Lockdown impact on lifestyle and its association with oral parafunctional habits in a Spanish adolescent population

Abstract

Aim: to analyse the possible association between decreased physical activity and social life, an increase in the use of mobile devices, internet and social networks, with increased anxiety and the appearance of oral parafunctions.

Design: 213 adolescents attended private clinics at two time points: before lockdown (T0) and after completion of total lockdown (T1). In T0 and T1 a clinical examination was carried out to assess dental wear (IA) and only in T1 were they given the self-report questionnaire referred to before and during lockdown (SBQ, STAI-S, CERI, CERM, IPAQ-SF, SSPQ, questions on parafunctions and on the use of day and night social networks).

Results: There was a significant decrease in IPAQ-SF in T0-T1. A significant increase in the use of social networking, CERI, STAI-S, IA and SBQ in T0-T1. There was a positive correlation between the increase in SBQ, the increase in the use of social networks, CERM and STAI-S.

Conclusions: There has been a change in adolescent lifestyle during lockdown with increased the appearance of oral parafunctions and bruxism. In particular, the increase in the use of social networks at night and the increase in anxiety during lockdown are predictors of the increase in self-reported bruxism.

Introduction

Due to the rapid spread of the SARS-CoV-2 virus, responsible for the COVID-19 disease, Spanish authorities imposed strict regulatory measures aimed at preventing the transmission of the virus. One of these measures was an obligatory total lockdown from March 16th to May 4th.

The interruption to education and physical activity in the home lockdown of children and adolescents has led to a deficiency in socialisation and to an increase in uncertainty and anxiety [1].

In this scenario, technology enables adolescents to contact and communicate with those who are far away and is in fact considered helpful as a means of stress reduction [2]. A problem arises however when the use of such a medium becomes compulsive. Recent studies warn of the risk that the adolescent population runs of losing control of their online activity and developing symptoms of pathological internet use (PIU) [3], also described in literature as problematic use of the Internet.

The same applies to smart phones. Their abusive use among the adolescent population, has become one of the major concerns of the last decade and in particular the possible connection that the overuse of telephones and a sedentary lifestyle has to adverse pathologies such as physical health and emotional problems, anxiety [4], sleep disorders and academic failures [3–5].

Being confined leads inevitably to a sedentary lifestyle and the likely adoption of undesirable habits such as the excessive use of screens [6]. In addition, physical activity is essential for physiological (maintenance of muscular functions, bone health, body composition, etc.) and psychological health [7], and may also have an impact on the quality of sleep [8].

An odontological question is posed by that written above: Is there a risk of developing or aggravating certain oral parafunctions, especially bruxism in the adolescent population as a result of lifestyle changes associated with the pandemic?

Parafunctional habits are a multifactorial problem whose etiology is not yet fully understood. Most theories that have attempted to explain their appearance suggest several factors to be involved. Odontological factors (skeletal malocclusions or occlusal alterations) [9], psychosocial factors (such as depression, anxiety and stress) [10], sleep-related[11] factors, are suggested as precipitants of bruxism.

Therefore, given that parafunctions affect the adolescent population and that some of the possible factors involved (psychosocial, sleep disorders) have possibly increased as a result of lifestyle change during the lockdown the present study has been proposed with the following objectives:

- To assess if there has been a change in the lifestyle of the adolescents during lockdown in terms of decreased physical activity, poor social life, cell phone, social network and internet abuse.

- To establish if there has been a greater occurrence of oral parafunctions during lockdown.

- To analyse the possible association between decreased physical activity and social life, an increase in the use of mobile devices, internet and social networks, with increased anxiety and the appearance of oral parafunctions.

- To determine what lifestyle changes after lockdown are able to predict the appearance of bruxism.

- To ascertain if the increased use of social networks at night is a moderating factor between the increase of both anxiety state and bruxism.

Material and method

Ethical approval was obtained from the Research Ethics Committee of the Universidad Rey Juan Carlos, Spain. Participants were informed about the objectives and nature of the study and were assured of the confidentiality of the information collected. Finally, all participants signed an informed consent form before their inclusion in this study.

Recruitment of participants was carried out by selecting all those adolescents who had attended appointments between September and December 2019 (T0) at private clinics in Madrid. The data was

collected by a single examiner. A repeated measures design was used with two time points: before lockdown (T0) and after completion of total lockdown (T1). In both T0 and T1 a clinical examination was performed to determine dental wear. But only in T1 were they given the self-reporting questionnaire alluding to before and during lockdown.

