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Awareness And Knowledge About Temporomandibular Joint Problems During Bruxism In South Indian Population

Research Article

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Abstract

The aim of the survey study is to create awareness and knowledge among people about Temporomandibular Joint during Bruxism in the South Indian population. A questionnaire of about 14 questions about Bruxism and TMJ and Circulated among dental students, the data are collected using google forms, and further SPSS is used for the statistical tests. Knowledge and awareness are created among the people and by seeing the data's about half of the people are already aware of various Temporomandibular joint disorders and Bruxism.

Introduction

Tooth grinding is an activity particularly important to the dentist due to the breakage of dental restoration, tooth damage, induction of temporal headache, and temporomandibular joint [21]. The prevalence of Bruxism in the general population is about 8% to 31% [24].

There are two main Kinds of of Bruxism: one occurs during sleep (nocturnal Bruxism) and one during Wakefulness (awake Bruxism). The course of Bruxism is not completely understood but probably involves multiple factors [8]. Nocturnal Bruxism is a repetitive sleep movement disorder primarily characterized by rhythmic masticatory muscle activity and by occasional tooth grinding and is associated with brief cardiac and brain reactivation [5]. Awake Bruxism is characterized by only clenching-type. activity and is associated with psychosocial factors [23]. Early diagnosis of Bruxism is advantageous, but difficult Early diagnosis can prevent damage that may be in cursed and the detrimental effect on quality [29]. A diagnosis of Bruxism is usually made and is mainly based on the patient's history (eg. reports of grinding notes) and the presence of typical signs and symptoms including tooth mobility, tooth wear, masseteric hypertrophy, an indentation on the tongues, hypersensitive teeth (which may be misdiagnosed as reversible pulpitis), [2] Pain in the muscle of mastication and clicking or locking of the temporomandibular joint [27]. Even though Bruxism as a whole is commonly considered the most harmful parafunctional activity of the temporomandibular joint [TMJ] there are many unsolved Issues concerning the actual causes relationship between Bruxism and temporomandibular disorder [16, 13]. The main uncertainties are due to a lack of knowledge on the etiology and diagnosis of Bruxism [12]. and-Temporomandibular disorder [23]. Damage to the articular disc can be a cause of TMD Some researches have shown [18] have shown that acute mechanical overload in Invivo Can come severe cartilage damage this [26, 32].

Materials And Method

A questionnaire of about 14 questions is Prepared about understanding the Bruxism and Temporomandibular joint, Tem-

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peromandibulandiar disorders, and other Bruxism associated Neurological and psychiatric disorders. (Table 1) [28] Further, the Questionnaire is circulated among The people through online platforms (google form) and responses are Collected. The sample size is 100 people who Reside among the south Indian population. The response is collected and viewed in an excel sheet and further analyzed using IBM SPSS software and .tabulated. (Ganapathyet al., 2016).

Results And Discussion

The first goal of the research article is to create awareness and knowledge about Bruxism, Temporomandibular disorder, treatments as a result of the survey various questions are answered and it will be explained briefly [31].

