

Can National Lockdown Due To Covid-19 Be Considered As A Stress Factor For Bruxism In Children

Research Article

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Abstract

Bruxism is a disorder characterized by grinding and clenching of teeth which may be due to various etiological factors. Though various etiological factors have been associated, the exact cause is known. Stress has been positively associated with bruxism. The prevalence of bruxism is seen to be high in children and reduces with age. The lockdown imposed due to COVID-19 has been stressful for children and parents. This study was initiated to explore if lockdown could be considered as stress factor for bruxism in children. An online survey link was shared to 182 parents of 6-8-year-olds. 155 parents responded. 58.7% of the parents reported of bruxism in their children during lockdown period. 60.6% of parents considered locked down to be a cause for stress. An increase in awareness of the clinical features as well as the long-term effects of bruxism is necessary for a better and healthier life of their children. Continuous monitoring of stress levels and mental health of both children and parents during any future quarantine or lockdown period is of prime importance to for optimal health of the body.

Keywords: Bruxism; Children; COVID-19; Lockdown; Stress.

Introduction

Bruxism is defined as the habitual grinding of teeth which may occur in the morning or at night. The exact etiology is unknown and is considered to be multifactorial of which stress is an important factor. Studies have shown that bruxism is seen in all age groups but the prevalence is higher in children. Many of these children carry bruxism as a habit in to adulthood and thus have a lower quality of life compared to those without the same disorder. Timely intervention and reduction of stress has been beneficial in the management of bruxism [1].

The outbreak of novel coronavirus disease 2019 (COVID-19)

has emerged in China, which rapidly spread the oddment of the world, and WHO declared it as a pandemic. To halt the COVID-19 transmission and cease the burden on health systems all most all of the countries have brought unprecedented efforts to institute the practice of "social distancing" as a result, many schools have been closed. Children are not beyond the grasp of this pandemic, and also the most vulnerable to the drastic effects of it, as they are forced to stay home for extended periods due to lockdown and school closure, resulting in minimal interaction with peers and decreased the opportunities for exploration and physical activities. All of these adversely impact children's mental health and welfare, leading to a wide variety of mental health issues, such as anxiety, stress, depression, and sleeping difficulties. To prevent the

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outbreak of COVID-19, India announced a national lockdown which resulted in its citizens locked in the house [2].

Bruxism has been associated with stress and various articles have been published about the increased stress levels [3]. Till date, no study has been done to assess the association of national lockdown and bruxism [2]. Hence, this survey was under taken to asses if national lockdown can be considered as a factor for bruxism in children.

Materials and Methods

The present study was initiated after receiving approval from the institutional review board. This cross-sectional study was conducted from 1st August 2020 to 31st August 2020 amongst parents visiting the Department of Pediatric and Preventive Dentistry. An online link was shared amongst all parents of six- to eight-year-old patients who visited the department during that time period which numbered to 182 patients. For all patients, any one parent answered the questionnaire. The questionnaire consisted of 10 questions which was validated by conducting a pilot survey among 30 parents before initiating the study. The results of the survey was statistically analysed using SPSS.

Results and Discussion

Out of the 182 patients to whom the link was shared, 155 (85.16%) of the parents participated which consisted of 72 (46.5%) males and 83 (53.5%) females.

Though bruxism is not a life-threatening condition, the effects that occur due to it can alter the quality of life of an individual and alter mental and physical health. The introduction of national lockdown has been found to create stressful conditions for not only adults but also for children. The limitations of daily activities with in the confines of a house denied children to meet their friends or play outside as well as the need for parents to find different ways to keep their children to be occupied, creating stress for both children as well as parents.

Stress has been found to be present in schoolchildren and has been found to produce multiple health related problems, including bruxism. An increase of stress among students has been seen from 5% in 1966 to 22% in 2002 due to various factors such as academic and peer pressure, economic disparities among friends as well the need to be accepted as a batter sibling. The introduction of lockdown has shown detrimental effects on the mental health of various age groups, especially children and adolescents.

Figure 1. Answers for question “Did your child feel stress during lockdown”.

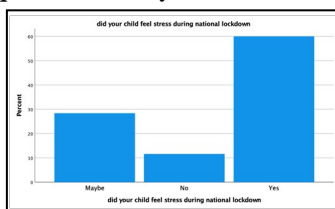


Figure 2: Answers for question “Did you notice your child grinding their teeth”.

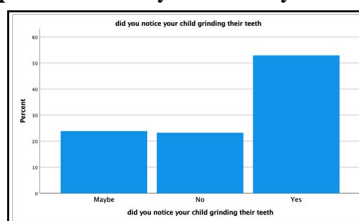


Figure 3. Answers for question “What did you feel caused stress”.