The inclusion criteria were the following: willingness of the minor to participate, parental consent for the minor's participation in the study, age between 11 and 17 years, fluent Spanish speaker and good general health. The exclusion criteria were the following: being in orthodontic treatment at the time of data collection, having some dental pain, having temporomandibular dysfunction, ASA>I, presence of systemic disorders (cardiovascular, pulmonary, neuromuscular and digestive) and / or mental development, neurological and / or neuropathic pain, being under medication that alters the neuromuscular system, which could interfere with the central nervous system.

After arriving at the surgery, a clinical examination was performed, in which the index of clinical bruxism was recorded. One of the team's researchers recorded the total number of teeth and the severity of enamel erosion on each tooth: Level 0 (no obvious enamel wear), level 1 (enamel to dentin wear at single points), level 2 (dentin wear down to a third height of the crown), level 3 (more than a third of tooth’s crown or restoration material worn).

The tooth wear index was calculated with the method proposed by Ekfeldt et al [12]. It is a reliable index, previously used in literature for the clinical diagnosis of bruxism and displays a significant association with bruxism. It is determined as the index $IA=(10\times G1+30\times G2+100\times G3)/(G0+G1+G2+G3)$, where IA is the tooth wear index and G0 , G1 , G2 and G3 are the number of teeth with level scores 0, 1, 2 and 3, respectively. In the clinical examination the presence of hypertrophy of the masticatory muscles was recorded as well as indentations in the tongue or lip and/or a dawn line on the inside of the cheek.

On completion of this, a self-reported questionnaire was given consisting of five sections: (a) Self-reported bruxism questionnaire (SBQ); (b) Questions about parafunctions; (c) State Anxiety Scale

(STAI-S); (d) Use of day and night networks; (e) Specific questionnaires on information and communication technologies (CERI and CERM); (f) Physical Activity Questionnaire (IPAQ-SF); (g) Social Participation Questionnaire (SSPQ).

The Self-reported bruxism questionnaire (SBQ) was collected to assess participants' self-perception of bruxism [13]. The SBQ is a questionnaire formed by 11 items that collects the most common questions for the self-reported diagnosis of bruxism. For example: have you noticed that you grind or clench your teeth frequently during sleep?; has anyone heard you grind your teeth at night?; has your jaw felt tired or painful when waking up in the morning? A 5-point Likert response system is used graded on the intensity (1=nothing to 5=very much). The score is obtained after adding up the 11 items. With a range of 11-55 points. A score between 0 and 18 means the patient is considered unlikely to have symptoms of bruxism, 19 to 24 would indicate an average score of clinical diagnosis (probable symptoms of bruxism), 25 or higher would indicate a diagnosis of definitive symptoms of bruxism. The SBQ presented a reliability coefficient of $\alpha = 0.88$.

To evaluate the presence of parafunctions such as nail, lip or the biting of hard objects questions such as "Do you bite your tongue and/or lip", "Do you bite your nails", "Do you bite hard objects", were used with a dichotomous yes / no answer.

The Spanish version of the State Anxiety Questionnaire (STAI-S) was used to measure anxiety-state. The STAI-S is a self-report questionnaire composed of 20 items under the instruction "right now, at this moment". It uses a 4-point Likert-type response system scaled according to the intensity (0= almost never/nothing, 1= somewhat/sometimes, 2= quite often, 3= very much/almost always). The total score ranges from 0 to 60 points [14].

Studies carried out on the Spanish population, show adequate levels of internal consistency and adequate psychometric indicators [14]. The internal consistency of state anxiety for our sample was $\alpha = 0.85$ and $\alpha = 0.82$ respectively for T0 and T1.

The patterns of use of ICT (information and communication technologies) were identified through the CERI (Questionnaire of experiences related to Internet use) and CERM (Questionnaire of experiences related to cell phones) [15]. The CERI and CERM questionnaires contain 10 items on a 4-point Likert scale (1: never / almost never, 2: occasionally, 3: sometimes, 4: almost always). Example of an item in the CERI: "How often do you give up the things you are doing to stay connected to the network longer? Example of item from CERM: "Do you get angry or irritated when someone bothers you while using your mobile? The result of the score is the sum of the answers of all the items. With a range of 10 to 40 points, higher scores indicating higher levels of internet and telephone use. The reliability analysis obtained values $\alpha = 0.79$ for CERI and $\alpha = 0.81$ for CERM at T0 and T1.

