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## Does Parental Work from Home Influence Development of Sleep Bruxism in Children

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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 with the introduction of work from home for parents. This study was initiated to find if work from home is a stress factor for children with bruxism. An online survey link was shared to 156 parents of 6–8-year-old children who visited the department of pedodontics and preventive dentistry. 111 parents responded to the survey. 71.2% of the parents found their children to be stressed of which 30.4% believed online classes and the lack of parental interaction due to work from home caused stress. 71.2% of the parents believed that consultation was necessary despite of lockdown. Within the limits of the study it has been found that work from home can be considered as a stress factor for children with sleep bruxism

**Keywords:** Bruxism, COVID-19, lockdown, work from home, stress

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### INTRODUCTION

The emergence of COVID 19 has made companies to minimize physical contact among individuals and prevent new infections, by carrying out a job without specific place of work restrictions, with the possible use of technological tools which is termed as work from home.<sup>1</sup> Though the pandemic has given rise to increasing number of individuals to avail work from home option, the idea was first flouted in 1980 as cost effective option for improving work life balance.<sup>2</sup> This experience is a new one for most employees and has been found to be advantageous for both employees such as possible productivity gains, increased staff motivation, better work–life balance, and better control over time schedule. Work from home has its own disadvantages such as difficulty in monitoring performance, cost of working from home, communication problems, no clear separation between home and work tasks, and unsuitability with all works. The blurring of physical and organisational boundaries between work and home can also negatively impact an individual’s mental and physical health due to extended hours, lack of or unclear delineation between work and home, and limited support from organisations.<sup>3</sup> A lack of family time may inversely affect of children in the family as they do not get time to spend with parents. The introduction of online classes along with the need to remain at home to minimize contact can lead to stress for children as well parents who need to find new alternatives to keep their children engaged and happy during a global lockdown.<sup>1,3</sup>

Bruxism is a repetitive jaw muscle activity characterized by clenching or grinding of the teeth. It can act as a risk factor for harmful consequences of health such as masticatory muscle pain and tooth wear. Stress is often

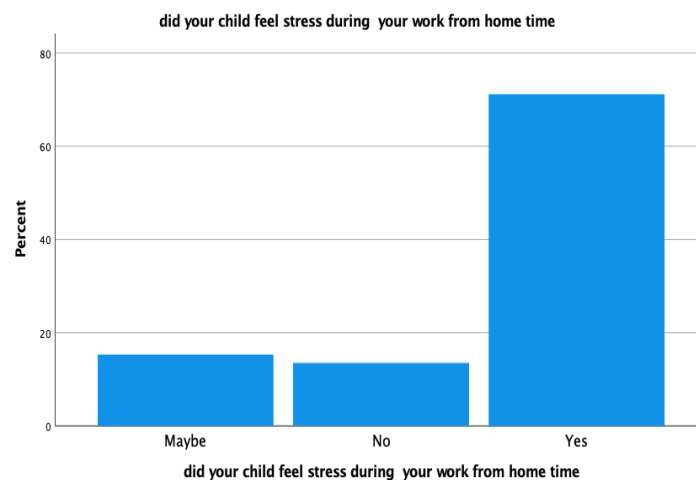
considered as an etiological factor for bruxism.<sup>4</sup> A rise in orofacial pain as well as bruxism has been in lockdown due to COVID-19. Since parents are occupied in their work from home, a conflict may arise when children are hungry or bored and parents do not provide the required attention and care. This crisis can give rise to stress which may be manifested as clenching of teeth. The increased use of screen time along with this stress from work for parents and academics for students can affect the quality of life of both parents and children. The association of maternal work status with bruxism has been explored in recent years.

## MATERIALS AND METHODS

The present study was initiated after receiving approval from the institutional review board. This cross-sectional study was conducted from 1<sup>st</sup> June 2020 to 30<sup>th</sup> June 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 156 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 were statistically analysed using SPSS.

