

Perception And Attitude Of People With Malocclusion In Social Gatherings - A Cross-Sectional Survey

Akshetha.L.S

Undergraduate student
Department of Dental anatomy
Saveetha Dental College and Hospitals
Saveetha Institute of medical and technical sciences
Saveetha university,
Chennai-60007
152001050.sdc@saveetha.com

Dr. Reshma Poothakulath Krishnan

Senior lecturer
Department of Oral Pathology
Saveetha Dental College and Hospitals
Saveetha Institute of medical and technical sciences o
Saveetha university, Chennai-600077
reshmapk.sdc@saveetha.com

Dr. SandhyaSundar

Senior lecturer
Department of oral pathology
Saveetha Dental College and Hospitals
Saveetha Institute of medical and technical sciences
Saveetha university, Chennai-600077
sandhyas.sdc@saveetha.com

ABSTRACT:

BACKGROUND: Malocclusion is defined as an abnormal occlusion in which teeth are not in a normal position in relation to the adjacent teeth in the same jaw. Malocclusion can be treated with braces, dental appliances and even surgery. Some authors noted social economic conditions are directly related to the presence of harmful oral habits that influence the development of malocclusion.

AIM: To analyse the perception and attitude of the people with malocclusion in social gatherings.

MATERIALS AND METHODS: The cross sectional study was conducted among the outpatients visiting the orthodontics department of a private dental college. A pretested structured questionnaire was prepared and distributed online among the recruited participants with malocclusion through google forms. The data collected were tabulated and analysed using Pearson's chi-square test in IBM SPSS software (version 23.0).

RESULT: About 70% of students were aware of dental esthetics, most of them wishing that their teeth should be attractive. 51% of the people feel confident when some people ask about the disarrangement of their teeth. 70% of people are aware of malocclusion. 3% of participants aged 11-20 years, 13% aged 17-20 years, 12% aged 21-30 years, 13% aged 31-40 years, 10% aged 41-50 years reported they felt guilty to smile with malocclusion during social gatherings (Pearson chi square, p value = 0.437). 8%

aged 11-20 years, 17% aged 17-20 years, 16% aged 21-30 years, 11% aged 31-40 years, 10% aged 41-50 years reported they thought that genetics is the reason for malocclusion (Pearson chi square, p value = 0.228).

CONCLUSION: The dental students had a good knowledge about the malocclusion and had a positive attitude towards undergoing correction for malocclusion.

KEY WORDS: Innovative Technique, Perception, Malocclusion, Disarrangement, Orthodontic treatment

INTRODUCTION:

Malocclusion means a mal relationship between arches of three planes which is defined as appreciable deviation and ideal occlusion. In world wide public health oral pathologies ranked third(1). The pleasing smile with well aligned teeth have a positive status and protruding disarrangement of teeth have a negative status. In addition , knowledge about the attitude of patients towards malocclusion was more important.

For young people, physical attractiveness is the most important factor which affects social relationships. Malocclusion of teeth is when your teeth are misaligned leads to oral health complications left untreated referred to: crowded with crossbite(2). Typically your teeth should fit easily inside your mouth without any crowding. Your teeth should not severely rotate or twist changes in appearance of your face, discomfort when chewing or biting, speech changes these are symptoms of malocclusion(3). Most of the malocclusions are largely hereditary. The only prevention is early detection of malocclusion which helps to decrease the effect of malocclusion and severity of treatment. Class one malocclusion is the most common bite as normal but upper teeth slightly overlap the lower teeth.

Malocclusion is caused by the anatomic variations and these variations are corrected by orthodontic treatment. In previous studies like Wilson and Cleary's is a comprehensive model, considering characteristics of individuals and environment. There are some methods to fix the malocclusion like braces, dental appliances, removal of teeth, reshaping, bonding and surgery. Malocclusion is also one of the major oral health problems and also increases the risks of traumatic dental injuries and dental caries(4).

Several studies have concentrated on clarifying the role of malocclusion on an individual's perception and satisfaction with the dental or facial appearance. Enhancing appearance and improving social status have been identified as important motivating factors behind the decision to initiate awareness among the people(5). To analyse the perception and attitude of the people with malocclusion in social gatherings. Our team has extensive knowledge and research experience that has translated into high quality publications (6),(7),(8),(9),(10),(11),(12),(13),(14),(15),(16),(17),(18),(19),(20),(21),(22),(22,23),(24),(25) The aim of the study is to analyse the perception and attitude of the people with malocclusion in social gatherings.

