

Knowledge and Perception on Autism among Dental Students: A Cross-sectional Study

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ABSTRACT

Introduction: Autism spectrum disease (ASD) is a lifelong neurodevelopmental disorder that begins at birth or during the first 18 months of life characterized by abnormalities in social interactions and communications and limited, repetitive behavior. Nonspecific neurological symptoms may be noted in many people with ASD such as lack of motor coordination, delayed development of hand dominance, and poor muscle tone. Dental and periodontal diseases can be compromised for children with ASD due to damaging oral habits such as bruxism, tongue thrusting, lip biting, and self-injurious behavior.

Materials and methods: A cross-sectional study was conducted through a random sample of 50 undergraduate dental students with 11 close-ended questions through online survey form. The result summarizes that all the students have knowledge about autism. About 100% of the study population are aware about autism. About 80% of the population showed awareness of the techniques of the dental therapies. About 86% of the population had the knowledge of oral manifestations of psychoactive drugs or anticonvulsants.

Keywords: Autism, Behavioral management, Bruxism, Children, Cross-sectional study, Dental problems.

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INTRODUCTION

Autism spectrum disorder (ASD) is a serious developmental disorder that impairs the overall cognitive, emotional, social, and physical health of an individual. Certain nonspecific neurological symptoms are seen in people with autism such as motor in coordination, delayed development of hand dominance, and poor muscle tone.¹ Autism is now recognized in 1 in 150 children.² It mostly begins at birth or during the first 18 months of life. People with autism appear physically normal, but their behaviors are affected severely.³ Females are most commonly affected by autism than males. The etiology of autism is unknown. Oral hygiene and proper dental care should be given to children with an autistic disorder.⁴ The major dental problems with ASD are gingival diseases, tooth decay, and dentofacial abnormalities. Dental and periodontal diseases can be compromised for children with ASD due to damaging oral habits such as bruxism, tongue thrusting, lip biting, and self-injurious behavior. Bruxism was frequently noted in children with ASD. Hard or soft intraoral or perioral tissue abnormalities do not exist, except for the compromised oral health. Autistic children enforce difficulties for parents and dental professionals, as the oral environment is challenging with the capabilities, characteristics, and behavior of people with ASD.³ Behavioral management methods for ASD people should involve gradual desensitization to familiarize them with the basic dental instruments and procedures. Advanced behavioral management techniques must be implemented by the dentist to complete simple dental procedures. The aim of this study is to analyze the knowledge and perception regarding autism among undergraduate dental students.³

MATERIALS AND METHODS

Study Design

A cross-sectional study has been conducted for the dental undergraduate students of dental institutions from 1st October to 6th October 2022 through online survey.

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Study Subjects

A random sample of 50 undergraduate dental college students was chosen from second years to interns, and a survey was conducted to test their knowledge regarding autism.

Study Methods

Eleven self-administered and close-ended questions were prepared and distributed among undergraduate dental students of the dental institution through "Microsoft Forms" online.

Statistical Analysis

Descriptive statistics as numbers and percent were calculated to summarize qualitative data. A pie chart and percentage count were used to obtain the result.

RESULTS AND DISCUSSION

Dental students of age-group 19–25 years were involved in this survey.

The survey was responded by 14% of second-year students, 18% of third-year students, 24% of final-year students, and 44% of interns, out of which 26% were male and 74% were female (Fig. 1).

The result summarizes (Table 1) that all the students (100%) have knowledge about autism. Genetic disorders and hormonal imbalance are found to be the impact for autism,⁵ and 48% of the population felt that autism occurs due to genetic disorders and hormonal imbalance. Clinical symptoms of autism are seen by the start of 18 months–24 months, and 50% of the population believed that the symptoms of autism are shown at the age of 18 months–24 months. Oral manifestations of autism are bruxism, picking at gums, lip biting, and tongue thrusting, to which this study showed that 98% of the population agreed to all the mentioned oral manifestations. Behavioral and pharmacological therapy is preferred for the management of autism. About 58% of the population prefer both behavioral and pharmacology therapy. Familiarization, restraint, tell–show–do technique, and voice-over are recommended to accommodate the dental therapies for autistic patients, and 80% of the population showed awareness of the techniques of the dental therapies.