Two measures previously used by Woods & Scott, 2016 [16], were collected to assess social media use. The term social networking refers to social networking sites (e.g., Facebook, Instagram and Twitter) and instant messaging (e.g., WhatsApp, Snapchat and Facebook messenger). One of the measurements for overall social media use, and the other for nighttime social media use. The first measured overall social media use consisted of 6 questions about frequency and duration of social media use. A 6-point Likert scale from "Less than once a month" to "Daily" was used. With a range of 0-30. A higher score indicates a higher use of social media in general. The second measured night-specific social media use consisted of 7 questions about frequency of social media use shortly before bedtime and in bed; duration of social media use after bedtime; perceived delays in sleep due to social media use; frequency and duration of sleep disturbances due to social media alerts. A Likert scale of 6 points from "Never" to "Daily" was used. Each scale gave an overall score of 0-35, with higher scores indicating higher levels of social media use. Cronbach's alphas were 0.78 and 0.76 or overall and evening social media use, respectively at T0 and T1.

In addition, the level of physical activity was collected with the International Physical Activity Questionnaire in its short version (IPAF-SF) [17]. The IPAQ-SF is a self-report questionnaire that assesses physical activity in the last 7 days. The validity of physical activity assessed with the IPAQ-

SF has been previously reported [17]. The IPAQ-SF records the number of days per week and the minutes per day dedicated to physical activity in four degrees of intensity: sitting, walking, moderate intensity (e.g., leisure cycling), and vigorous intensity (e.g., running or aerobics). The energy expended was estimated in hours of metabolic energy equivalent (MET) per week in the following manner, METs walking = 3.3 × (minutes walking) × (days walking in leisure time); METs moderate = 4.0 × (minutes of moderate intensity activity) × (days of moderate intensity leisure); METs vigorous = 8.0 × (minutes of vigorous intensity activity) × (days of vigorous intensity leisure). The total minutes of leisure METs per week was estimated as: Total METs = (walking METs) + (moderate METs) + (vigorous METs)

The Social Participation Questionnaire (SSPQ) is a short 14-item questionnaire modified from the original Social Participation Index [18]. From questions 1 through 12, the participant could choose one of six response categories: "Never"=1 item; "Rarely"=2 items; "Sometimes"=3 items; "Often"=4 items; and “At all Times"=5 items. For the remaining two questions, a binary response of "Yes"=5 points / "No"=1 point was requested. The total scores of this questionnaire correspond to the sum of the points obtained in the 14 questions. The total SSPQ scores range from "14" to "70", where "14" indicates that the participant has "never" been socially active; a score between "15" and "28" indicates that the participant has "rarely" been socially active, a score between "29" and "42" indicates that the participant is "sometimes" socially active, a score between "43" and "56" indicates that the participant is "often" socially active, and a score between "57" and "70" indicates that the participant is "always" socially active. Cronbach's alphas in our study were 0.88 and 0.81 respectively for T0 and T1.

Statistical Analysis

The study presents a pre-post study, which considers the variables described in the previous section. A statistical analysis was performed using SPSS version 26 (SPSS Inc., Chicago, IL, USA). The data analysis included descriptive statistics and the Kolmogorov-Smirnov test to evaluate the assumption of normality, which was confirmed. To ascertain possible differences in T0-T1 for continuous

variables, paired t-tests were performed. According to Cohen (1988), small Cohen's d values are ≈0.2, medium values are ≈0.5, and high values are ≈0.8. Cohen (1988) also considers small effect size values to be ≈0.01, medium values to be ≈0,06, and those large enough to be taken into account as ≈0.14. Significance levels were established at 0.05. A regression analysis determined which factors are predictors of the increase in self-reported bruxism.

Subsequently, a PROCESS module (version 3.3) by Hayes was used to perform multiple simple moderation analyses (model 1) using SPSS. This was done to observe whether the increased use of social networks at night is a moderating factor between the increased state anxiety and the increase in the self-reported bruxism scale.

Results

The sample comprised 213 adolescents, 116 women and 97 men. The age range was 11-17 years, with a mean of 14 (±1.9) years.

Lifestyle Change

As described in Table 1, there was a significant decrease in physical activity (t (212)=-22,096, p<0.01) and social activity (t (212)=51,881, p<0.01) in T1 compared to T0, as well as a significant increase in the frequency of daytime social networking (t (212)=-14. 718, p<0.01) and nighttime (t (-17,542)=, p<0.01), of the use of Internet (t (212)= -13,254, p<0.01), of the mobile telephone devices (t (212)=-13,678, p<0.01) and of state anxiety (t (-39,646)=, p<0.01). Moderate/ large effect sizes were observed in all comparisons.

