Original Article

PARAFUNCTIONAL HABITS AMONG UNDERGRADUATE CLINICAL STUDENTS AND HOUSE OFFICERS AT KHYBER COLLEGE OF DENTISTRY

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ABSTRACT

Objective: *The objective of this study was to find out the prevalence of parafunctional habits in undergraduate clinical students and House officers.*

Material and Methods: *The present study was conducted at Khyber College of Dentistry, Peshawar, Pakistan. A total of 200 undergraduate clinical students and house officers between the ages of 20-25 years were included. The structured questionnaire was a comprehensive instrument including items determining the presence of parafuntional habits. The questionnaire included level of study, age, gender, socioeconomic status and various parafuntional habits like bruxism, clenching, nail biting, lip/object biting or thumb sucking. It also included additional questions like duration of habits if any, consultations taken for these habits and qualifications of the consultants. The data obtained was analyzed via SPSS-19 version.*

Results: *Out of total subjects, 165 responded to the questionnaire. Female (72%) predominated male (28%). Majority of the respondents were from a higher level of studies. Socioeconomic indicators showed a good status in majority (148,88.5%) of the participants. One hundred and seven (64.84%) were having a history of parafunctional habits in isolation or combination. Most of the respondents (30.84%) were having lip/object biting, followed by nail biting (16.82%).*

Conclusions: *Females in high educational levels, suffer from parafunctional habits especially objects / nail biting. Introducing educational programs in curricula may raise awareness of these oral parafunctions' harmful effects.*

Key words: *Para functional Habits, Khyber College of Dentistry, Temporomandibular joint dysfuction*

INTRODUCTION

Habits are learned patterns of highly complex nature. A habit is any act acquired through experience and performed regularly and unconsciously. Oral habits can be functional or parafunctional. The term Oral Para function was introduced into dental literature in 1950 as abnormal, fixed motor activities of the masticatory system differing qualitatively and quantitatively from normal functions of the system. They are resulting from the perversion of a normal function, acquired by repeated practice of an act that is not functional or necessary, which may be a sign of adjustment problems or inappropriate emotional expression. These habits can be divided into sleep-related or waking-state oral parafunctional habits. Sleep-related habit is primarily bruxism (phasic, tonic or both)[1,2]. Whereas waking-state oral parafunctional habits are more diverse including variety of behaviours such as clenching, nail biting, pen/pencil chewing, excursive positioning, holding jaw rigid and lip biting[1-3].

Oral parafunctional habits have serious effects if remained unchecked as they play an important role in oral and general health . They can cause muscle pain, headache, tooth wear, temporomandibular joint disorder (TMD) and even tooth loss[4,5]. It is believed that habits (especially bruxism) can act as an important etiologic factor of TMD, as they lead to a traumatic dental occlusion that may affect the teeth and the masticatory muscles and temporomandibular joints, causing the disruption of the functional balance of stomatognathic system, or worsening the already es-

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tablished TMD[6-9].

TMDs and parafunctional habits are found to be significantly more common in females than males. Women report clenching awareness more than men[10,11]. World-wide studies[12-14] show that prevalence of parafunctional habits is highly variable ranging from simple lip biting to more complex abnormal orofacial maneuvers leading to TMPDs and atypical facial pains.

Dental education is a delicate period in a student's life as these educational programs are universally known to be demanding and stressful. Due to professional courses, students feel great amount of burden in dealing with academic stress and anxiety. Stress in dental students can lead to issues in mental health such as fatigue, dizziness, sleeplessness tachycardia, gastrointestinal symptoms and irritability. In the same manner this psychological load also put dental students at risk of oral parafunctional habits and its consequences[14].

The aim of this study is to find out the prevalence of parafuntional habits in undergraduate clinical students and house officers at Khyber College of Dentistry as they are representatives of different regions and areas.

METHOD AND MATERIALS

The present study is a descriptive and quantitative study conducted at Khyber College of Dentistry, located in University of Peshawar, Pakistan. The sample contained 200 undergraduate clinical students (third year, fourth year) and graduates (house officers), between the ages of 20-25 years and included both genders.

A self-administered questionnaire was distributed among the students of third year, final year and house officers of Khyber College of Dentistry. The duration of the study was 3 months, from 1st September 2016 to 30th November 2016. The structured questionnaire was a comprehensive instrument including items determining the presence of parafuntional habits. The questionnaire included level of study, age, gender, socioeconomic status and various parafuntional habits like bruxism, clenching, nail biting, lip/object biting or thumb sucking. It also included additional questions like duration of habits if any, consultations taken for these habits and qualifications of the consultants. The data obtained was analyzed via SPSS-19 version. A descriptive analysis was made regarding the data and results were drawn in the form of tables.

Table-1. Level of studies

Level of study	n	%
3RD Year	51	30.92
4TH Year	57	34.54
House Officers	57	34.54
Total	**165**	**100.00**

RESULTS

A total of 200 proformas were distributed but 165 responded to the questionnaire. Out of 165 respondents, 46(28%) were male and 119 (72%) were female, with a male to female ratio of 1:2.5 . Majority of the respondents were from a higher level of studies. Details are given in table 1.

Socioeconomic indicators showed a good status in majority (148,88.5%) of the participants. Only 9.1% were having satisfactory status and 2.4% belonged to poor socioeconomic group.

Out of total respondents, 107(64.84%) were having a history of parafunctional habits in isolation or combination. Most of the respondents (30.84%) were having lip/object biting, followed by nail biting (16.82%). Details of distribution of parafunctional habits is given in table 2.