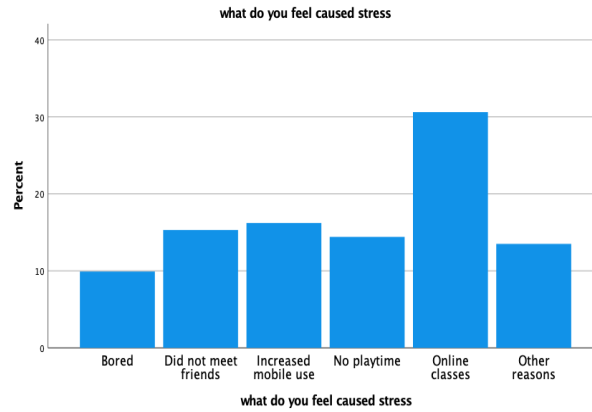
## RESULTS

Out of the 156 patients who visited the OPD during the specified time for the survey, 111 parents replied (71.15%). 54 were males (48.6%) and the remaining 57% were females (51.4%). 53.2% of the parents noticed that their children grinded their teeth during lockdown period, whereas only 13.5% did not notice the same. The remaining 33.3% parents were not sure if their children grinded their teeth. 56.8% of children were found to be grinding their teeth at night while 14.4% grinded during the day. 28.8% of the children did not grind their teeth at all. 43.2% of the parents were aware of the term bruxism while 23.4% had never heard the term. 33.3% of the terms were not sure if they heard the term before. 50.5% of the parents felt bruxism requires treatment. 36% parents were not sure while 13.5% parents did not feel treatment was required. 61.3% felt treatment for bruxism was necessary during lockdown whereas 25.2% felt treatment was not necessary till pain occurred. 13.5% of parents felt treatment was not at all necessary. The remaining answers given by parents in the survey has been illustrated as graphs ( Fig 1-Fig 5)



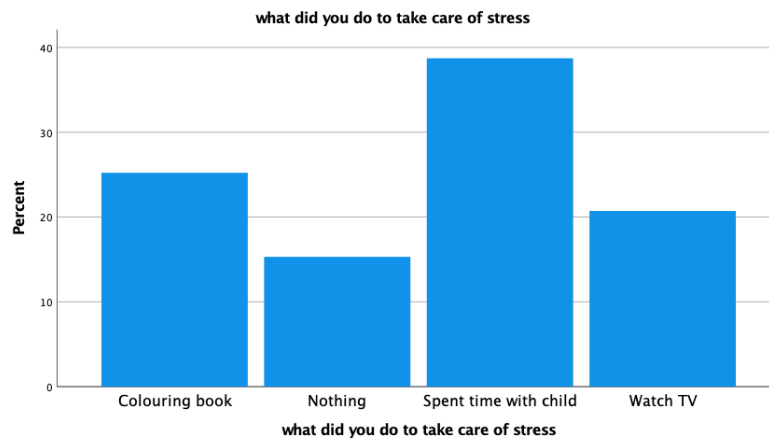
**Fig 1: Did your child feel stress during your work from home time?**

71.2% of the parents felt that their child felt stress during work from home time, while 13.5% of the parents did not feel so. 15.3% of the parents were unsure



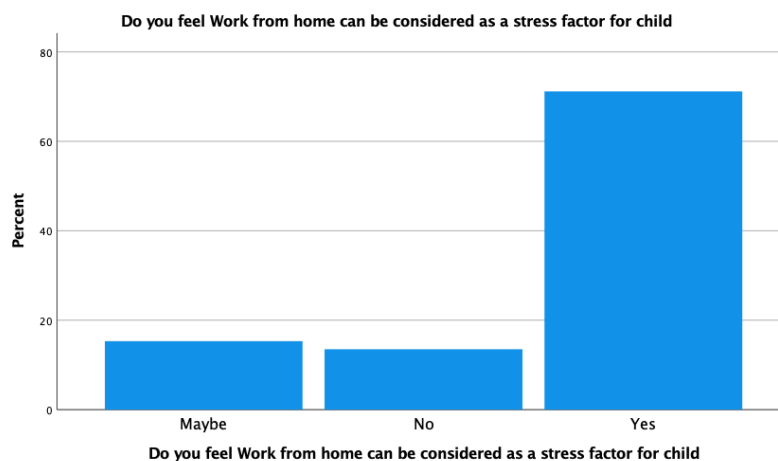
**Fig 2: What caused stress**

30.6% of the parents felt online class caused stress. 16.2% of parents felt increased use of mobile phones caused stress. 15.3% of parents felt not meeting friends caused stress. No playtime was the reason for stress in 14.4%. 9.9% of the parents felt boredom to be the cause of stress while 13.5% parents had other reasons.



