



## Oral Habits in a Group of Preschool Autistic Children

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spectrum disorder as measured by IQ score, males out number females by only 2:1. More over the ratios approaching equality of 1:1 in the most severe symptom logy of the spectrum<sup>(6,7)</sup>

ASD is currently characterized in impairments in an individual's social communication as well as the presence of restricted and Repetitive Behavior in autism (RRBIs). The defining system of ASD as described in the Diagnostic and Statistical Manual, Fifth Edition (DSM-5) are explained in detail. the symptoms are divided into two domain(1) impaired social communication skills (including impaired social-emotional reciprocity, impaired nonverbal communication and a typical social relationships)and (2) restrictive and repetitive behaviors an dinterests<sup>(8)</sup>.

Children with an autistic disorder may need more dental care and may also be more difficult to treat than healthy children. It is extremely important that the patient's medical history is registered and annually updated so the patients can be treated in an appropriate way. It is also essential that any medication used is documented in the dental record. The connection between certain types of medication and their impact on saliva and increased caries activity is well known. Patients using such medication may need extra preventive treatment. The autistic children are more difficult to treat and had a greater need for specialized dental care. The access to a paediatric dentist when the need arises is therefore important. Sedation with nitrous oxide-oxygen worked well in some children but not at all children. A high sensitive to the sound level may explain the difference. General anesthesia is the best option for treatment of ASD children especially in multiple caries.<sup>(9)</sup>

Autismspectrumdisorder(ASD)isagroupof neurodevelopmentaldisordersthatmay affectchildren atanearly age. In addition to self-injurious behaviors such as hitting with bare hands, banging their heads on walls and furniture, and pricking or pinching; oral habits including bruxism, tongue thrusting, lip biting, and pica (eating objects and substances such as gravel, or pens) have been reported among children with ASD. These habits may contribute to significant

### I. INTRODUCTION

All over the whole world the term "Health" is considered central concept with in healthcare which also includes dental care. There are two common descriptions for the concept of health. The first is based on the biomedical approach focusing on disease prevention and treatment. The second approach focuses on the whole individual and is based on preserving health which requires the interplay between individual and environment.<sup>(1)</sup>

Poor oral health is associated with poor overall health and oral conditions are the second most expensive disease group to treat (after cardiovascular disease).The main oral conditions are tooth decay, gum diseases, oral cancer and oral trauma. The majority of oral diseases are related to socio-economic factors and daily living habits and it has also become clear that risk factors in oral diseases are often the same as those implicated in general diseases.<sup>(2)</sup>

People with disabilities have been reported to have poorer oral health status than the general population which have a significant effect on an individual's whole quality of life. It is confirmed that individuals with disabilities may have a lot of limitations in oral hygiene care and performance due to their motor and sensory and intellectual disabilities. They are more susceptible to poor oral health. They require assistance from their parents, siblings or care givers.<sup>(3)</sup>

The etiology of AS Disstill unknown, although in some patients structural and functional alterations in the limbic system (responsible for emotions and social relations) have been detected through use of sophisticated imaging techniques.<sup>(4)</sup>The selective hypo-activation of certain ere bral are as associated with motor integration has also been described.<sup>(5)</sup>

A predominance occurs amongst males suggesting an alteration associated to the Y chromo some with an overall predilection of 4:1 males over females. This may be attributed to the variability that can be explained by a feminine protective effect to be affected by the disorder than a male. However in the more severe forms of Autism



The questionnaires were distributed in Arabic language to the mothers. It was collected from mothers after about 15 minutes. Questionnaires were evaluated for completeness, and the uncompleted forms were either returned to the mother for completing, and if it was not possible, they were discarded.

The questionnaire include 9 question about (thumb sucking-lip biting-nail biting-foreign body biting-tongue thrusting- bruxism- mouth breathing) was distributed among mothers twice with one week apart to insure validity and reliability.

### III. RESULTS

This study was conducted on 50 autistic children aged from 3 to 6 years old and 50 normal children to evaluate oral habits of autistic children.

Participants were also asked to fill a questionnaire included questions related to the child's oral habits

Table (1) and figure (1) illustrated oral habits between the studied groups, There was statistically significant difference between the studied groups regarding to sucking and biting foreign objects and bruxism. It was found that, 74 % and 44 % of autistic group were exhibiting the habit of sucking and biting foreign objects respectively, Compared to (14% and 10%) in normal children (P value < 0.001).

