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Association Of Stress, Peer Pressure And Performance Pressure On Oral Hygiene: An Original Research

Dr.Mathew J Maliyil[1], Dr. Rohinjeev Ghotra[2], Dr. Aseem Bhatia[3], Dr. Preeti Lath[4], Dr. Nikhitha Raigir[5], Dr. Kommuri Baji Babu[6], Dr. Rahul VC Tiwari[7]

[1]Reader & HOD, Department of Public Health Dentistry, Sri Ramakrishna Dental College & Hospital, Coimbatore- 06.
[2]BDS, Gian Sagar Dental College and Hospital, Baba Farid University of Health Sciences, Faridkot, Punjab, India.
[3]BDS, Gian Sagar Dental College and Hospital, Baba Farid University of Health Sciences, Faridkot, Punjab, India.
[4]Professor and Head, Department of Periodontics, Hi-Tech Dental College and Hospital, Bhubaneswar, Odisha.
[5]Intern, Sri Sai College of Dental Surgery, Vikarabad.
[6]M.D.S, Oral and Maxillofacial Surgery, Government Dental College and Hospital, Vijayawada, Andhra Pradesh
[7]OMFS, FOGS, PhD Scholar, Dept of OMFS, Narsinbhai Patel Dental College and Hospital, Sankalchand Patel University, Visnagar, Gujarat

[1]E mail: mathewmaly@gmail.com

ABSTRACT:
Aim: Aim of our research was to evaluate the amount of stress as well as performance pressure on the oral hygiene in our study participants.
Methodology: Survey was conducted in 200 patients who had reported to various private clinics over a period of 6 months. Questionnaire was given having 12 questions, which helped us assess their stress levels related to their oral hygiene status. Descriptive analysis was carried out with the data received from the study participants.
Results: Maximum participants had moderate stress levels (47%), whereas around 34 % experienced oral health problems. 67% were conscious about their appearance, and their smile. Only 14 % went for regular dental check-ups, which further shows less awareness for preventive care.
Conclusion: Our findings suggest that individuals with greater perceived stress also report poorer oral health. These findings may warrant greater attention be paid to the role of psychological stress in the development of oral disease.

Keywords: oral hygiene, stress, periodontitis, caries.

1. INTRODUCTION

Stress is unavoidable process and is increasing day by day in everyone's life.[1] It's defined in general as the need to make a behavioral adjustment to environmental changes. It can also be defined as adaptive response of an organism to a threatening stimulus, which provides the

link between the psychological and physiological processes that are associated in the onset of the disease.[2] And it is a part of the human condition that is present universally, but to varying degrees, and has different effects on individuals.[3] Chronic stress is likely to contribute to the progressive long term development of oral diseases through atleast two distinguishable pathways. First, stress can motivate individuals to cope in unhealthy ways that foster oral diseases (e.g., substance use, including illicit drugs, alcohol and tobacco, poor diet). Second, chronic stress contributes to high allostatic load that canlead to the dysfunction of physiological systems critical to homeostasis, and thus affect the underlying mechanisms of diseases progression, more generally.[4] Stress has been defined in general as the need to make a behavioral adjustment to environmental changes. It can also be defined as adaptive response of an organism to a threatening stimulus, which provides the link between the psychological and physiological processes that are associated in the onset of the disease.[5] While there seems to be a common belief that psychosocial stress affects oral hygiene behavior, this assumption has rarely been proved. Periodontitis is an inflammatory response of the periodontium, which involves the destruction of investing tissues around the teeth and results in loss of tooth support and leading to tooth loss. Although, bacterial pathogens are required to initiate the disease process.[7-9] It is found in 5–20% of most adult populations worldwide.[10,11] Most studies have found that periodontitis affects majority of the adult population after the age of 35–40 years.[12]The etiological significance of biological and behavioral risk factors for periodontal diseases, such as smoking, advancing age, oral hygiene, and systemic diseases like diabetes mellitus has already been established.[13-17] Other factors such as stress, depression and anxiety are not yet confirmed as absolute risk conditions, but have been identified in some observational studies.[18-20] The contribution of psychological factors to the development and progression of the periodontal disease has recently become an area of increased research activity. Studies indicated that there might be strong relationships between stress, depression, and periodontal disease demonstrating convincing linkages between depression and elevated cortisol levels, negligence of oral hygiene, pocket depth, attachment loss, and tooth loss.[21] Mannem and Chava[22] found stress to be an important risk factor for periodontal disease. Regarding to smoker people the studies shows that's smoking is more prevalent in depression patients.[23,24] And among the many harmful oral habits, which are believed to be induced by emotional disturbances, smoking is possibly the most important in relation to worsened periodontal conditions.[25] Emotional conditions are suggested to cause alterations in dietary intake and affecting periodontal health with indirect pathway. Psychological factors affect the choice of foods through the physical consistency of the diet, and the quantities of food eaten during stressful periods is likely to cause an increase in the accumulation of plaque. Considering that psychological stress and plaque may act synergistically on the concentration of periodontal IL-1β, if the neglect of oral hygiene behavior occurs as a result of mental stress, the concentration of periodontal IL-1β might reach maximum levels.[26,27]

Aim Of The Study

Aim of our research was to evaluate the amount of stress as well as performance pressure on the oral hygiene in our study participants. Our research also investigated the amount of peer pressure on the people in terms of oral hygiene.