MATERIALS AND METHODS:

The survey was done with the help of a well structured questionnaire consisting of 15 questions. Some questions were of yes/no type and others of multiple choice questions. This is the cross sectional study, nearly 100 participants participated in the survey. Age groups from 17-60 years were included in the study. The questionnaire consists of experience, common cause and management of malocclusion. The questionnaire was validated and later distributed to the participants. A web-based questionnaire was also developed using Google forms and was circulated. The participation of the subjects was kept

voluntary and nobody was not obligated to fill the form. Questions were answered with “yes” or “no” or by marking the correct responses. Total 100 responses of all participants including male and female were summed up and results were analysed using SPSS software. Descriptive analysis was performed to find the association between various parameters using Pearson’s chi square test. The p-value less than 0.05 was considered significant.

RESULTS:

The study consisted of 100 of respondents. Of the total participants, 27% of people are aged 17-20 in(fig 1). 70% of people are aware of malocclusion(fig 2).51% of people feel guilty to smile with malocclusion(fig 3). 63% of people thought that genetics is the main reason for malocclusion(fig 4).The findings revealed that 56% of people avoid smiling due to the appearance of teeth(fig 5).The comparison between age and feeling guilty to smile in social gatherings the p value is 0.437(fig 6). The comparison between age and genetics can be the reason for malocclusion the p value is 0.722(fig 7). 55% of people ever cover themselves because of appearance. 51% avoid participating in social gatherings due to the appearance of teeth.

The comparison between age and feeling confident or guilty when people ask about the teeth the p value is 0.142. The comparison between age and awareness of malocclusion the p value is 0.800. The comparison between age and feeling guilty to smile with malocclusion the p value is 0.437.

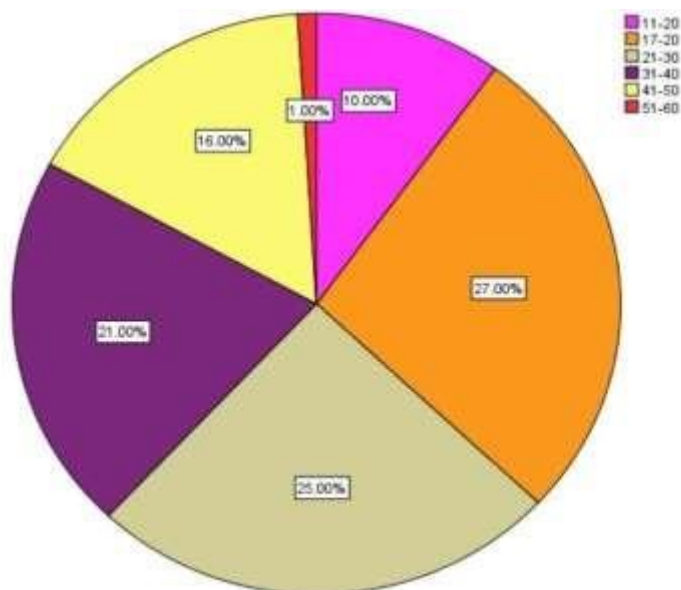


Fig1: Pie chart shows the response of different age groups of participants. Pink colour denotes 11-20 age group, Orange colour denotes 17-20 age group, Beige colour represents 21-30 age group, Purple colour denotes 31-40 age group, Yellow colour denotes 41-50 age group, Red colour denotes 51-60 age group. 27% of people belong to the 17-20 age group, 25% of people belong to the 21-30 age group, 21% of

people belong to 31-40 age group, 16% of people belong to 41-50, 10% of people belong to 11-20 age group and 1% of people belong to 51-60.

