

Status of dental caries in Normal Children versus mentally challenged Children

¹Dr. Vinayam, M.D.S., Junior Resident, Department of Conservative Dentistry and Endodontics, ESIC Hospital, Lucknow, Uttar Pradesh, India

²Dr. Mishan Manohar Jaiswal, M.D.S., Senior Resident, Department of Conservative Dentistry and Endodontics, Department of Dentistry, Nalanda Medical College & Hospital, Patna - 800007, Bihar, India

³Dr. Rashmi, M.D.S., Assistant Professor, RDJM Medical College & Hospital, Turki, Muzaffarpur, Bihar

⁴Dr. MD Imtiyaz Ahmad, M.D, JR-3 (Post graduate trainee), Department of Pharmacology, Nalanda Medical College & Hospital, Patna - 800007, Bihar

⁵Dr. Neha Kumari, M.D.S Department of Pedodontics and Preventive Dentistry, Dental Life Care, Param Parwati market, 1st Floor, Vijay Nagar, Bailey Road, Patna - 800014, Bihar

Corresponding Author: Dr. Mishan Manohar Jaiswal, M.D.S., Senior Resident, Department of Conservative Dentistry and Endodontics, Department of Dentistry, Nalanda Medical College & Hospital, Patna - 800007, Bihar, India

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Abstract

Aim: The aim of the study was to gauge and compares the oral health conditions and cavity standing in disabled and healthy youngsters.

Materials and methods: 2 teams of willy-nilly chosen youngsters aged 3–12 years were examined. the primary cluster comprised one hundred youngsters with disabilities (cerebral palsy, retardation, Down syndrome, autism, and hearing–speaking disorders) and therefore the second (control) cluster enclosed one hundred healthy youngsters. The examined youngsters were chosen from a traditional faculty and from colleges that

beware of the disabled youngsters. A clinical examination was performed employing a mirror and probe, that disclosed the presence of cavity in addition as missing (extracted) and stuffed teeth. All clinically detected cavitation’s were recorded as cavity. The degree of oral hygiene was evaluated in keeping with the OHI-S index values that were determined by marking the plaque with I Chronicles eozine resolution.

Results: The values of OHI-S index ranged from three.9 to 4.56 in disabled youngsters and from two.84 to 2.94 in healthy youngsters. In disabled youngsters, the common dft values were three.52 in deciduous teeth and

five.34 in mixed dentition. In healthy youngsters, the common dft values were one.53 in deciduous teeth and five.21 in mixed dentition. the common DMFT index in disabled youngsters was one.51 for mixed and half-dozen.48 for permanent dentitions. In healthy youngsters, the common DMFT values were one.33 in mixed and four.84 in permanent dentition.

Conclusion: normally, the results disclosed a considerably poor level of oral hygiene and quite high level of decay prevalence in disabled compared to the healthy youngsters, accentuating the necessity to arrange preventive care measurements and improve tending among the disabled.

Keywords: DMFT/dft index, Mentally challenged youngsters, OHI-S, Oral health standing.

Introduction

The disabled comprise a considerable section of the community and it's calculable that there square measure concerning five hundred million individuals with disabilities worldwide.¹ Worldwide the rife most unwellness in people kids is tooth decay and “dental treatment is that the greatest abandoned health want of the disabled.”² several printed studies have according comparatively poor oral hygiene and high levels of periodontitis in mentally challenged kids,^{3,4} and in an exceedingly form survey, Randell et al. found that kids with Down's syndrome had poorer dental health practices than traditional kids do.⁵ people with Down's syndrome demonstrate a high prevalence of periodontics diseases.^{6,7} The special preventive care have to be compelled to disabled kid because of having vital psychological, physical, and intellectual issues, so they ought to procure exceptional preventive care in dental workplace.⁸ consequently, scanty aid or faulty dental public health measurements might have a negative influence on the oral health standing. thanks to the

depleted or typically complete pathology of their stomatognathic equipment, usually because of anatomical malformations of the oro-facial cavity and children's uncooperative behavior, accomplishment of excellent oral hygiene measurements typically implies the help of oldsters or caretakers. the foremost necessary risk issue for tooth decay in disabled kids is because of poor oral hygiene and inadequate tooth brushing. Preventive measurements ought to thereby embrace adequate education and motivation each for patients and their caretakers, finally aiming at getting and maintaining satisfactory oral hygiene throughout the lifetime.⁹ The aim of this study was to guage and compare the oral health conditions and tooth decay standing in disabled and healthy kids.