Additionally, 46% of children with autism suffered from bruxism compared to 14% in normal children (P value < 0.001)

dental problems such as soft tissue injury, tooth loss, tooth wear, increased overjet, anterior open bite, and posterior crossbite. Furthermore, these habits are associated with skeletal and dentoalveolar deformation. The severity of deformation is related to the frequency and duration of the habit, and should be evaluated by pediatric dentists. An assessment of the prevalence of various oral habits among children with ASD and comparison non-ASD children would provide the necessary information regarding the habits in these groups and the problems associated with the oral habits.<sup>(10)</sup>

### II. MATERIAL AND METHODS

The total of 50 children aged between (3-6) years from both gender diagnosed as ASD were selected from prof Mahmoud El wasefy clinics and 50 comparable healthy children as a control group were selected from pediatric clinic in faculty of Dentistry Mansoura University. This study was performed between (2021 and 2023).

Ethical approval was obtained from the Ethical Committee in Faculty of Dentistry, A written informed consent was obtained from parents to have their agreement for their child to be dentally examined and answer a detailed questionnaire that was especially designed for this study.

Any case (child) who needed treatment was referred to pediatric dental clinic in the Faculty of Dentistry, Mansoura University.

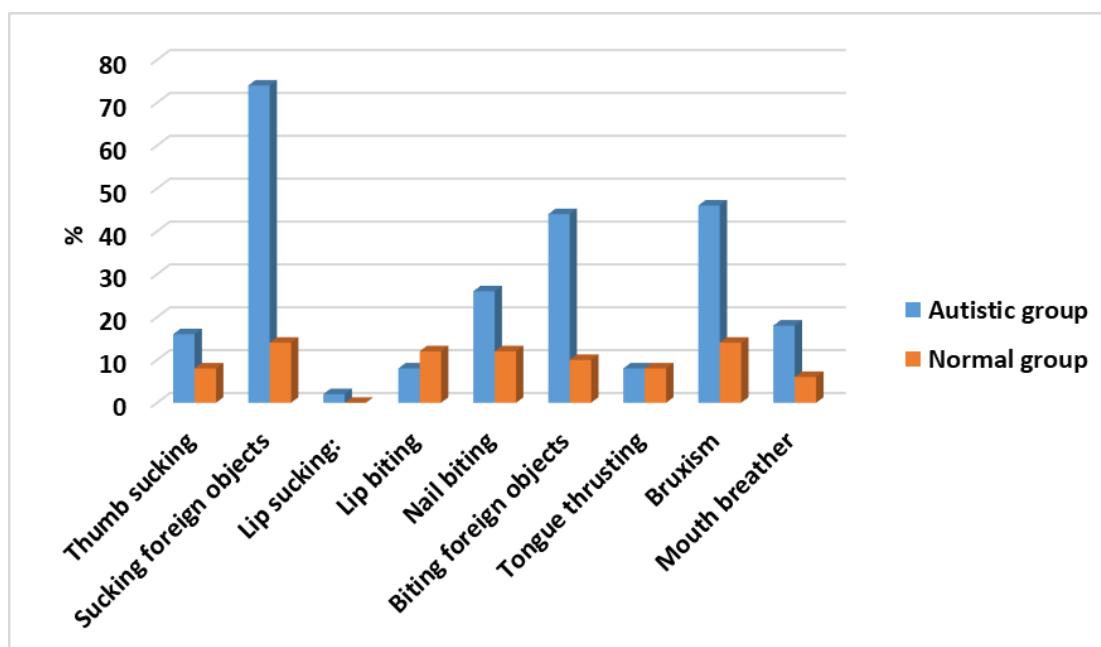
A well-structured self-administered questionnaire that was based on review literature,

Oral habits	Autistic group N=50(%)	Normal group N=50 (%)	Test of significance
<b>Thumb sucking:</b>	8(16%)	4(8%)	$\chi^2=1.52$ P=0.218
<b>Sucking foreign objects</b>	37(74%)	7(14%)	$\chi^2=36.53$ P<0.001*
<b>Lip sucking:</b>	1(2%)	0	$\chi^2_{FET}=1.01$ P=1.0
<b>Lip biting</b>	4(8%)	6(12%)	$\chi^2=0.444$ P=0.741
<b>Nail biting</b>	13(26%)	6(12%)	$\chi^2=3.18$ P=0.074
<b>Biting foreign objects</b>	22(44%)	5(10%)	$\chi^2=14.66$ P<0.001*