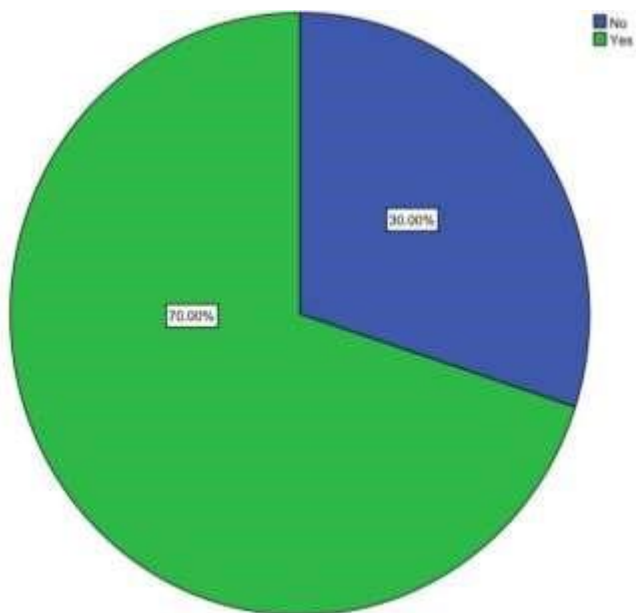


Fig 2: Pie chart shows the responses regarding the awareness of participants about malocclusion. Green colour denotes yes and blue denotes no. Majority of the study participants (70%) were aware of the malocclusion in. whereas 30% of study participants were not aware of the malocclusion of their teeth.

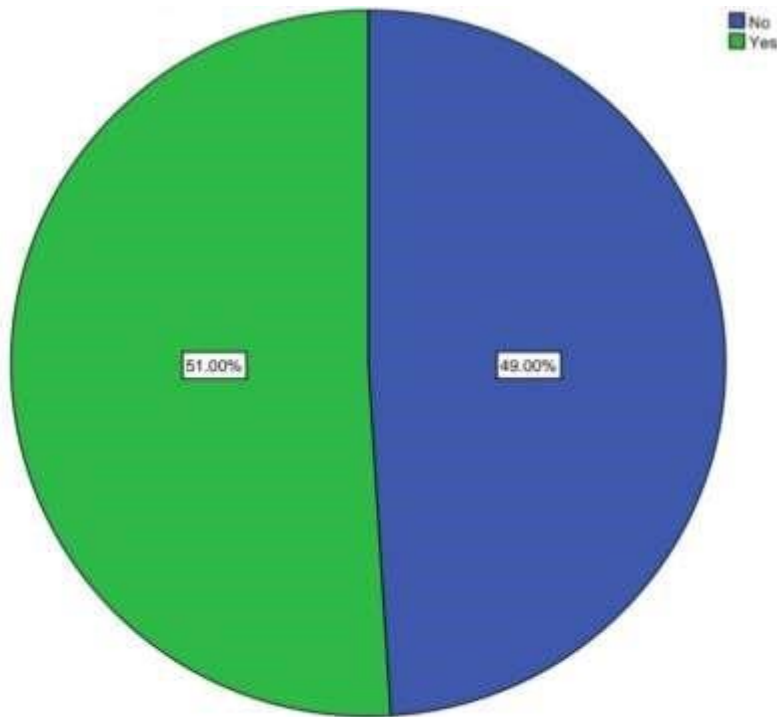


Fig 3: Pie chart shows the response of the participants who feel guilty to smile with malocclusion. Green colour denotes yes and blue colour denotes no. Majority of the study participants (51%) were feeling guilty and 49% of people were not feeling guilty for smiling with malocclusion.

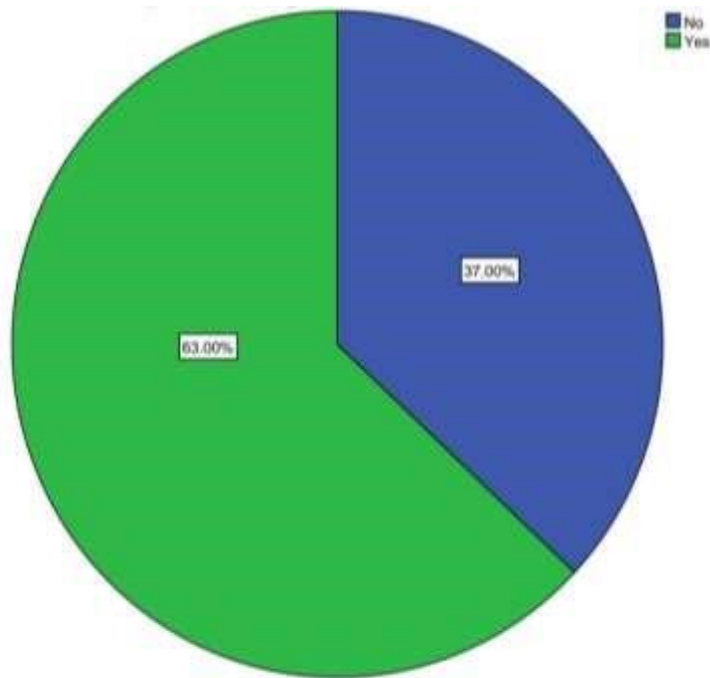


Fig 4: Pie chart shows the response of the participants who thought that genetics can be a reason for malocclusion. Green denotes yes and blue denotes no. Majority of the study participants 63% were people who thought that genetics could be the main reason and 37% of people thought that genetics cannot be the main reason for malocclusion.