Materials and Methods

A clinical examination was performed on a arbitrarily designated sample of one hundred healthy kids from St. Anne's high school, Patna and one hundred disabled kids from the Arunim faculty for mentally challenged, Patna. For the aim of the study, examinees were divided into 2 clusters: the primary group comprising one hundred kids with disabilities (cerebral palsy, slowness, congenital anomaly, autism, and hearing—speaking disorders) and therefore the second management cluster comprising one hundred healthy kids. kids were 3–12 years recent. Clinical examination was performed by employing a probe and a mirror and enclosed registration of clinically gift cavity lesions, extractions, and therefore the range of fillings. The oral hygiene index (OHI) was used for the analysis of the degree of oral hygiene conditions. For that purpose, teeth of every kid within the examined teams were treated with I Chronicles eosin alcohol resolution. Teeth were 1st separated into six teams (3 in upper jaw and three in mandible). once having them marked by employing a

plaque marker (1% fluoresceine alcohol solution), the degree of oral hygiene was evaluated by revealing proprioception and oral coloured surfaces. the foremost coloured surfaces in every of the six teams of teeth during a patient's mouth were evaluated from zero to three and therefore the values were registered within the patient's chart. The OHI index for every patient was calculated by dividing the full total with the amount of teams (6).^{10,11} Clinically detected cavitations were registered as active unhealthy lesions. For the aim of evaluating the prevalence and therefore the intensity of unhealthy lesions in each dentitions and revealing each potential morbidity (caries, extractions, and fillings), Klein–Palmer's index (DMFT index) was used. Representing the typical range of cariously affected and dentally treated teeth within the population, the DMFT index disclosed decayed, missing, and stuffed teeth within the permanent dentition. The dft index was used for an equivalent purpose in deciduous teeth (d = decay in deciduous teeth; D = decay in permanent teeth), extractions (M = missing tooth in permanent dentition), and fillings (f = filling in deciduous tooth; F = filling in permanent tooth). The prevalence of {caries|cavity|dental cavity|tooth decay|decay} was established and given as proportion of the population littered with caries. oldsters and/or caretakers of the examined kids were duty-bound to sign the consent and therefore the approval from the establishment for Disabled kids was taken. For applied mathematics analysis, the information were performed in stand out and regenerate to the SPSS applied mathematics program, version 10.

Results

Figure one representing the common OHI-index values show that there's a statistically important distinction within the quality of oral hygiene between deciduous (p

= zero.033) and mixed ($p < \text{zero.001}$) dentitions, in each management and examined teams of kids. Comparing the results of the common dft index values conferred in Figure two, there's no statistically important distinction between the examined teams, and there's no important distinction between deciduous and mixed dentitions in healthy and mentally unfit youngsters. Comparing the results of the common DMFT values obtained for mixed dentition, there's no statistically important distinction between disabled and healthy youngsters (Figs three and 4).

Figure 1 representing the average OHI-index values show that there is a statistically significant difference in the quality of oral hygiene between deciduous ($p = 0.033$) and mixed ($p < 0.001$) dentitions, in both control and examined groups of children.

Comparing the results of the average dft index values presented in Figure 2, there is no statistically significant difference between the examined groups, and there is no significant difference between deciduous and mixed dentitions in healthy and mentally handicapped children.

Comparing the results of the average DMFT values obtained for mixed dentition, there is no statistically significant difference between disabled and healthy children (Figs 3 and 4).

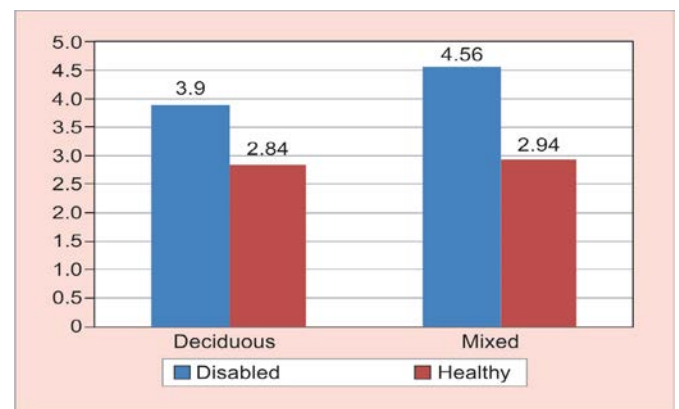


Fig. 1: The relationship representing the average OHI-S index values in deciduous and mixed dentitions in healthy and mentally handicapped children ($p = 0.033$ in

deciduous, $p < 0.01$ in mixed dentition, OHI-S value = oral hygiene index—simplified)

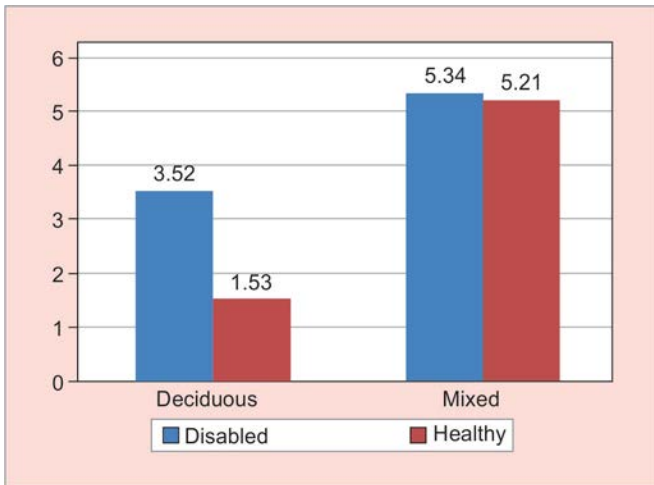


Fig. 2: The relationship representing the average values of dft index in deciduous and mixed dentitions in healthy and mentally disabled children [p (deciduous, mixed)—no statistically significant difference; dft index—decayed, filled teeth (deciduous teeth)]