Oral parafunctions

In addition, during lockdown the number of adolescents biting their nails increased by 11.3% (N=24), also the number of those biting their tongue increased by 9.4% (N=20).

When comparing the values obtained in T0 and T1, a statistically significant increase was found in the index of clinical bruxism (t (212) = -7,935, p <0.01) and in the scale of self-reported bruxism (t (212) = -6,188, p <0.01). Moderate effect sizes were observed in comparisons.

Lifestyle change and increased oral parafunctions

To those participants who registered an increase in nail biting during lockdown there was also a higher state anxiety (19.7±7) in comparison to those who did not start the habit (14.1±4.8) (t (211) = -4.975, p <0.01). Those who started the habit of nail-biting also had a higher use of daytime social networks (5.7±3.5) than those who did not (2.7±3.3) (t (211) = -4.206, p <0.01). Large effect sizes were observed in the comparisons.

A Pearson's product-moment correlation was run to assess the relationship between the change in physical activity, social life, daily and nightly social network use, cell phone and internet use, and the increase in the clinical bruxism index and the self-reported bruxism scale. In addition, the relationship between the increase in anxiety-state and the increase in the clinical bruxism index and the self-reported bruxism scale was assessed.

As described in table 2, there was a moderate and statistically significant positive correlation between the increase in the self-reported bruxism scale, the increase in the use of day and night social networks, the Cerm and the anxiety-status.

Predictors of increased bruxism

A hierarchical multiple regression was performed to determine if the sum of increased social network use, increased mobile device use and increased state anxiety improved the prediction of the increase in self-reported bruxism scale. See Table 3 for full details of each regression model. The complete model of increased social network use, increased mobile device use, and increased state anxiety (Model 3) was statistically significant, R2 = .517, F(1,209) = 74.5, p < 0.01; adjusted R2 = .510. The addition of the variable of increased mobile device use to the prediction (Model 2) led to a statistically

significant increase in R2 of 0.126, F(1, 210) = 40.161, p < 0.01. The addition of increased night-time social network use to the prediction (Model 3) also led to a statistically significant increase in R2 of 0.174, F(1, 209) = 75,082, p < 0.01.

Use of social networks during the night, anxiety and bruxism

The moderating role of the increase in the use of social networks at night was evaluated between the increase in anxiety state and the increase in the scale of self-reported bruxism (Table 4). The results indicated that the moderation model explained 48% of the variation of the increase in the scale of self-perceived bruxism. The interaction between anxiety state and the use of nocturnal social networks significantly increased the coefficient of determination (F= 65.344; ΔR2= 1.1; p ≤ 0.01). As for conditional effects, the impact of the increased use of nocturnal social networks on the scale of self-reported bruxism was significant for the low use of nocturnal social networks (t=3. 73; p ≤ 0.01; 95% CI=[0.29, 0.94]), for the medium use of social networks at night (t=7.99; p ≤ 0.01; 95% CI=[0.65, 1.07]) and for the high use of social networks at night(t=7.38; p ≤ 0.01; 95% CI=[0.81, 1.40]).

Discussion

The results provide empirical support for the objectives formulated in our study. They emphasise the possible relevance of the lockdown impact on the lifestyle of adolescents. Emphasising a very significant decrease in social activity [19] and a marked sedentarism. Similar findings were reported in other studies[1], in which they reflected a poor social life, a high prevalence of physical inactivity during lockdown [6] and more time in front of the screen [6]. Our findings add to this evidence, as participants reported a tendency to abuse social networks, cell phones, and the Internet.

Previous literature shows that psychological reactions to past epidemics and pandemics depend on individual vulnerability, such as developmental age, having special needs, a pre-existing mental health condition, or being economically disadvantaged[20]. However, the strong impact COVID-19 is

having on the population in terms of psychological problems has already been documented, as a high percentage of the population has reported moderate to severe anxiety[21]. Recent research has warned that psychological factors associated with the pandemic may lead to a higher risk of developing, worsening and perpetuating bruxism[22], a fact that was noted in our study but associated with other variables involved in the pandemic.

In this context, the regression model explains how the increase in bruxism corresponds to a 17.6% abuse of social networks, to a 12.6% increase in the use of mobile devices and to a 21.8% increase in anxiety state levels. These results are innovative and underline the importance of studying this model in an integrated way.