As the data are collected and depicted as a pie chart. This questionnaire based Survey study has given knowledge and awareness about Bruxism, Temporomandibular joint, and associated disorders [2]. Our sample population was about 100 in number. In Figure 2 shows that most of the people are already aware of the term Bruxism like 76% of the people said the Bruxism means Clenching or grinding of the teeth and 18% of them said that it means Biting fingernail and remaining 6% of them said biting lips [33]. In Figure 3 shows that the major Cause of Bruxism is stress and anxiety [34]. While in previous studies 86% of Bruxism episodes are associated with arousal response along with involuntary leg movement. (Lavigneet al., 2008) [21] Figure 4 shows that about 90 people are aware the Bruxism is dangerous if it occurs regularly Figure 5 shows that 82% of the people said that Bruxism is a habit and 18 % of them said no according to the previous studies is it proved that Bruxism is defined as an unconscious habit of rhythmical unfunctional clenching [10] In figure 6, According to the response 46% of them said that symptoms of bruxism are facial pain, headache, and earache and 28% of them said only facial pain 16% of them said only headaches and 10% of them said the only earache [6] And in Figure 7 About 72 % of the people said that night guards are good for temporomandibular disorder and 28% of the people said no it does not [1]. According to our study, (Figure 8) most of them said that Bruxism occurs during Stage 5 [REM}] [4, 15]. but previous research has suggested that 80% of the Bruxism in young adult occurs in Stage 1 and 2 and is about 5-10% during REM [35, 36] In Figure 9 it shows that About 73% of them said that Bruxism causes Temporomandibular disorders while according to one previous study it is concluded that about 50 % of the population TMJ disorders are due to Bruxism [9]. If TMJ Disorders is left untreated the majority (Figure 10) 73% of them said it causes enamel erosion, fractured teeth, mobility, gum recession, flattening of the chewing surface, and more 23% of them said that it causes sinus problems and remaining 4% of them said body pain [11, 30] In Figure 11 people responded that About 52% of them said nocturnal Bruxism means that it occurs while awake 48% of them said that it occurs while sleeping [4].

In our study, 80% of them said that Bruxism will go away and 20% of them said it will will not go away(Figure 12) but previous studies have concluded that Bruxism will not go away by itself [25] In figure 15 it shows that According to our study, about 46% of them have Bruxism and remaining 54% of them do not have Bruxism, previous studies report that 22% of the population have Bruxism [20].

A gender comparison was done on awareness of causes, dangerous effects, habituality, symptoms and signs and prevention methods (Figure 16-20). It was found that there was statistically non significant difference between the awareness among the males and females in this study. The study by (Berger et al., 2016) [7], also had similar results and was well correlated with this study.

Conclusion

In the absence of awareness treatment and management of Bruxism focus to prevent progression of dental wear, reduce. teeth Grinding sounds, and improve muscle discomfort and mandib-

Figure 1. The pie chart shows the percentage of responses given by participants of about gender about 58%(Blue) of them are male, 42%(red) of them are female.

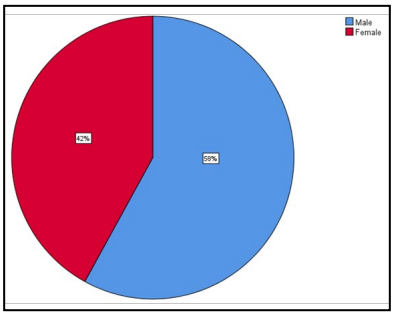

Figure 2. The pie chart shows the percentage of responses given by participants of about awareness of Bruxism about 71% (Blue) of the people said the Bruxism means Clenching or grinding of the teeth and 23% (red) of them said that it means Biting fingernail and remaining 6% (green)of them said biting lips.

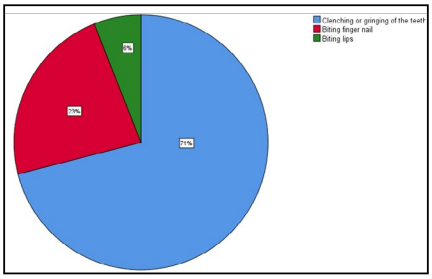

Figure 3. The pie chart shows the percentage of responses given by participants of about causes of Bruxism about 57% (Blue) of the people said that the cause of Bruxism is Stress and Anxiety and 25% (red) of them said that it is some neurological issue and the remaining 18% (green) of them don't know.

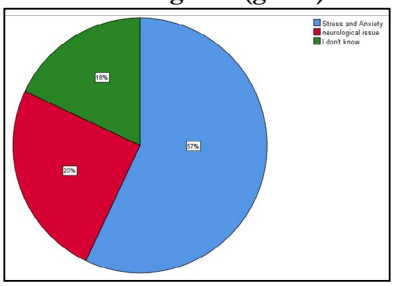

Figure 4. The pie chart shows the percentage of responses given by participants when asked is Bruxism dangerous about 90% (Blue) of the said Bruxism is dangerous if it occurs regularly and the remaining 10% (red) of them said it's not dangerous.

