiatives aimed at improving dietary habits to prevent dentofacial anomalies (DFA) among children with ASD. A discussion will follow, evaluating current programs in Kazakhstan, their effectiveness, and pilot projects.

Interpretation: Development of proposals to enhance cooperation between governmental and non-governmental organizations.

# Stage III: Continuous Dental Improvement (CDI).

Workshops can become an essential part of a continuous medical education program, allowing dentists to stay up to date with the latest advancements and techniques for working with children with ASD. This approach contributes to improving the quality of dental care and clinical outcomes after completing the intensive practical session. The final part of the workshop focuses on applying practical knowledge, unlike seminars that are often theory centred. Workshops are oriented towards creating new solutions and approaches, making them more effective for learning. For "novices," interns, and residents, this method provides opportunities to learn new techniques, while experienced postgraduate dentists can find inspiration and exchange ideas, leading to new insights. Participants can

work both individually and in groups, creating projects that can be included in their professional portfolios. In Stage III of the intensive course, in accordance with the WEP, participants will conduct research on different levels of disease prevention and develop a prevention program for dentofacial anomalies in children with ASD, taking into account aspects of reproductive health and family planning. The seminar (workshop) will also include an analysis of clinical cases, emphasizing the consequences of inadequate preventive measures, which may lead to severe health complications for both mother and child.

Group work: Development of a comprehensive prevention program incorporating elements of reproductive health. Interpretation: Discussion of methods for assessing the effectiveness of preventive programs and their adaptation to meet the needs of the target audience.

Summarizing the above, it should be noted that workshops organized according to the proposed model are a powerful tool for improving the skills of dentists working with children with ASD. They provide the practical application of theoretical knowledge, facilitate the exchange of experience and adaptation to the individual needs of the participants. However, it is important to keep in mind that the success of such events depends on the quality of training and the involvement of all participants, as well as on the availability of the necessary resources and support from educational institutions.

#### Conclusion.

Autism spectrum disorders (ASD) are a significant problem in the field of dental care for children, requiring specialists not only deep theoretical knowledge, but also practical skills that are formed from the first days of training in medical universities. It is important to note that from the student bench, future dentists master various types of simulations, which allows them to connect theoretical aspects with practical situations. However, the dynamic development of medical practice and the needs of society require the constant updating and complementation of this fundamental knowledge. Our "portrait" of a dentist providing assistance to children with ASD includes a compiled list of criteria that are dictated by modern innovations and the requirements of modern medical science. Our proposed criteria not only contribute to the standards of the World Health Organization (WHO), focusing on the principle of "health for all," but also emphasize the doctor's responsibility to society, enshrined in the Constitution.

Dentists working with ASD children must not only provide high quality dental care but also develop communication skills. Particular consideration should be given to communication difficulties with children with ASD who have difficulty communicating and perceiving information. The use of clinical cases in the educational process allows students not only to study theory, but also to apply it in practice, which contributes to the formation of an integrated approach to treatment and interaction with patients.

In conclusion, it is important to note that workshops organized according to the proposed model represent a powerful tool for enhancing the qualifications of dentists working with children with ASD. These workshops ensure the applied use of theoretical knowledge, promote the exchange of experiences,

and adapt to the individual needs of participants. However, the success of such events depends on the quality of preparation, the involvement of all participants, and the availability of necessary resources and support from educational institutions.

In light of the above, there are several key findings that have practical implications for dentists working with autism spectrum disorder (ASD):

- Specialized training in the form of courses and workshops is necessary for dentists to effectively interact with patients and their families by understanding the behavior and communication challenges of children with ASD.
- The implementation of practice-oriented training methods in dental education programs is critically important. Simulation practices help future professionals develop necessary skills in a safe and controlled environment.
- Dentists must consider the unique needs and behavioral traits of children with ASD, requiring flexibility and adaptability in their approaches to organizing appointments and treatment.
- Establishing interdisciplinary collaboration between dentists, psychologists, and other specialists is essential for creating a comprehensive professional approach to treating children with ASD and maintaining oral health.
- Developing and implementing intensive training for dentists focused on working with children with ASD contributes to improving the quality of dental care and the overall health of this vulnerable patient group.