Until now these variables have been studied in a fragmented rather than unified manner. The increase in the use of social networks and in the use of mobile devices [3–5] was positively correlated with higher levels of anxiety as were high levels of anxiety associated with bruxism [10,11], but the studies were separate.

The results of our research highlight the importance of the use of social networks at night as a predisposing factor for bruxism. This is in line with the data reported in previous research because the using of social networks prior to going to bed can delay the onset of sleep and diminish its quality as the disconnection required for sleep is complicated by the stimulation of connecting to social networks and the prolongation of the waking state. Social networks are prioritised over sleep [23].

At the same time, the role of sleep disorders in the appearance of bruxism [24] is a subject that has generated great interest due to the ongoing controversy that exists on the subject. In previous research it has been found that most of the episodes of sleep bruxism are observed during light non-REM sleep and tend to occur in relation to recurrent micro-activation within the so-called cyclic alternating pattern, which is repeated every 20 to 60 s during non-REM sleep [25]. The use of devices by adolescents, before falling asleep, is associated with a more discontinuous sleep, characterised by a greater number of nighttime awakenings[26].

The contributions of this study should be evaluated after taking into account its limitations as well. Firstly, we used a convenience sample, which came from a specific segment of the child population in the Community of Madrid and this limits the possibilities of generalising the results. Secondly, we have analysed the role played by a set of variables such as lack of physical activity, poor social life, abuse of social networks, cell phones and internet, but these only represent some of the many factors that could act in the development of parafunctions. A possible third limitation comes from the use of self-report measures, which can be affected by memory biases and responses based on social desirability. Fourthly, in the diagnosis of bruxism both self-report and clinical assessment produce totally sensitive but insufficiently specific results compared to instrumental reference assessment, such as electromyographic records [27]. Furthermore, in the clinical inspection, the presence of hypertrophy of the masticatory muscles was noted, as well as indentations in the tongue or lip and/or a dawn line on the inside of the cheek. However, these signs can also be a consequence of functional promotor activity, such as swallowing [28].

With regard to dental wear, it is considered a multifactorial condition, which leads to the loss of dental hard tissue. It can be divided into subtypes of mechanical wear (wear and abrasion) and chemical wear (erosion). Due to its multifactorial etiology, tooth wear can manifest itself in many different representations and therefore can be difficult to diagnose [29]. For this reason, it is plausible that the record at this level may have been biased.

This research may have some interesting implications for clinical practice, such as the field of prevention in adolescent oral health, which requires an extra effort from dentists in times of pandemic to investigate the possible etiologies of patients with parafunctions. In the event that professionals detect screen abuse, it may be appropriate for them to inform families that they should monitor their child's time spent on smartphones and social networks, as this may have detrimental effects on general and oral health, specifically on anxiety-state levels, physical inactivity and the development or aggravation of parafunctions. It is well known that a sedentary lifestyle is a risk factor for chronic

diseases. On the other hand, bruxism is not a disorder in otherwise healthy people, but could be a risk factor for negative consequences for oral health [27] such as painful temporomandibular disorders (TMD), mechanical wear of teeth, prosthetic complications and others [24]. As with onychophagy, nail biting is a habit that can also be harmful to health, with effects such as loss of dental tissue and increased risk of infection by the spread of pathogens from the nails to the mouth. And finally, there is no lack of scientific evidence to support how anxiety can affect both psychological and emotional well-being and systemic health.

Parents should encourage more non-device related activities and games; in addition, they have an excellent opportunity to interact positively with their children through physical closeness and to strengthen bonds that will be more beneficial than mobile and social network abuse. However, in order to do this, parents must set an example with the use of these devices.

Future lines of research are required to verify the results in representative populations and to consider the possibility of implementing interventions among the adolescent population in the area of social network and smartphone abuse, in order to minimise its possible effects on systemic and oral health. As well as ascertaining whether these are lasting effects. There has been no lockdown In Spain as strict as in the early stages of 2020, but there are however still many restrictions that affect the social life of adolescents and their lifestyle in general.

Bullet Points:

- There has been a change in adolescent lifestyle during lockdown in terms of a deficiency of physical activity, poor social life, mobile, social network and internet abuse. There has been an increase in the occurrence of oral parafunctions during lockdown.

- The increase in the use of social networks at night and the increase in anxiety during lockdown are predictors of the increase in self-reported bruxism by the patient.