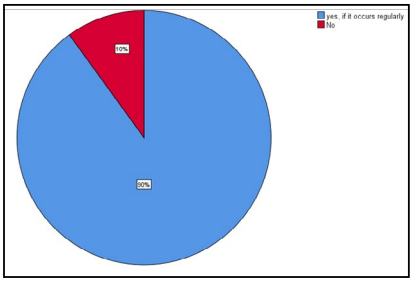

Figure 5. The pie chart shows the percentage of responses given by participants of when asked is Bruxism a Habit about 82% (Blue) of the people said that Bruxism is a habit and 18 % (red) of them said no.

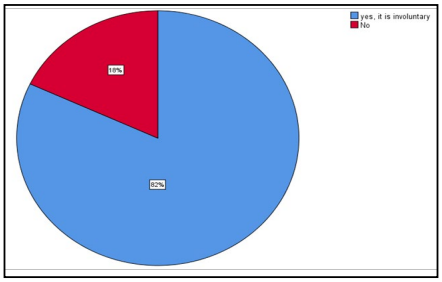

Figure 6. The pie chart shows the percentage of responses given by participants about symptoms about 46% (orange) of them said that symptoms of bruxism are facial pain, headache, and earache and 28% (Blue) of them said only facial pain 16% (red) of them said only headaches and 10% (green) of them said the only earache.

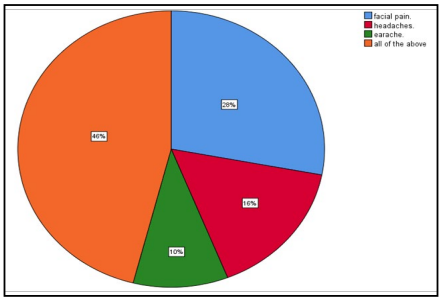

Figure 7. The pie chart shows the percentage of responses given by participants about night guards about 72 % (Blue) of the people said that night guards are good for temporomandibular disorder and 28% (red)of the people said no it does not.

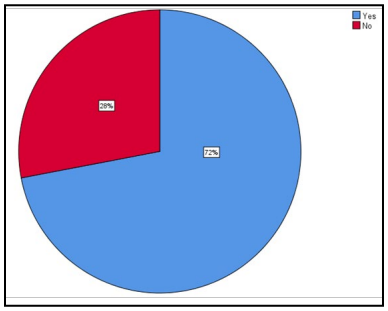

Figure 8. The pie chart shows the percentage of responses given by participants about sleep stages about 22% (Blue) of them said stage 3, 38% (red) of them said stage 4, 40% (green) of them said stage 5.

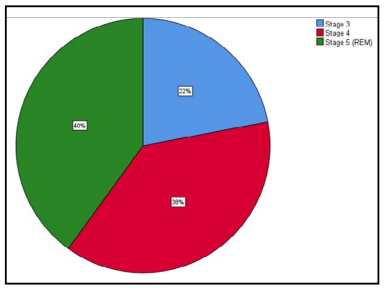

Figure 9. The pie chart shows the percentage of responses given by participants about cause of TMJ disorders, about 73% (blue) of them said that Bruxism causes Temporomandibular disorders and 27% (red) of them said that Bruxism does not causes Temporomandibular disorders .

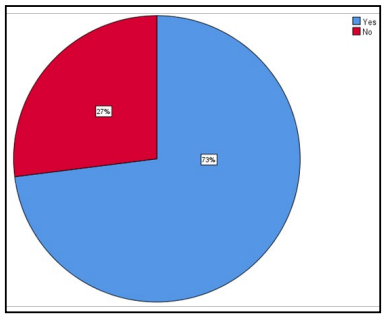

Figure 10. The pie chart shows the percentage of responses given by participants about untreated TMJ disorders, about 73% (Blue) of them said it causes enamel erosion, fractured teeth, mobility, gum recession, flattening of the chewing surface, and more 23% (red) of them said that it causes sinus problems and remaining 4% (green) of them said body pain.