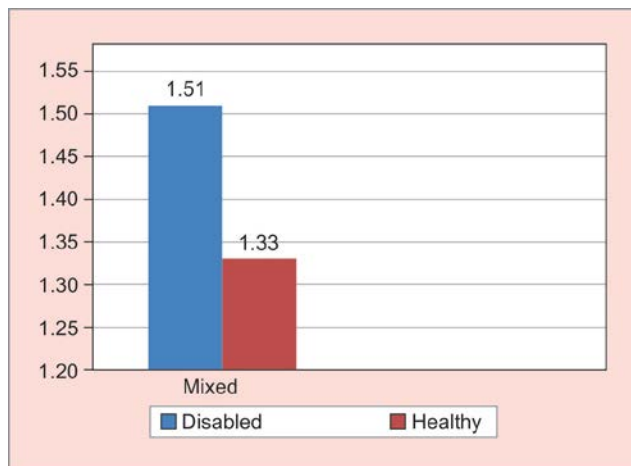


Fig. 3: The relationship representing the average values of DMFT index in mixed dentition in healthy and mentally handicapped children [p (mixed)—no statistically significant difference, DMFT index—decayed, missing, filled teeth]

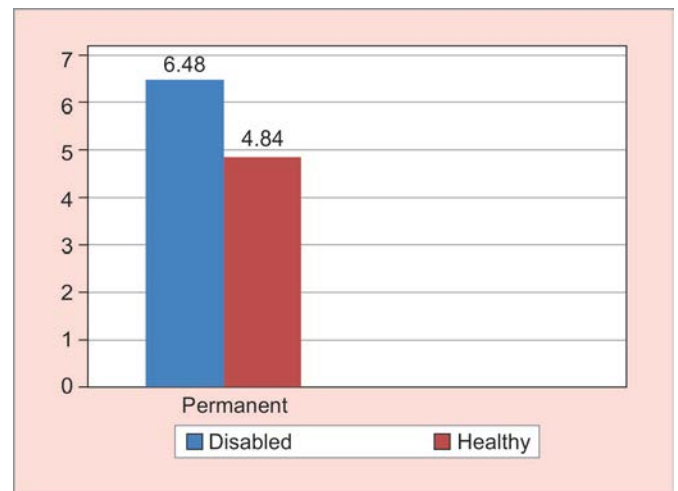


Fig. 4: The relationship representing the average values of DMFT index in permanent dentition in healthy and mentally handicapped children [p (permanent)—no statistically significant difference, DMFT index—decayed, missing, filled teeth]

Discussion

There is a statistically vital distinction within the quality of oral hygiene in deciduous ($p = \text{zero}.033$), mixed ($p < \text{zero}.001$), and permanent dentitions ($p < \text{zero}.001$), between the management and also the examined teams of kids (Fig. 1). The OHI-S index for disabled youngsters ranges from three.9 to 4.56 indicating poor oral hygiene as compared with healthy youngsters, whose OHI-S index ranges from a pair of.84 to 2.94. comparison the results of the typical dft index values given in Figure a pair of, there's no statistically vital distinction between the teams in deciduous and mixed dentitions. The average dft index in disabled youngsters is three.52 for deciduous and five.34 for mixed dentition, whereas in healthy youngsters, the typical dft index for deciduous dentition is one.53 and 5.21 for mixed dentition. Comparing the typical deft values in deciduous (1.51) and DMFT values in permanent (6.48) dentitions, there's a rise within the intensity of decay. youngsters within the age of six ar additional freelance in brushing their teeth. attributable to their psychological

and physical impairment, in addition as inadequate oral hygiene measurements, they may consequently be in danger for a better intensity of decay. Referring to the recent findings, the prevalence of decay in youngsters with special wants was terribly high and also the variety of kids with sensible oral hygiene standing was terribly low.¹² Some authors confirmed that effective oral health programs commencing well before the standard initial contact with dental services within the age of five are required for young youngsters World Health Organization are at a high risk of caries.¹³

Conclusion

According to the current results, a considerably low level of oral hygiene standing and a high level of the decay prevalence are found in disabled youngsters compared to healthy youngsters. It ends up in the conclusion that preventive care continues to be not satisfactory within the Indian population and attention, particularly in disabled youngsters, isn't adequately organized within the country. More changes are necessary so as to enhance preventive measures and promote oral health significantly in youngsters with disabilities.

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