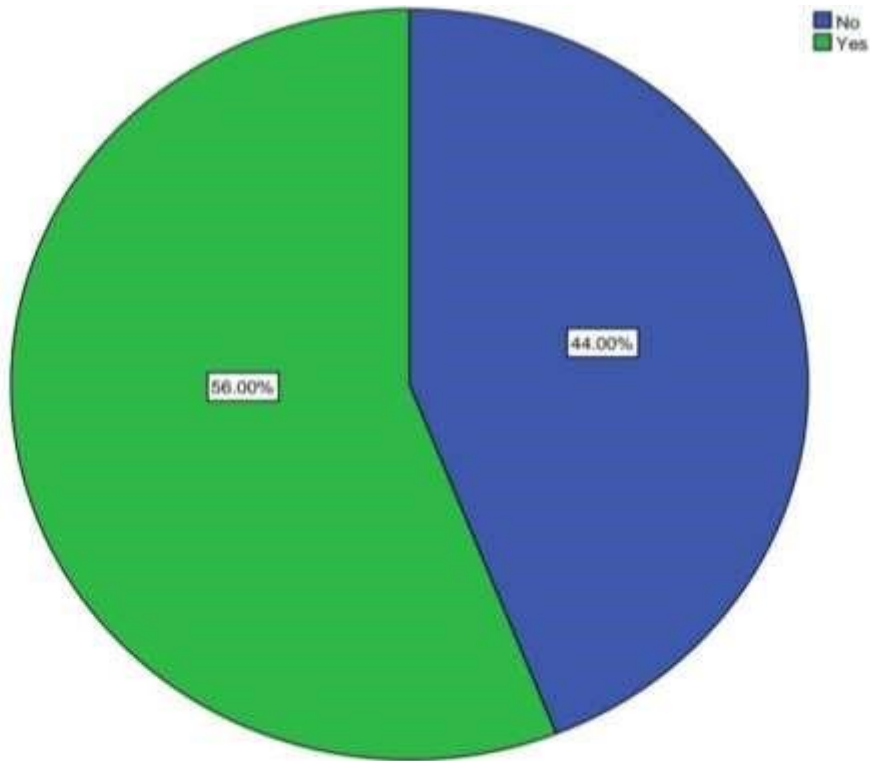


Fig 5: Pie chart shows the response of the study participants who avoid smiling because of malocclusion. Green denotes yes and Blue denotes no. Majority of the study participants were 56% avoid smiling and 44% do not avoid smiling due to malocclusion.