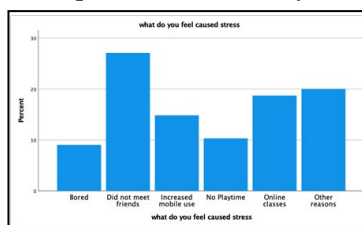
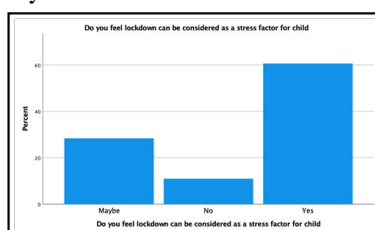


Figure 4. Answers for question “Do you feel lockdown can be considered as a stress factor for child”.



From the results of the present study, 58.9% of the parents were aware of the term “bruxism” compared to 29.7% of the parents who never heard the term before. It was found that 60% of the parents felt their child experienced stress during the lockdown period of which 52.9% children showed grinding of teeth. 23.9% of the parents were not sure if their child would grind their teeth because of stress. 58.7% of the children would grind their teeth during night compared to 18.1% of children who would grind their teeth during the day. These rates seem to be high compared to available literature indicating an increase in stress levels in children as young as six years most probably due to curtailment of playtime or social interaction.

When parents were asked what they felt caused stress, maximum number of parents (27.1%) felt that not meeting friends was the main cause of stress. 18.7% of parents felt that online classes was the cause for stress while 14.8% of the parents felt increased use of mobile games resulted in the same. 9% of parents felt that their children were bored and felt stress while 20% parents said that stress was due to other reasons but did not mention what it was. 38.7% of the parents spent time with their children to reduce with stress and understand their needs due to lockdown. 28.4% of the parents allowed their children to watch television to reduce their stress while 21.3% of the parents bought new colouring books for their children to be engaged and reduce their stress. 11.6% of the parents did not do anything to reduce the stress of their children.

60.6% of the parents felt that lockdown was a stress factor which resulted in episodes of bruxism whereas 11% parents did not consider it to be a factor for bruxism. 28.4% of parents were not sure and felt lockdown could be a reason for bruxism. 67.7% of the parents felt treatment was necessary and availed consultation during the lockdown period. 11% of the parents did not avail any treatment.

The increase of stress due to lockdown in children is increasing with even lack of internet connection during the COVID 19 pandemic for online classes resulting in suicides. The world has changed dramatically since the start of the COVID-19 pandemic and this has included education at all levels. For instance, it has been estimated that since the beginning of April 2020, approximately 90% of the total enrolled learners from 185 countries have been involved in little or no educational activities because of schools and higher education institutions' closure. prolonged school closures, disease-containment measures and economic shutdowns during the COVID-19 pandemic can have potentially serious implications on all aspects of a child's development, including physical, psychosocial, cognitive, and mental health, and on family relationships. Incidence of domestic violence and child maltreatment may increase during periods of school closure. Children could be at greater risk in homes with over crowding or with parents unemployed due to COVID-19 [4, 5]. Concerns have been raised over the adequacy of support for vulnerable groups such as children with learning difficulties, neurodevelopmental disorders, and mental health needs. In addition, home schooling can be difficult for children from low-income families due to limited resources [6].

A recent survey conducted in the UK showed that parents were experiencing increased stress during the coronavirus outbreak, as they were trying to balance caring responsibilities, home school-

ing, and working from home. The economic impact of the pandemic is also likely to add financial burdens and increase parental stress. For children and adolescents with mental health needs, school closures might be even more devastating due to the A recent review on the psychological impact of quarantine during COVID-19 showed a high prevalence of posttraumatic stress and fear among subjects in quarantine [7]. Children are more vulnerable to their environment, which can affect their long-term health and productivity in adult life. Despite limited studies addressing the impact of COVID-19 pandemic on the psychosocial well-being of children, existing data from previous studies highlighted definite concerns over the physical and mental health of children lack of resources and help at home that the schools would normally provide. During the COVID-19 pandemic, it was observed that children who went to bed earlier and those with longer sleep duration had fewer psychosocial problems. Previous studies have highlighted the importance of adequate sleep on behavioural development and quality of life in children. Similar findings have also been observed for children who maintained an exercise routine during school closure [8]. Children who were more active exhibited fewer psychosocial problems, and subsequently resulted in less parental stress. On the other hand, although distance learning through digital technologies has become pivotal during school closures, our results revealed that prolonged and increased use of electronic devices for both gaming and learning purposes was associated with increased psychosocial problems especially in younger children and resulted in more parental stress [9]. Therefore, prolonged use of electronic devices should be avoided. Parents and educators of pre-schoolers should adhere to the American Academy of Paediatrics recommendations to limit screen time to less than 1h per day and consider home-schooling without relying solely on digital technologies [1, 9].

The management of stress in children due to lockdown is very important. Though bruxism is not life threatening, the effects may last a lifetime. Hence early detection plays a pivotal role. Awareness amongst parents is usually low and can result in even more detrimental effects in time [9]. Hence increasing awareness of bruxism as well as a check on the mental health and stress of children and parents will help in controlling bruxism.

Conclusion

With in the limitations of our study it was found that lockdown due to COVID 19 can be considered as stress factor for bruxism in children.

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