<b>Tongue thrusting</b>	4(8%)	4(8%)	P=1.0
<b>Bruxism</b>	23(46%)	7(14%)	$\chi^2=12.19$ P<0.001*
<b>Mouth breather</b>	9(18%)	3(6%)	FET=3.41 P=0.121

$\chi^2$ =Chi-Square test.  
 MC: Monte Carlo test  
 FET: Fisher exact test  
 \*statistically significant



We studied oral habits among ASD children. The study showed statistically significant differences between the two groups regarding bruxism which was higher in case group that goes with Kuter B, Guler N. 2019<sup>(12)</sup>.

The study showed also statically significant difference between case and control group regarding sucking and biting objects which were higher among ASD children that goes with Qiao Y et al 2020<sup>(13)</sup>.

## V. CONCLUSION

From this study, we can conclude that compared to the control children, ASD children had Oral habits as bruxism and sucking and biting foreign objects

## REFERENCES

## IV. DISCUSSION

Oral health is considered of great importance for everyone. It is an integral part of general health and well-being and mores of or those with disabilities as autistic children due to their compromised medical and congenital conditions. Children with autism spectrum disorder do not have the ability to express their needs or pain and discomfort and in many cases are unable to independently take care of their oral health due to their disabilities. Improving their oral status is one of the challenges that oral health professionals encounter<sup>(11)</sup>.

The present study was carried out on a group of autistic Egyptian children with age ranging between 3 and 6 years to study oral habits. In the current study all the autistic children were examined and diagnosed in their normal environment in the clinic or center.



- [8]. Maye MP, Kiss IG, Carter AS. Definitions and classification of autism spectrum disorders. *Autism Spectrum Disorders: Advancing Positive Practices in Education*. 2022.
- [9]. Fahlvik-Planefeldt C, Herrstrom P. Dental care of autistic children within the non-specialized Public Dental Service. *Swed Dent J*. 2001;25(3):113-8.
- [10]. Al-Sehaibany FS. Occurrence of oral habits among preschool children with Autism Spectrum Disorder. *Pakistan journal of medical sciences*. 2017;33(5):1156.
- [11]. Purohit BM, Acharya S, Bhat M. Oral health status and treatment needs of children attending special schools in South India: a comparative study. *Special Care in Dentistry*. 2010;30(6):235-41.
- [12]. Kuter B, Guler N. Caries experience, oral disorders, oral hygiene practices and socio-demographic characteristics of autistic children. *European Journal of Paediatric Dentistry*. 2019;20(3):237-41.
- [13]. Qiao Y, Shi H, Wang H, Wang M, Chen F. Oral health status of chinese children with autism spectrum disorders. *Frontiers in Psychiatry*. 2020;11:398.
- [1]. Lerner DJ, Levine S, Malspeis S, D'Agostino RB. Job strain and health-related quality of life in a national sample. *American journal of public health*. 1994;84(10):1580-5.
- [2]. Organization WH. *The world health report 2003: shaping the future: World Health Organization*; 2003.
- [3]. Altun C, Guven G, Akgun OM, Akkurt MD, Basak F, Akbulut E. Oral health status of disabled individuals oral health status of disabled individuals attending special schools. *European journal of dentistry*. 2010;4(04):361-6.
- [4]. Schumann CM, Hamstra J, Goodlin-Jones BL, Lotspeich LJ, Kwon H, Buonocore MH, et al. The amygdala is enlarged in children but not adolescents with autism; the hippocampus is enlarged at all ages. *Journal of neuroscience*. 2004;24(28):6392-401.
- [5]. Bauman ML. Brief report: neuroanatomic observations of the brain in pervasive developmental disorders. *Journal of autism and developmental disorders*. 1996;26(2):199-203.
- [6]. Fombonne E. The prevalence of autism. *Jama*. 2003;289(1):87-9.
- [7]. Banach R, Thompson A, Szatmari P, Goldberg J, Tuff L, Zwaigenbaum L, et al. Brief report: Relationship between non-verbal IQ and gender in autism. *Journal of autism and developmental disorders*. 2009;39:188-93.