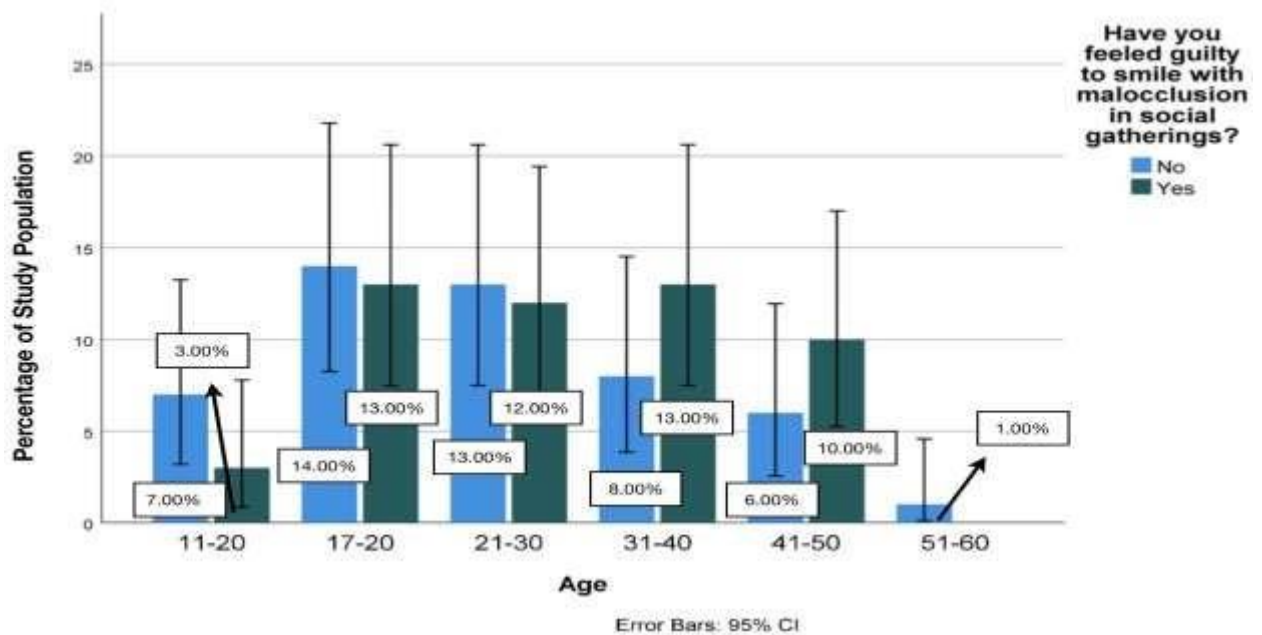


Fig 6: The bar graph represents the association between age and feeling guilty to smile. X axis represents age and Y axis represents feeling guilty to smile. Blue colour represents negative and green colour represents positive response. 3% aged 11-20 years, 13% aged 17-20 years, 12% aged 21-30 years, 13% aged 31-40 years, 10% aged 41-50 years reported they felt guilty to smile with malocclusion during social gatherings. The differences are statistically not significant (Pearson chi square, p value is 0.437).