# Ethical Approval.

Approval for the study was granted by the Local Ethics Committee of the S.D. Asfendiyarov Kazakh National Medical University, decision No. 8(114) dated 30.06.2021.

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«WORKSHOP» КАК ПРАКТИКО-ОРИЕНТИРОВАННЫЙ МЕТОД ОБУЧЕНИЯ ВРАЧЕЙ-СТОМАТОЛОГОВ: ВВЕДЕНИЕ В ОБРАЗОВАТЕЛЬНЫЕ ПРОГРАММЫ ДЛЯ РАБОТЫ С ДЕТЬМИ С РАССТРОЙСТВАМИ АУТИСТИЧЕСКОГО СПЕКТРА (РАС)»

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Резюме. Статья посвящена актуальной проблеме стоматологической помощи оказания детям расстройствами аутистического спектра и подчеркивает необходимость инновационного подхода в подготовке врачей стоматологов. Разработанный нами интенсив для практических занятий, основанный на использовании клинических кейсов и алгоритмов ведения пациентов с аутизмом, представляет собой важный шаг к улучшению качества стоматологической помощи. В процессе обучения в медицинских вузах студенты осваивают различные виды симуляций, что позволяет им интегрировать теоретические знания с практическими навыками. Однако, учитывая динамическое развитие медицинской практики и потребности общества, необходимо постоянное обновление этих знаний. Мы представили «портрет» стоматолога, работающего с детьми с расстройствами аутистического спектра, который включает перечень критериев, соответствующих современным требованиям и инновациям в области медицины.

**Цель исследования:** разработка воркшопа как практико-ориентированного интенсива для стоматологов, направленного на оказание помощи детям с аутизмом с целью улучшения подготовки специалистов с акцентом на симуляционных практиках и современных методах обучения в вузах.

Материалы и методы. В настоящем исследовании использован комплексный подход, включающий анализ литературы, касающийся методов обучения в направлении практико-ориентированной практики обучения стоматологов в медицинских вузах, с акцентом на стоматологической помощи детям с аутизмом.

Заключение. Расстройства аутистического спектра представляют собой значительную проблему в области стоматологической помощи детям, требующую от специалистов не только глубоких теоретических знаний, но и практических навыков, которые формируются с первых дней обучения в медицинских вузах. Важно отметить, что со студенческой скамьи будущие стоматологи осваивают различные виды симуляций, что позволяет им связывать теоретические аспекты с практическими ситуациями.

Таким образом, подготовка стоматологов, ориентированная на практико-ориентированные методы (интенсив практические занятия) обучения, являются

ключевым аспектом В обеспечении безопасной, качественной стоматологической помощи детям с аутизмом. Соответственно, интеграция научно-исследовательских проектов с образовательными учреждениями в части внедрения современных симуляционных практик, активно используя клинические кейсы, способствует повышению компетентности специалистов и реализации междисциплинарных основ интеграции.

Ключевые слова: дети, аутизм, стоматология, гигиена, воркшоп, кариес, зубы, стоматологическая среда. ესემზაევა საულე სერიკოვნა

რაქტიკაზე ორიენტირებული მეთოდი: შესავალი საგანმანათლებლო პროგრამებში აუტისტური სპექტრის აშლილობის მქონე ბავშვებთან მუშაობისთვის.

აზდუკალიკოვა დ.ბ., აუეზოვა ა.მ., ბაიმურატოვა მ.ა., ესემბაევა ს.ს. ერმუხანოვა გ.ტ., ჟ.უ. ერქიბაევა.

სამედიცინო ყაზახეთის უნივერსიტეტი "საზოგადოებრივი ჯანდაცვის უმაღლესი სკოლა", ასფენდიაროვის ყაზახეთის ეროვნული სამედიცინო უნივერსიტეტი, ალმათი.