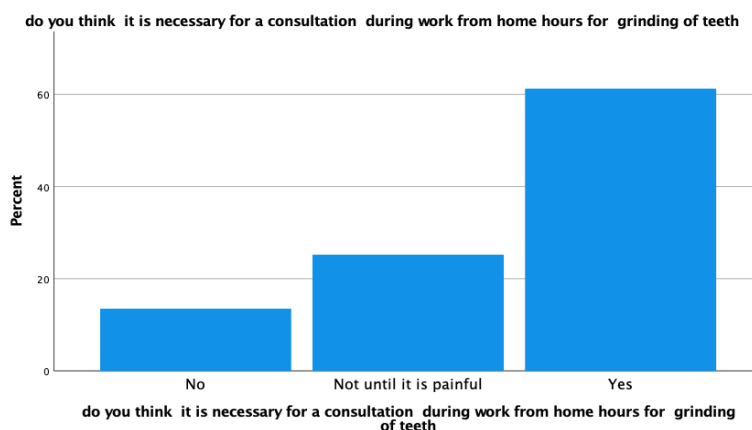
**Fig 3: What did you take care of stress**

38.7% of the parents spent time with the child. 25.2% of the parents gave colouring book. 20.7% of the parents allowed their children to watch TV while 15.3% patients did nothing



**Fig 4: Do you feel work from home can be a stress factor for child?**

71.2% of the parents felt that work from home is a stress factor, while 13.5% of the parents did not feel so. 15.3% of the parents were unsure if work from home can be a stress factor.



**Fig 5: Do you think it is necessary for a consultation during work from home hours for grinding of teeth**

71.2% of the parents felt that consultation was necessary during work from home hours, while 13.5% of the parents did not feel so. 15.3% of the parents were unsure if consultation during work from home hours was necessary.

## DISCUSSION

Before the pandemic, discussions on the future of work-life were unclear and often questioned. COVID-19 forced a decision upon people, and with the world having to adapt quickly, many businesses opted to try WFH. The WFH practices have been employed widely, as can be seen in the U.S., where studies show in May 2020, 35.2% of the workforce worked from home, an increase from 8.2% in February. Furthermore, 71.7% of workers that WFH found that they could work effectively. In some places, WFH guidelines were given by governments, where government employees WFH while advisory notices were sent to employers of private organizations, as a precaution to prevent further spread by reducing social contact. WFH saves daily commuting time and offers more flexibility for workers to take care of their families.<sup>5,6</sup> WFH allows employees to choose working at times when they are most productive, and WFH can be beneficial for avoiding distractions from co-workers, especially in open plan offices. With options to WFH, workers can take a break from their offices and focus on organizing an individualized approach to their work-life balance that can promote a healthier lifestyle, a benefit for both physical and mental health. Finally, workers may have more control of environmental factors when WFH; indoor environmental quality (IEQ) factors (eg, lighting, temperature, humidity, air quality, noise, ergonomics, etc) are important for physical and mental health of workers. Specifically, IEQ factors influence a workers' comfort, which in turn impacts satisfaction. Unlike in conventional offices, where the workspaces are usually arranged by employers, during WFH, workers have full autonomy and the responsibility of setting up their workspaces at home, being able to work in a location at home that may have better IEQ conditions as opposed to being in a fixed cubicle or open-plan offices.<sup>6</sup> In fact, research has found that home offices might provide better air quality conditions compared to traditional offices.<sup>7</sup>