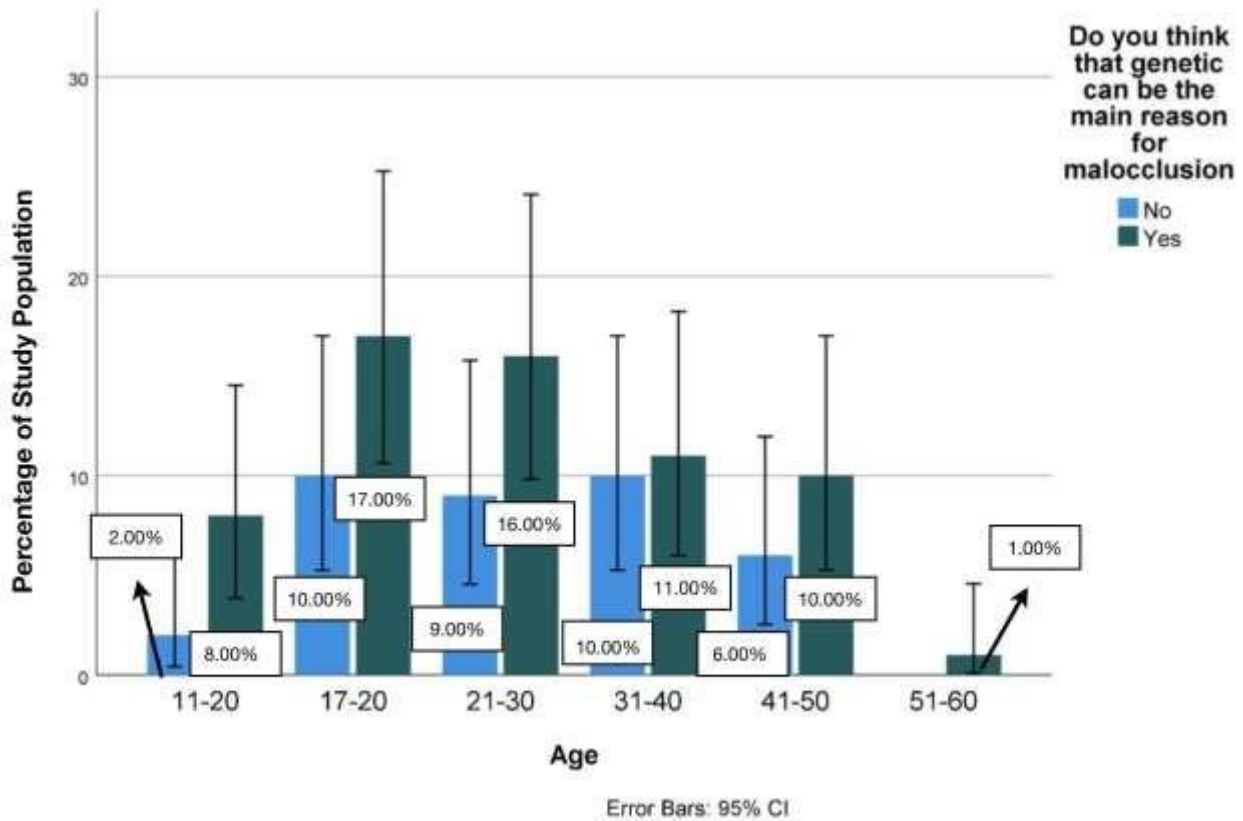


Fig 7: The bar graph represents the association between age and participants thought that genetics is the reason for malocclusion. The X axis represents age and the Y axis represents the number of participants who believe that genetics is the main reason for malocclusion. Blue colour represents negative and green colour represents positive response. 8% aged 11-20 years, 17% aged 17-20 years, 16% aged 21-30 years, 11% aged 31-40 years, 10% aged 41-50 years reported they thought that genetics is the reason for malocclusion. The differences are statistically not significant (Pearson chi square, p value = 0.228).

DISCUSSION:

Adolescence is a period of transformation characterised by an emotional reorganisation involving various internal and external conflicts due to these factors. There is an increasing interest in the impact of malocclusion on the address that psychological well-being, however evaluated by focusing on dental appearance using DAI malocclusion had a negative impact on adolescent QOL(26).

The presence of malocclusion in the anterior region may interfere with adolescents' psychological well-being. Previous studies explain the presence of several occlusal characteristics

associated with a negative impact on quality of life(27). These studies were conducted with adolescents. Children are more concerned with the approval of adults as adults are more concerned about their body image

Previous studies describe that children have severe malocclusion associated with the negative impact on the quality of life, and also explain that dental caries will not interfere in the results of malocclusion(28). Many children did not have the normal development of the occlusion. Some problems indicated by the experts are the tendency of crowding in permanent dentition and early loss of primary tooth. Malocclusion also can lead to more complicated orthodontic treatments in the permanent dentition. Sometimes malocclusion causes headache and causes teeth to be sore and some minor bite problems can cause major sources of pain. Malocclusion is commonly seen in teenagers 80.2% of girls and 78.4% of boys and children also suffer from malocclusion.(29)

There are many reasons why adolescents may feel a need for orthodontic treatment and in many cases these reasons are not related to the seriousness of malocclusion(30). The low level of education on part of the head of facility directly and negative effects formulation of concept of self care from such families more susceptible to oral conditions,poorer oral health,g CODE reader experience of caries and periodontal disease(31). Some authors noted social economic conditions are directly related to the presence of harmful oral habits that influence the development of malocclusion.

The limitation of the study of the dental student may not represent the general population of society for their cross-sectional studies are required to include more number of participants of different age groups.

CONCLUSION:

The overall knowledge and attitude of people with malocclusion was reasonably good. They had a positive attitude about malocclusion and the treatment options . The position of the teeth can affect their face looks, dental attractiveness most influence variables to perceive the treatment.

ACKNOWLEDGMENT:

Saveetha Dental College and Hospitals, Saveetha Institute of Medical and technical science, Saveetha University.

SOURCE OF FUNDING:

The present study was supported by the following agencies.

- Saveetha Dental College
- Saveetha Institute of Medical and technical science
- Saveetha University Prompt paper products private LTD.,
- Doppler Scans

REFERENCES:

