



Research Article

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Dental Education, Dentists' Attitudes and Knowledge Concerning Patients with Autism in Georgia

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Abstract

The number of patients diagnosed with Autism Spectrum Disorders (ASD) has increased significantly. The objectives of this study were to explore dentists' professional attitudes and behaviour towards patients with ASD; these dentists' perceptions of their dental education about these issues; and the relationships among their educational experiences, attitudes, and behaviours concerning patients with ASD. Survey data were collected from 170 general dentists in Tbilisi. The results showed that 56.3 percent of dentists treat patients with ASD. The respondents disagreed with statements indicating that their undergraduate dental education had prepared them well to treat patients with ASD. However, the better they felt prepared, the more likely they were to provide care for these patients. The frequency with which dentists said they use appropriate behaviour management strategies when treating patients with ASD correlated with the quality of their educational experiences. In conclusion, given the growing number of patients with ASD, it is important to revisit dental education efforts targeted towards preparing future dental care providers for the treatment of patients with ASD and special needs.

Keywords: Education, Dentists, Autism, Attitudes

Introduction

Nowadays, in the world, autism spectrum disorder is considered to be a rapidly spreading disease among non-communicable diseases. According to the World Health Organization (WHO), the prevalence of autism in 2013 was 160: 1, but now this proportion has changed significantly at the expense of increasing the number of patients and is 59: 1 (Centers for Disease Control and Prevention, ASD, 2019 / Center for Disease Control and Prevention). Worldwide, the burden of mental and behavioural disorders is increasing. Mental health as a public health priority is a major challenge in many countries around the world - strategies, action plans and programs are being developed to reduce the burden and outcomes of mental disorders. Access to medical and social services is crucial in this regard [1]. In developed European countries, public spending on mental health accounts for 8-12% of public health spending.

Per capita, mental health spending was \$2.7 million in Georgia in 2011, compared to \$4 in neighbouring Armenia, \$6.4 in Moldova, and \$60.2 in Estonia (WHO (2005) Mental Health Atlas. WHO-Geneva). In Georgia, the treatment of patients with ASD funded by the City Hall and its subordinate structures does not include dental treatment. Consequently, due to material conditions, patient visits to dental clinics are reduced, which affects the general population. In patients with autistic spectrum disorder, especially in children, problems with the management of dental behaviour (non-cooperative behaviour) are evident. In particular, the degree of non-cooperative dental intervention in patients with autism spectrum disorder is 50-72% higher than in children with typical development. Non-cooperative behaviour is mainly manifested in their increased aggression [2].



In Georgia, this process is further facilitated by the lack of adapted dental services for patients with autism spectrum disorder. In 2013, a study conducted in Georgia found that health services needed improvement, especially for patients with disabilities, which also referred to patients with ASD. The study found that dentists' knowledge of how to treat patients with chronic diseases is higher than their knowledge of how to treat patients with disabilities, such as patients with ASD [3].

60-90% of children and almost 100% of adults in the world suffer from dental caries, while periodontal diseases are observed in 15-20%. The World Health Organization calls on public health authorities to take measures that will improve the condition of the oral cavity. For example, the following measures should be taken for prevention: Develop the right policies to effectively control risk factors for oral diseases, develop and implement communication-based projects to promote oral health and prevent oral diseases in vulnerable and disadvantaged sections of the population. Take protective measures against common risk factors for oral or other chronic diseases, improve country support for strengthening oral disease systems, and integrate them into public health. People with disabilities complain about the problem of access to medical services, they face a particularly difficult situation when receiving dental services. Because dentists are not trained and have insufficient education to treat people with disabilities, the treatment process is delayed. The problem is further complicated by the unadopted environment and infrastructure. Many studies are conducted to assess the oral health of children with autism spectrum disorder in order to understand the role of dentists in the treatment of children with ASD [4]. Studies have shown that dentists who have experience dealing with patients with ASD can easily overcome difficulties during their treatment [5]. Therefore, based on the current background and the urgency of the problem, scientific research and its design were selected, and the objectives of this study were to explore dentists' professional attitudes and behaviour towards patients with ASD; these dentists' perceptions of their dental education about these issues; and the relationships among their educational experiences, attitudes, and behaviours concerning patients with ASD.

Materials and Methods

In order to achieve the goals, a survey was conducted in Tbilisi, where 170 dentists were selected, for which a questionnaire was created. In order to study the adaptation of dental services, a questionnaire for dentists consisting of 13 questions was used. Information was obtained about their seniority, the number of patients with autistic spectrum disorder received, difficulties in treating them, guidelines and the necessity of having a psychologist in the clinic.

Results

At all stages of the research process: research planning, survey design, sampling, questionnaire design and validation, interview process, data analysis, and other details were strictly controlled, which minimized the error of the results and kept the reliability of the total results at 95 percent.