- Additionally, the increased use of social networks at night plays a moderating role between the increase in state anxiety and the increase in bruxism.

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Tables

Table 1. Comparison of the variables of physical activity, social activity, daytime social network use, nighttime social network use, Cerm, Ceri, Anxiety-State, Bruxism Index and Self-reported Bruxism Scale before and after confinement.

	T0 M (SD)	T1 M (SD)	*t*	P- value for change (T0-T1)	*D Cohen*
Physical activity	856.6 (343.5)	332.8 (91.6)	22.096	p<0.01	2.08
Social activity	51.3 (6.9)	21.7 (4.1)	51.881	p<0.01	5.21
Use of daytime social networks	14.2 (6.04)	18.1 (9.2)	-14.718	p<0.01	0.50
Use of social networks at night	7.9 (8.3)	20.7 (9.9)	-17.542	p<0.01	1.40
Cerm	18.4 (7)	22.1 (8.6)	-13.254	p<0.01	0.47
Ceri	23.6 (3.9)	26.8 (4.6)	-12.188	p<0.01	0.75
Anxiety-state	18 (10.3)	32.7 (13.4)	-39.646	p<0.01	1.23
Bruxism index	0.5 (0.3)	0.8 (0.6)	-7.935	p<0.01	0.63
Self-reported bruxism scale	10.4 (7.3)	15.4 (13)	-6.188	p<0.01	0.47

d de Cohen = TE small ≈0,20; TE medium≈ 0,50; TE large ≈ 0,80.

Table 2. Intercorrelations between Δ T0-T1 variables studied (physical activity, social activity, daytime social networking use, nighttime social networking use, Cerm, Ceri, Anxiety-state, Bruxism Index and Self-reported Bruxism Scale). N=213

	1	2	3	4	5	6	7	8	9
Δ Physical activity		0.129	-0.013	-0.47	0.004	0.033	-0.013	-0.105	-0.110
Δ Social activity			0.205**	-0.097	0.067	0.155*	0.123	0.121	-0.043
Δ Use of daytime social networks				0.102	0.403**	0.011	0.635**	0.559**	0.366**
Δ Use of social networks at night					0.322*	0.067	0.108	0.246**	0.553**
Δ Cerm						0.182**	0.371**	0.384**	0.502**
Δ Ceri							-0.003	0.002	0.052
Δ Anxiety-state								0.477**	0.467**
Δ Bruxism index									0.493**
Δ Self-reported bruxism scale									

**. Correlation is significant at the 0.05 level, **. Correlation is significant at the 0.01 level

Table 3. Prediction of Hierarchical Multiple Regression Δ Self-reported bruxism from ΔAnxiety state, ΔCerm and ΔUse social networks night.

	Δ Self-reported bruxism					
	Model 1		Model 2		Model 3	
Variable	B	β	B	β	B	β
Constant	9.8**		9.4**		15.4**	
ΔAnxiety state	1**	0.46	0.69**	0.32	0.71**	0.33
ΔCerm			1.11**	0.38	0.69**	0.23
Δ Use social networks night					0.54**	0.44
R^2	0.218		0.343		0.517	
F	58.753**		54.909**		74.547**	
ΔR^2	0.218		0.126		0.176	
ΔF	58.753**		40.161**		75.082**	

Note. N=213, * $p < 0.05$, ** $p < 0.01$, Δ= Increase

Table 4. Moderation effects of increased use of social networks at night moderating factor between increased state anxiety and increased self-reported bruxism scale

	Effect	SE	*t*	*p*	LLCI	ULCI
Model						
$R^2 = 0.48$; $F = 65.34$; $p \leq .01$						
Λ Anxiety state	0.51	0.21	2.46	p<0.01	0.10	0.91
Λ Use of night networks	0.24	0.19	1.25	0.21	-0.14	0.62
Λ Anxiety state * **Λ** Use of night networks	0.03	0.01	2.13	0.03	0.01	0.05
Conditional effects						
Low **Λ** Use of night networks	0.61	0.16	3.73	p<0.01	0.29	0.94
Medium **Λ** Use of night networks	0.86	0.11	7.99	p<0.01	0.65	1.07
High **Λ** Use of night networks	1.10	0.15	7.38	p<0.01	0.81	1.40

Note. Bootstrap samples= 10,000. R^2 = Coefficient of determination. SE= Standard error. LLCI= Lower level of the 95% confidence interval. ULCI= Upper level of the 95% confidence interval.