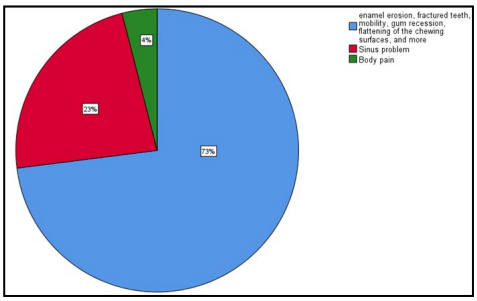

Figure 11. The pie chart shows the percentage of responses given by participants about nocturnal Bruxism, About 52% (Blue) of them said nocturnal Bruxism means that it occurs while awake 48% (red) of them said that it occurs while sleeping.

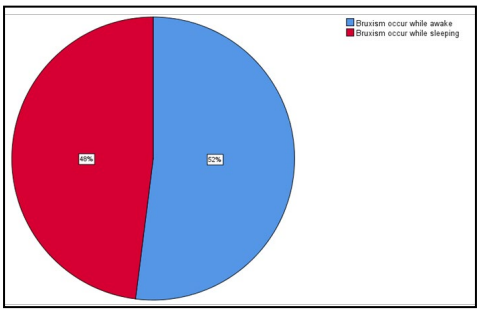

Figure 12. The pie chart shows the percentage of responses given by participants when asked can Bruxism go away, about 80% (Blue) of them said that Bruxism will go away and 20% (red) of them said it will not go away.

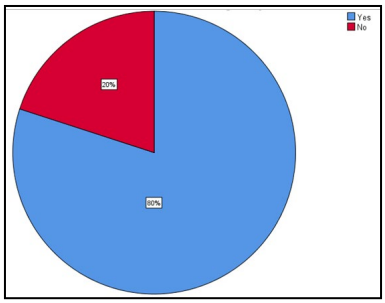

Figure 13. The pie chart shows the percentage of responses given by participants about treatment, about 65% (blue) of them said that the treatment for Bruxism is muscle relaxant and 27% (red) of them said NSAID, 8% (green) of them said meditation.

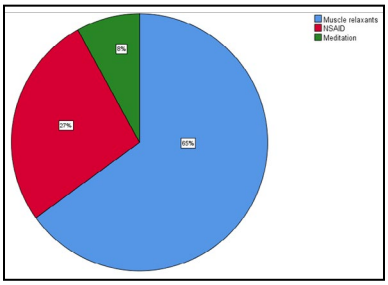

Figure 14. The pie chart shows the percentage of responses given by participants about symptoms, about 61% (Blue) of the people said that Bruxism is a symptom of sleep apnea and the remaining 39% (red) of them said it not a symptom of sleep apnea.

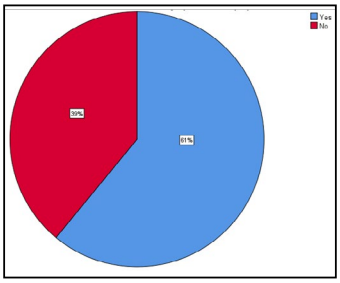

Figure 15. The pie chart shows the percentage of responses given by participants when asked do you have Bruxism about 46% (Blue) of them have Bruxism and remaining 54% (red) of them do not have Bruxism.

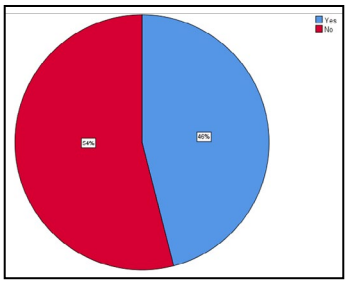

Figure 16. Bar graph shows the comparison of Gender about causes. X axis represents the Gender of the responded population and Y axis represents the various causes like stress and anxiety (blue), neurological issue (red), don't know (green) which was responded to by the population. Most of them said stress and anxiety are the main causes of Bruxism. Pearsons's Chi square value- 0.193, p value= 0.908 (>0.05)hence not significant..