Before starting the main research, the questionnaires issued by us were pre-tested on about 30 respondents, on the basis of which the questions of the questionnaire were modified, removed and new questions were included. Also, after the completion of the study, a secondary analysis/comparison of the main results was carried out in relation to the records in the dental clinics. When comparing the results, the main indicators were located close to each other. Both preliminary and results were evaluated using Krombacher's alpha. The obtained total and the indicator of each component made a mark higher than 0.7. This allows us to consider the indicators of descriptive and inferential statistics obtained as a result of the analysis as reliable and valid and use them both for generalization and for formulating conclusions and recommendations (Table 1).

Table 1: Reliability statistics.

Krombacher's Alpha	Cronbacher's Alpha Based on Standardized Items	Number
0.574	0.785	12

Depending on the purpose of the research, children's dentists were involved in the research. The number of paediatric dentists interviewed was 170 individuals, including 10 men and 160 women.

We considered the work experience of the interviewed dentists as an important factor, because those who had a short work experience either had no experience working with patients with ASD or had a small amount. 24.3% had 0-5 years of work experience, 26.4% had 16 or more years of work experience, 25% had 6-10 years of work experience (Figure 1).

62.9% of respondents had experience working with patients with ASD, 37.1% did not.

Those who had experience working with patients with ASD, 49% had 1-2 patients with ASD in the past year. 5.0% of the interviewed dentists had undergone special training courses and 95.0% had not. Therefore, the need to train dentists to treat patients with ASD is significant.

87% of the interviewed dentists state that they need special guidelines for accepting ASD patients. Only 40% of them believe that it is necessary to have psychologists and occupational therapists in clinics. This too can be considered an inadequate assessment, because as ASD's parents note, their children often express aggression, cry and often need to be restrained when they visit the doctor. However, they also note that if they find the necessary way, their children calm down quickly. And here the role of psychologists can be irreplaceable. 38% of doctors who had work experience of 0-5 years, the reason for refusing treatment was the inability to communicate with the patient, because the child's behavior is uncontrollable, uncooperative. Also, the reason for refusal was the lack of experience in working with patients with ASD, which was noted in 27.3% of respondents. The respondents' distribution of work experience and their opinion about the lack of practical guidelines for the treatment of patients with ASD in the clinic was distributed as follows: 85% of doctors with 0-5 years of experience believe that there is a lack of guidelines, 6-10 years - 80%.

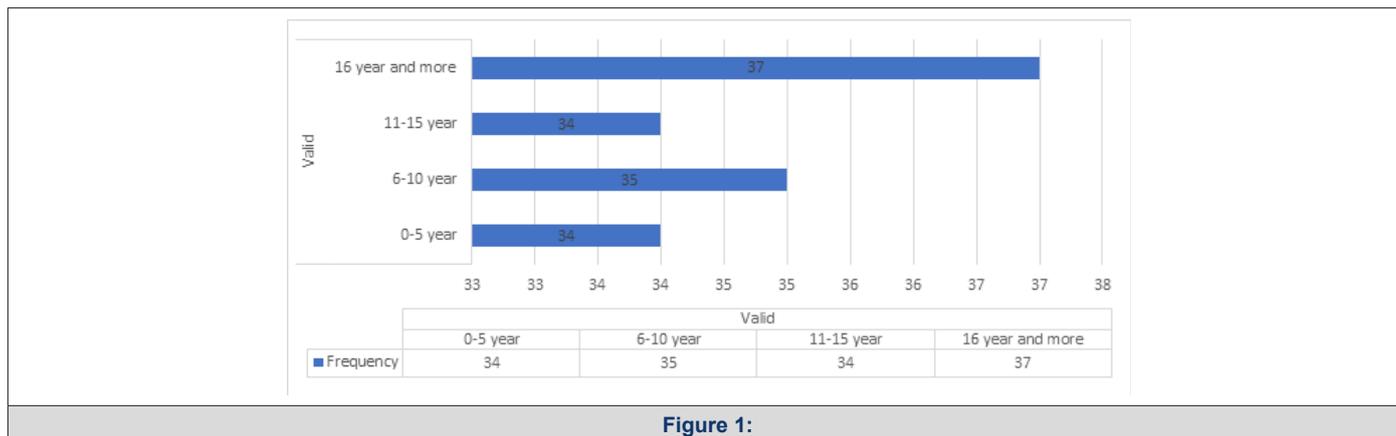


Figure 1:

Conclusion

The analysis of the research results allows us to make important conclusions regarding the reception of dental services: According to the self-assessment questionnaire, 95% of the interviewed dentists need retraining for the treatment of patients with ASD, which implies the development of additional skills (for example: manipulations performed with games), which will be a contributing factor for the quality delivery of dental services to patients with ASD; It is necessary to raise the qualifications of dentists, to develop skills in order to perform dental treatment of patients with ASD perfectly.

Ethics Approval and Consent to Participate

The questionnaire was approved by the Bioethics committee (11-5308), and it fully met the ethical aspects of the research.

Availability of Data and Materials

Electronic-form transcripts of the conducted interviews and signed consent forms are all in possession of the author. The thesis can be freely accessed, which previously been published in doctoral program of The University of Georgia.

Competing Interests

The authors declare no potential conflicts of interest.

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Contributions

M.S contributed to the conception and design of the study.

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