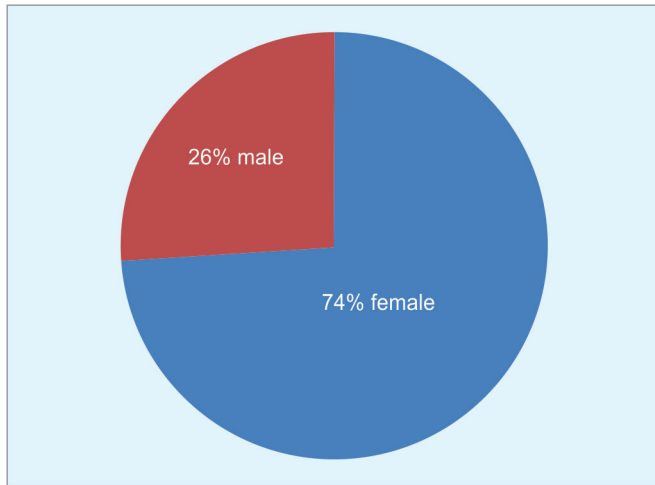


Fig. 1: Survey response

Poor tongue coordination, medications, and pouching of food inside the mouth are the reasons for high prevalence of dental caries in autistic patients to which 80% of the population had the knowledge of the reasons for high prevalence for dental caries. Xerostomia, delayed tooth eruption, and poor periodontal health are the oral manifestations of psychoactive drugs or anticonvulsants. About 86% of the population had the knowledge of oral manifestations of psychoactive drugs or anticonvulsants. In the past two decades, the awareness among the public, parents, and health professionals has increased about ASD. This cross-sectional study has been carried out among the dental undergraduate students (2nd, 3rd, 4th year, and interns). Collection of data regarding the knowledge and awareness of autism was carried out by a self-administered questionnaire answered by the undergraduate students. Although there were many limitations that may have affected the responses collected such as superficial responses by people or late answering, they may not respond to some questions. In the previous study conducted by Saveetha Dental College and Hospital, Chennai² in 2020 on the topic of “KNOWLEDGE AND AWARENESS REGARDING AUTISM AMONG UNDERGRADUATE STUDENTS”, they conducted a study to test the knowledge and awareness on autism among undergraduate students and concluded that most of the population were aware of autism among students. According to the study conducted in Alexandria, Egypt in the period 2009–2011,¹ which was a cross-sectional study with a sample size of 200 children, stated that children with ASD had more untreated caries, behaved negatively, and were uncooperative. They had poor oral hygiene, and the caries prevalence rate was more. They had self-injurious behaviors. According to this study, the half population was aware of what actually autism is and when the symptoms of autism start. Students were well aware of the oral conditions and manifestations of autistic patients. Few students had the knowledge of proper management of autistic patients.

CONCLUSION

This study (Fig. 2) concludes that most of the dental students who participated in the survey are aware of autism. Many sessions or webinars can be done to increase the knowledge of autism among the students.

Table 1: Questions and the results obtained

Sl. no.	Questions	Results
1.	Are aware of the condition “Autism”?	100% of the students were aware of the condition autism.
2.	Etiology of autism	48% of the students had knowledge of etiology of autism.
3.	Period of onset of symptoms of autism	50% of the students were aware about the age of onset of symptoms of autism.
4.	Oral manifestations of autism	98% of the students had the knowledge of oral manifestations of autism
5.	Theory for management of autistic patients	58% of the students were aware of the theory of management of autistic patients.
6.	Techniques recommended to accommodate the dental therapy for autistic patients	80% of the students were aware of techniques of dental therapy.
7.	Reasons for high prevalence of dental caries	80% of the students had the knowledge of reasons for high prevalence of dental caries.
8.	Oral manifestations of psychoactive drugs or anticonvulsants	86% of students had the knowledge of oral manifestations of psychoactive drugs or anticonvulsants.

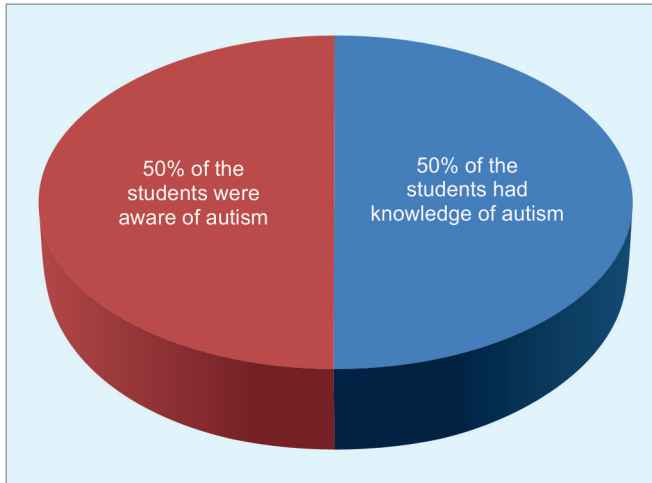


Fig. 2: Survey results

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