1. Davies SJ. Malocclusion – a term in need of dropping or redefinition? [Internet]. Vol. 202, British Dental Journal. 2007. p. 519–20. Available from: <http://dx.doi.org/10.1038/bdj.2007.372>
2. Chauhan D, Sachdev V, Chauhan T, Gupta KK. A study of malocclusion and orthodontic treatment needs according to dental aesthetic index among school children of a hilly state of India. *J Int Soc Prev Community Dent.* 2013 Jan;3(1):32–7.
3. Aslan BI, Akarslan Z, Karadağ Ö. APICAL ROOT RESORPTION IN TEETH AFTER THE TREATMENT OF CLASS II MALOCCLUSION WITH FORSUS FRD AND FIXED TECHNIQUE [Internet]. Atatürk Üniversitesi Diş Hekimliği Fakültesi Dergisi. 2021. p. 1–1. Available from: <http://dx.doi.org/10.17567/ataunidfd.890346>
4. Rakosi T, Jonas I, Graber TM. *Orthodontic Diagnosis.* Thieme; 1993. 272 p.
5. Shigakubu ND. *Journal of Nihon University School of Dentistry.* 1995.
6. Princeton B, Santhakumar P, Prathap L. Awareness on Preventive Measures taken by Health Care Professionals Attending COVID-19 Patients among Dental Students. *Eur J Dent.* 2020 Dec;14(S 01):S105–9.
7. Mathew MG, Samuel SR, Soni AJ, Roopa KB. Evaluation of adhesion of *Streptococcus mutans*, plaque accumulation on zirconia and stainless steel crowns, and surrounding gingival inflammation in primary molars: randomized controlled trial. *Clin Oral Investig.* 2020 Sep;24(9):3275–80.
8. Sridharan G, Ramani P, Patankar S, Vijayaraghavan R. Evaluation of salivary metabolomics in oral leukoplakia and oral squamous cell carcinoma. *J Oral Pathol Med.* 2019 Apr;48(4):299–306.
9. R H, Hannah R, Ramani P, Ramanathan A, Jancy MR, Gheena S, et al. CYP2 C9 polymorphism among patients with oral squamous cell carcinoma and its role in altering the metabolism of benzo[a]pyrene [Internet]. Vol. 130, *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology.* 2020. p. 306–12. Available from: <http://dx.doi.org/10.1016/j.oooo.2020.06.021>
10. Antony JVM, Vini Mary Antony J, Ramani P, Ramasubramanian A, Sukumaran G. Particle size, penetration rate and effects of smoke and smokeless tobacco products – an invitro analysis [Internet]. Vol. 7, *Heliyon.* 2021. p. e06455. Available from: <http://dx.doi.org/10.1016/j.heliyon.2021.e06455>
11. Sarode SC, Gondivkar S, Sarode GS, Gadbail A, Yuwanati M. Hybrid oral potentially malignant disorder: A neglected fact in oral submucous fibrosis [Internet]. *Oral Oncology.* 2021. p. 105390. Available from: <http://dx.doi.org/10.1016/j.oraloncology.2021.105390>
12. “Critical appraisal of different triggering pathways for the pathobiology of pemphigus vulgaris-A review” on Publons [Internet]. [cited 2021 Sep 24]. Available from: <https://publons.com/publon/47643844/>

13. Chandrasekar R, Chandrasekhar S, Sundari KKS, Ravi P. Development and validation of a formula for objective assessment of cervical vertebral bone age. *Prog Orthod*. 2020 Oct 12;21(1):38.
14. Subramanyam D, Gurunathan D, Gaayathri R, Vishnu Priya V. Comparative evaluation of salivary malondialdehyde levels as a marker of lipid peroxidation in early childhood caries. *Eur J Dent*. 2018 Jan;12(1):67–70.
15. Jeevanandan G, Thomas E. Volumetric analysis of hand, reciprocating and rotary instrumentation techniques in primary molars using spiral computed tomography: An in vitro comparative study [Internet]. Vol. 12, *European Journal of Dentistry*. 2018. p. 021–6. Available from: http://dx.doi.org/10.4103/ejd.ejd_247_17
16. Ponnulakshmi R, Shyamaladevi B, Vijayalakshmi P, Selvaraj J. In silico and in vivo analysis to identify the antidiabetic activity of beta sitosterol in adipose tissue of high fat diet and sucrose induced type2 diabetic experimental rats. *Toxicol Mech Methods*. 2019 May;29(4):276–90.
17. Sundaram R, Nandhakumar E, Haseena Banu H. Hesperidin, a citrus flavonoid ameliorates hyperglycemia by regulating key enzymes of carbohydrate metabolism in streptozotocin-induced diabetic rats. *Toxicol Mech Methods*. 2019 Nov;29(9):644–53.
18. Alsawalha M, Rao CV, Al-Subaie AM, Haque SKM, Veeraraghavan VP, Surapaneni KM. Novel mathematical modelling of Saudi Arabian natural diatomite clay [Internet]. Vol. 6, *Materials Research Express*. 2019. p. 105531. Available from: <http://dx.doi.org/10.1088/2053-1591/ab2f9b>
19. Tang X, Yu J, Li M, Zhan D, Shi C, Fang L, et al. Inhibitory effects of triterpenoid betulin on inflammatory mediators inducible nitric oxide synthase, cyclooxygenase-2, tumor necrosis factoralpha, interleukin-6, and proliferating cell nuclear antigen in 1,2-dimethylhydrazine-induced rat colon carcinogenesis [Internet]. Vol. 16, *Pharmacognosy Magazine*. 2020. p. 841. Available from: http://dx.doi.org/10.4103/pm.pm_516_19
20. Shree KH, Hema Shree K, Ramani P, Herald Sherlin, Sukumaran G, Jeyaraj G, et al. Saliva as a Diagnostic Tool in Oral Squamous Cell Carcinoma – a Systematic Review with Meta Analysis [Internet]. Vol. 25, *Pathology & Oncology Research*. 2019. p. 447–53. Available from: <http://dx.doi.org/10.1007/s12253-019-00588-2>
21. Zafar A, Sherlin HJ, Jayaraj G, Ramani P, Don KR, Santhanam A. Diagnostic utility of touch imprint cytology for intraoperative assessment of surgical margins and sentinel lymph nodes in oral squamous cell carcinoma patients using four different cytological stains. *Diagn Cytopathol*. 2020 Feb;48(2):101–10.
22. Karunagaran M, Murali P, Palaniappan V, Sivapathasundharam B. Expression and distribution pattern of podoplanin in oral submucous fibrosis with varying degrees of dysplasia – an immunohistochemical study [Internet]. Vol. 42, *Journal of Histotechnology*. 2019. p. 80–6. Available from: <http://dx.doi.org/10.1080/01478885.2019.1594543>