Among those who were having parafunctional habits, 28 (26.17%) were males and 79 (73.83%) were females. Subjects with parafunctional habits who belonged to a good socioeconomic status were

Table-2:

Habits	n	%
Grinding of teeth	13	12.15
Clenching	17	15.89
Nail biting	18	16.82
Biting lips/objects	33	30.84
Grinding+ Clenching	3	2.80
Clenching+ biting lips	5	4.67
Nail biting+ Biting lips/objects	6	5.61
Grinding +Clenching+ Nail biting	5	4.67
Grinding+Clenching+Nail biting+Biting lips	2	1.88
Other combinations of habits	5	4.67
Total	**107**	**100**

95 (88.78%) followed by 9 (8.65%) with satisfactory socioeconomic status.

Duration of the habit in majority of the subjects was 4-6 years (39.25%), followed by 7 years or more (28.03%) and 1-3 years (26.17%).

Only 10 individuals sought consultation for their parafunctional habit and its associated problems.

DISCUSSION

Many studies are conducted on parafunctional habits in different regions of the world. The prevalence of oral parafunctional habits varies greatly among different populations. In the present study, the prevalence of parafunctional habits was found to be 65% which is in contrast to studies done else where[15-18]. This difference may be attributed to different research criteria and cultural, socioeconomic or geographical diversity of investigated populations . Emodi et al[15] and Fujita et al[16] showed the prevalence of parafunctional habits to be 78.8% and 82.85 respectively. Conversely in studies done in Indian population, Kharbanda et al[17], Shetty and Munshi[18] recorded a low prevalence ranging from 25 to 29%. In a study by Panek et al[19], 95% of the students of a randomly selected group from the Vocational Technical School revealed various parafunctional habits.

Parafunctional habits has a positive association with stress. As recognized in the literature, the age group most affected by parafunctional habits is the young and middle aged adults[20-21]. Our study was conducted in young undergraduate students of age 20-25 years. These students are representatives of different regions, whose personalities are shaped by their cultures. Research shows that personality plays a mediating role in becoming casualty of stress in younger people[18,20]. Furthermore dental education itself is highly demanding and irksome not only because it requires one to learn tremendous amount of information but also the constant need to interact with patients and apply knowledge to clinical practice. Sources of stress for dental students such may include time and scheduling pressure, management of uncooperative patients, examination anxiety, financial problems, highly technical tasks and demand of clinical practice. Other factors include personal expectations, and dissatisfaction with a system that assess students and doctors as good or bad primarily by academic grades. A lot of dental students do not seek help for their own stress and are likely to put on a brave face to avoid showing their personal fragility. This leads to stress accumulation in fresh faced young and eager dentists leading to development of parafunctional habits, musculoskeletal problems, anxiety and depression and even suicidal ideation[22].

Some studies have shown that there is no difference in gender predilection[23] while other have reported a higher prevalence of parafunctional habits in females[24,25]. The reason for female predominance can be attributed to mental factors. These may include stress and physiological changes. Study conducted by Akhter et al suggested that parafunctional habits and prevalence of TMJ sounds and TMPDs tended to increase with stress level especially in females[26].The present study shows female predominance which is in accordance with many worldwide studies. The only difference is that those studies were conducted in general population while the present study was conducted on dental students of a tertiary oral health care unit, where female students are already in majority at the time of their enrollment. There were one hundred and nineteen (119) females and forty six (46) males in our study . Out of these, 80 females and 27 males reported parafunctional habits which increasing of females to males ratio.

Majority of subjects having parafunctional habits in the present study were good socioeconomically. Though this may not be in agreement with other studies. One study[27] reported prevalence of parafunctional habits higher in people of poor socioeconomic status. The reason for this may be poverty, lack of health facilities, poor health and most importantly lack of awareness. Most of the people may not report any parafunctional habit as either they are not aware of its presence or they consider it normal especially if it is asymptomatic.

Parafunctional habits may present as isolated (single) type or as double, triple or even fourfold coincidences in a single person. The highest prevalent parafunctional habit in this study was biting lip/object (30.84%) followed by nail biting (16.82%), clenching (15.8%) and grinding (12.15%). Similar results were given by Fateih[27] where most prevalent habit was biting lip/object (41%) followed by nail biting (29%) and bruxism (22%). Similarly Schiffmann et al[28] reported highest prevalence of biting lip/object (72%), followed by clenching (59%), nail biting (48%) and

bruxism (22%). In contrast to these results, Panek et al[19] reported bruxism (45%) and clenching (45%) as most prevelant habits followed by Biting nails (41%) and Biting mucosa of lip or cheek (29%).

Some studies have reported that its the amount, frequency, intensity and duration of habits that determine the severity of signs and symptoms of TMD, as they relate to fatigue and muscle pain, in addition to joint compression[29]. Probably the intensity and duration are more important than the number of habits. In this study,majority of students (40%) had parafunctional habits for 4 to 7 years while 28% had these habits for more than 7 years. 26% of the students reported parafunctions for 1 to 3 years while only few (3%) had it for less than an year. Among all these students, only 10% took consultations for their habits. The reason for such a low figure may be unawareness, low or no symptomology at all .

CONCLUSION & RECOMMENDATION

It is concluded from the results that females in high educational levels, suffer from parafunctional habits especially objects / nail biting. Introducing educational programs in curricula may raise awareness of these oral parafunctions' harmful effects. Moreover, popularizing prophylactic measures and advice concerning early therapy may be indicated to prevent both functional consequences and irreversible morphological damage to mouth.

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