While there are benefits to WFH, numerous negative aspects of full time WFH have also been described. Employees who are at home do not have the opportunity to socialize with colleagues and may have decreased physical movements, such as loss of walking between different meeting locations. Moreover, extended hours of screen exposure due to full time computer work can lead to fatigue, tiredness, headaches and eye-related symptoms. For individuals who live alone, full time WFH without face-to-face interactions and social support everyday could contribute to mental issues such as social isolation and depression. For others, blurred work-life boundaries can make it difficult to detach mentally from work which can increase stress and anxiety.<sup>8</sup> A common area of concern in work-life boundaries is balancing work schedules around other family members, where, for some parents, work time becomes "porous" as they might need to take care of house chores and run errands in between their work meetings. In some cases, parents might choose to sacrifice their sleep hours and work at nights or early mornings since these are the only quiet hours where they could concentrate on work and avoid frequent interruptions. Ongoing work-family conflict can lead to emotional exhaustion.<sup>9</sup>

The abrupt shifts to WFH and other factors associated with the COVID-19 pandemic provide a unique context for exploring the relationship of WFH on physical and mental well-being. Most apparent impacts on health are due to social and behavioral factors. In particular, the extended stay at home mandates during the pandemic may contribute to general depressed and anxious feelings, often leading to changes in routines and eating habits. These changes in physical activities and food intake can interact with other stress related to WFH that together will likely directly impact physical and mental well-being. Moreover, these behaviors are likely further impacted for workers who have children, as the closure of schools and day care centers, require working parents

to also perform home schooling for their kids, as well as to managing a more chaotic working environment with increased distractions.<sup>10,11</sup>

In addition to behavioral and social changes, WFH during the COVID-19 pandemic has also highlighted areas of need for the physical space in home office environments. Of note is that not all workers have access to dedicated workstations in their home, which can result in sharing of their workstations, such as with children who have to attend school remotely,<sup>12</sup> setting up makeshift desks, such as the dining table, or working in a variety of places throughout the day, such as kitchen counters, sofas, coffee tables and beds. Moreover, during the pandemic, workers can spend longer hours at their desks in the absence of commuting, limited business traveling, and increased use of computers to conduct meetings rather than holding face-to-face meetings at various different physical locations. Increase stress due to sharing of workspaces, poor body mechanics due to lack of proper physical workstation, and prolonged sedentary activity can all lead to increased discomfort and pain. Furthermore, unlike office work environments where central heating, ventilation, and air conditioning systems are available, workers may not pay as close attention to managing the IEQ environment at home. Specifically, working in a location that is not designed for work can lead to unsatisfactory IEQ conditions that can have detrimental effects on both physical and mental well-being, while also decreasing overall work performance<sup>13</sup>

In total, the pandemic has created a new environment for considering both work and home life within the discussion of WFH. A detailed understanding of the factors in this new environment that relate to physical and mental well-being is instrumental to ensuring positive impacts for office workers who might WFH in near future. Specifically, employers and employees alike require insights on how to provide the best work conditions for workers who either decide or are asked to WFH such that negative health impacts are minimized.<sup>14,15</sup>

The lack of time parents spend with children during lockdown is evident from our results. Children need love and care but with the emergence of COVID-19, work and home have been merged into one place which requires children to be quiet yet engaged so that they do not disturb their parents.<sup>16,17</sup> With lack of social interaction and curtailing of playing area, children would get bored and frustrated leading them to use gadgets more than usual. The increase in screen time in turn will result in stress on eyes. Boys have been found to be more engaged in mobile games, and the loss in any game may often upset the child. Repeated attempts to win the level may not succeed which results in child grinding their teeth resulting in bruxism.<sup>1,2,18</sup>

Our team has rich experience in research and we have collaborated with numerous authors over various topics in the past decade.<sup>19-42</sup> From the present study, it was found that parents had different approaches to management of bruxism while working from home. Most parents felt that bruxism required consultation and necessary treatment was supposed to be initiated. During the lockdown due to COVID-19, only emergency dental treatment was available. Most parents could only use teleconsultation. Though bruxism does not have any life-threatening issues, the deleterious effects due to bruxism can affect individuals throughout their life. Proper examination of a child with bruxism is essential for treatment planning. An early intervention in the child will help in improving the quality of the children and reduce frequency of visits to the dentist and doctor.

## CONCLUSION

Within the limits of our study, it was found that work from home during lockdown for parents can be considered as a stress factor for children with sleep bruxism. Parents should find ways to keep their children engaged so that stress does not develop to prevent sleep bruxism.

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