23. Sarode SC, Gondivkar S, Gadbail A, Sarode GS, Yuwanati M. Oral submucous fibrosis and heterogeneity in outcome measures: a critical viewpoint. *Future Oncol*. 2021 Jun;17(17):2123–6.
24. Preeth DR, Saravanan S, Shairam M, Selvakumar N, Raja IS, Dhanasekaran A, et al. Bioactive Zinc(II) complex incorporated PCL/gelatin electrospun nanofiber enhanced bone tissue regeneration [Internet]. Vol. 160, *European Journal of Pharmaceutical Sciences*. 2021. p. 105768. Available from: <http://dx.doi.org/10.1016/j.ejps.2021.105768>
25. Yang J, Lam EWN, Hammad HM, Oberley TD, Oberley LW. Antioxidant enzyme levels in oral squamous cell carcinoma and normal human oral epithelium [Internet]. Vol. 31, *Journal of Oral Pathology & Medicine*. 2002. p. 71–7. Available from: <http://dx.doi.org/10.1034/j.16000714.2002.310202.x>
26. Wilson IB. Linking clinical variables with health-related quality of life. A conceptual model of patient outcomes [Internet]. Vol. 273, *JAMA: The Journal of the American Medical Association*. 1995. p. 59–65. Available from: <http://dx.doi.org/10.1001/jama.273.1.59>
27. Mtaya M, Brudvik P, Astrøm AN. Prevalence of malocclusion and its relationship with sociodemographic factors, dental caries, and oral hygiene in 12- to 14-year-old Tanzanian schoolchildren. *Eur J Orthod*. 2009 Oct;31(5):467–76.
28. Bernabé E, de Oliveira CM, Sheiham A. Condition-specific sociodental impacts attributed to different anterior occlusal traits in Brazilian adolescents [Internet]. Vol. 115, *European Journal of Oral Sciences*. 2007. p. 473–8. Available from: <http://dx.doi.org/10.1111/j.1600-0722.2007.00486.x>
29. Bernabé E, Flores-Mir C. Influence of anterior occlusal characteristics on self-perceived dental appearance in young adults. *Angle Orthod*. 2007 Sep;77(5):831–6.
30. Martins-Júnior PA, Marques LS, Ramos-Jorge ML. Malocclusion: social, functional and emotional influence on children. *J Clin Pediatr Dent*. 2012 Autumn;37(1):103–8.
31. Dutra SR, Pretti H, Martins MT, Bendo CB, Vale MP. Impact of malocclusion on the quality of life of children aged 8 to 10 years. *Dental Press J Orthod*. 2018 Mar;23(2):46–53.