ყაზახეთის რესპუბლიკა. რეზიუმე. სტატია ემღვნება აუტისტური სპექტრის აშლილობის მქონე ბავშვების სტომატოლოგიური მოვლის აქტუალურ პროზლემას და ხაზს უსვამს სტომატოლოგების ტრენინგში ინოვაციური მიდგომის აუცილებლობას. ჩვენ მიერ შემუშავებული სასწავლო ინტენსიური პრაქტიკული რომელიც ეფუძნება აუტიზმის მქონე პაციენტების მართვის კლინიკურ შემთხვევებსა და ალგორითმებს, წარმოადგენს მნიშვნელოვან ნაბიჯს სტომატოლოგიური მოვლის ხარისხის გაუმჯობესებისკენ. სამედიცინო უნივერსიტეტებში სწავლის პერიოდში სტუდენტები ეუფლებიან სხვადასხვა ტიპის სიმულაციას, რაც მათ თეორიული ცოდნის პრაქტიკულ უნარებთან ინტეგრირების საშუალებას ამლევს. სამედიცინო პრაქტიკის დინამიური განვითარებისა და საზოგადოების საჭიროებების გათვალისწინებით, აუცილებელია ცოდნის მუდმივი განახლება. ამ წარმოგიდგენთ აუტისტური სპექტრის აშლილობის მომუშავე ზავშვეზთან სტომატოლოგის "პორტრეტს", რომელიც მოიცავს იმ კრიტერიუმების ჩამონათვალს, რომლებიც აკმაყოფილებს მედიცინის სფეროში თანამედროვე მოთხოვნებსა და სიახლეებს. კვლევის მიზანი: შემუშავდეს ვორქშოპი, როგორც ორიენტირებული პრაქტიკაზე ინტენსიური კურსი სტომატოლოგებისთვის, რომელიც ისახავს აუტიზმის მქონე ბავშვების დახმარებას, რათა გააუმჯობესოს სპეციალისტების მომზადება სიმულაციური პრაქტიკისა და სწავლების თანამედროვე უნივერსიტეტებში. მეთოდებზე მასალეზი მეთოდები. ამ კვლევამ გამოიყენა ყოვლისმომცველი მიდგომა, რომელიც მოიცავდა სწავლების მეთოდების ლიტერატურის მიმოხილვას სამედიცინო სკოლებში პრაქტიკაზე ორიენტირებული სტომატოლოგიური სფეროში, აქცენტი აუტიზმის მქონე განათლების ბავშვების სტომატოლოგიურ მოვლაზე.

დასკვნა. აუტისტური სპექტრის აშლილობები წარმოადგენს მნიშვნელოვან პრობლემას პედიატრიული სტომატოლოგიური მოვლის სფეროში, რომელიც მოითხოვს სპეციალისტებს არა მხოლოდ ღრმა თეორიული ცოდნა, არამედ პრაქტიკული უნარ-ჩვევები, რომლებიც ყალიბდება სამედიცინო უნივერსიტეტებში ტრენინგის პირველივე დღეებიდან. რომ სტუდენტობის მნიშვნელოვანია აღინიშნოს, დროიდან მომავალი სტომატოლოგები ეუფლებიან სხვადასხვა სახის სიმულაციას, რაც მათ თეორიული ასპექტეზის პრაქტიკულ სიტუაციეზთან დაკავშირეზის საშუალებას აძლევს. ამრიგად, სტომატოლოგების ტრენინგი, რომელიც ორიენტირებულია სწავლების პრაქტიკაზე ორიენტირებულ მეთოდებზე (ინტენსიური პრაქტიკული გაკვეთილები), არის საკვანძო ასპექტი აუტიზმით დაავადებული ბავშვებისთვის უსაფრთხო, ხარისხის სტომატოლოგიური უზრუნველსაყოფად. შესაბამისად, საგანმანათლებლო დაწესებულებებთან კვლევითი პროექტეზის ინტეგრაცია თანამედროვე სიმულაციური პრაქტიკის დანერგვის თვალსაზრისით, კლინიკური შემთხვევების აქტიური გამოყენებით, ხელს უწყობს სპეციალისტების ამაღლებას კომპეტენციის და ინტეგრაციის ინტერდისციპლინური საფუძვლების განხორციელებას. საკვანმო სიტყვები: ბავშვები, აუტიზმი,

სახელოსნო, კარიესი, სტომატოლოგია, ჰიგიენა, კზილები, სტომატოლოგიური გარემო.