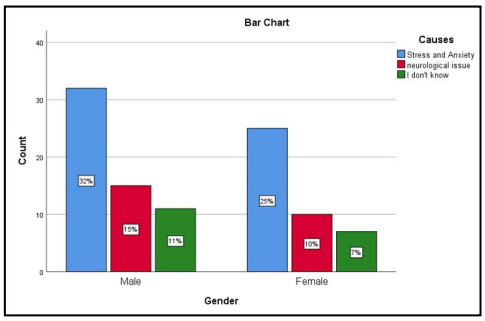

Figure 17. Graph shows the correlation between Gender and dangerous X axis represents the Gender of the responded population and Y axis represents whether it is dangerous(blue) or not(red). More male population said that Bruxism is dangerous if it occurs regularly than females. Pearsons's Chi square value- 0.018, p value= 0.893 (>0.05)hence not significant.

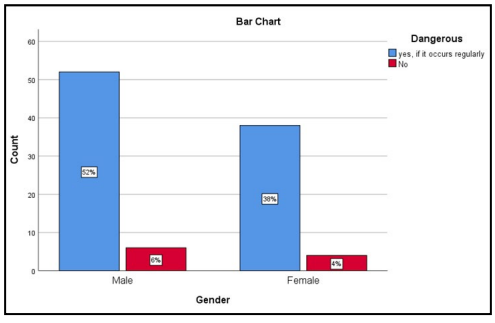

Figure 18. Graph shows the correlation between Gender and Habit. X axis represents the Gender of the responded population and Y axis represents whether it is habit(blue) or not(red) . More male population said that Bruxism is an involuntary habit than females. Pearsons's Chi square value- 0.087, p value= 0.768 (>0.05)hence not significant.

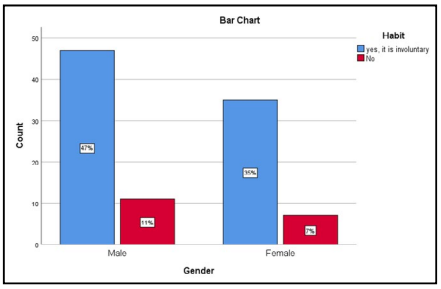

Figure 19. Graph shows the correlation between Gender and guards for TMJ reveals p value= 0.576 which is not significant. X axis represents the Gender of the responded population and Y axis represents whether night guards are good(blue) or not(red). More male population said that night guards are good for Bruxism than females. Pearsons's Chi square value- 0.313, p value= 0.576 (>0.05)hence not significant.

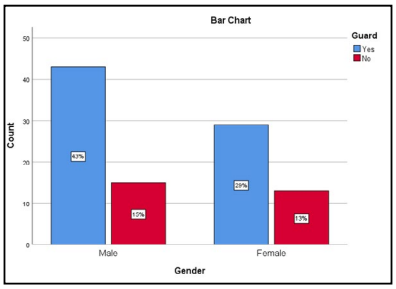

Table 1. Questionnaire Used In The Study.

Do you guys know what Bruxism is?
Clenching or grinding of the teeth Biting fingernail Biting lips
What causes Bruxism? Stress and Anxiety neurological issue I don't know
Is Bruxism dangerous? yes, if it occurs regularly no
Is Bruxism a habit? yes, it is involuntary no
What are the symptoms of bruxism? Facial pain. Headaches. Earache. all of the above
Are night guards good for TMJ Disorders? yes no
What stage of sleep does sleep Bruxism occur? Stage 3 Stage 4 Stage 5 (REM)
Can Bruxism cause TMJ Disorders? Yes no
What happens if TMJD is orders is left untreated? fractured teeth,enamel erosion, mobility, gum recession, flattening of the chewing surfaces, and more Sinus problem Body pain
What is nocturnal bruxism? Bruxism occurs while awake Bruxism occurs while sleeping
Can bruxism go away? yes no
What is the treatment for bruxism? Muscle relaxants NSAID Meditation
Is bruxism a symptom of sleep apnea? yes no
Do you have bruxism? Yes no

ular dysfunction. Better counselling and behavioural strategies splint theory are prescribed in order to avoid Severity. There are some limitations in the Survey study we could have increased the sample size. So that it could have reached a lot of people to help prevent it.

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