2. METHODOLOGY

A survey was conducted in 200 patients who had reported to various private clinics over a period of 6 months with 53 female participants and 147 male participants within age group of

15- 40 years. The purpose of the study was explained to each patient before giving them questionnaire and verbal consent was taken. Those patients who did not agree to be a part of the survey or gave incomplete answers were excluded from the study. A pretested questionnaire of total 12 questions; was used for data collection. (Table 1) The questionnaire included socio-demographic status, oral health practice, visiting dentist and smoking habits. Stress was measured by using modified dental anxiety stress scale questionnaire having score 0 to 3 from never to severe stress. Total score of stress was calculated by combing each score of every question. Total score is divided into three scale, low stress (0-14), Moderate stress (15-30) and severe stress (31- 45). The Microsoft Office Excel was used to collect data. The statistical analysis was performed by the Statistical Package for Social Science (SPSS) version 21 (SPSS Inc., Chicago, IL, USA). Descriptive analysis was carried out with the help of frequency percentages.

3. RESULTS

We observed that maximum participants had moderate stress levels (47%), whereas around 34 % experienced oral health problems. 67% were conscious about their appearance, smile as well how their teeth were looking. However, only 12 % opted for flossing possibly because of increased difficulty level of the procedure. Unfortunately, only 14 % went for regular dental check-ups, which further shows less awareness for preventive care. 53% also had issues like GERD, bruxism, with 38% having a past history of smoking which affected oral hygiene negatively. An astounding number (89%) were conscious about foul odour from oral cavity, which shows the peer pressure they were dealing with. (Table 2)

Table 1- Questionnaire in the study.

S. NO.	QUESTIONS
1	Do you feel your oral health is deteriorating?
2	Do you feel the peer pressure for proper appearance in terms of your smile and teeth?
3	Do practice flossing of your teeth?
4	Do you feel professional pressure in terms of your overall appearance?
5	Do you visit dentist regularly for check-ups?
6	Do you notice bleeding while eating or brushing?
7	Do you experience oral ulcerations frequently?
8	How do you rate your general stress level? (Low/ Moderate/ Severe)
9	Do you experience frequent clenching of teeth/ acidity?
10	Do you use mouth-rinses?
11	Are you conscious about how your breath smells?
12	Are you a smoker? If yes then mention the frequency per day

Table 2- Data recorded in the study.

Q. No.	Questions	Measurement recorded (%)
1	Oral health deterioration	34%
2	Peer pressure for proper smile and teeth	67%
3	Flossing of teeth	12%
4	Professional pressure for overall appearance	44%
5	Regular dental visits	14%
6	Bleeding while brushing or eating	21%
7	Frequent oral ulcerations	26%

8	Stress level	Low (33%), moderate (47%), severe (20%)
9	Experience of clenching of teeth/ acidity	53%
10	Usage of mouth-rinses	41%
11	Consciousness about foul odour	89%
12	Habit of smoking	38%

4. DISCUSSION

Brushing, interdental cleaning, tongue hygiene are the most important tools for better oral health. The oral health related factors are associated with poor social and emotional well being but it is not possible to determine the exact pathway.[28] Stress can increase the frequency of mouth sores. Students often have mouth sores during their school year but no more or fewer during holidays.[29] It can also cause facial pain, grinding teeth, poor oral hygiene and gum diseases. Little is mentioned in the literature about mental stress relation-ship to oral health but some researchers found that stress were a risk factor for periodontal diseases. We have tried to find that oral hygiene practice is affected due to stress and this leads to affect oral health. Pratt et al[30] reported that adult aged 20 years and over stress were more likely to be smokers than those without stress. Lin et al found dental pain which was associated with stress.[31] A study involving high school students reported that the higher the level of stress during the university examination and that leads to higher perception of the oral diseases.[32,33] In our study, we observed that patients were very much conscious about their appearance, teeth as well as gingival status, bleeding from gums, foul odour from oral cavity. Professional appearance of being well groomed was a very evident pressure which these participants were facing. Unfortunately, they were not well aware or realised the importance of frequent dental visits for preventive as treating various dental diseases, which is very essential for oral well being. We noticed that mostly female patients were having moderate to severe stress levels. However, many male patients also had a higher stress levels, so less attention was given on oral hygiene practice which leads to further oral infection like gingivitis and periodontitis.

5. CONCLUSION

Our findings suggest that individuals with greater perceived stress also report poorer oral health. These findings may warrant greater attention be paid to the role of psychological stress in the development of oral disease, including as a cause of social inequalities in oral health, and health inequity, more generally. More research is needed to explain the relationship between perceived current stress and oral health and to inform the design of interventions for the uninsured and those disadvantaged in other ways.

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