



Research Article

Modified Fonseca's Questionnaires in Assess Prevalence, Severity of Temporomandibular Disorders for Dental Undergraduates in Baghdad City

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Abstract: The multiplex etiology, wide period, collection of manifestations, the reasons for the importance of the epidemiology of TMDs and the understanding of it, addition to management requires, need numerous diagnostic and therapeutic procedure to diminish the signs and symptoms. An early diagnosis and management are of great benefit. The study aims to assess the prevalence of TMD among students at the Faculty of Dentistry in Baghdad. This study involve 365 undergraduate students from Ibn Sina University of Medical and Pharmaceutical Sciences-College of Dentistry in Baghdad, Iraq. The study started from January 2020 and end into May 2022. From The 365 precipitants there were 125 (34.2%) male students and 240 (65.8%) females, the students ages ranged (18-24) years. Standard questionnaire-based study is used with fonseca anamnestic rate index. In This study from the total number of 350 students, 59 (16%) were with no Temporomandibular disorders (TMDs), About 170 (46.6%) of the participants had Mild TMD, the Moderate TMD found in 102 (28%) students and 34 (9.4%) had Severe TMD problems, It is clear that subjects classified as mild TMD (46.6%) was significantly the higher than the other groups in their results, From the total sample, 291 participants had a some kind of TMDs, the prevalence is (83%). This work found that simple information index, play a good role in recognizing, classifying TMD symptoms depending on severity.

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INTRODUCTION

There is a concept, admits possibility of non-existence of a direct relationship between pain and tissue

damage and emphasizes subjectivity interpretation of pain. Defines pain as an unpleasant, sensorial, emotional experience, accompanying with real or possible injuries.

TMDs are identified as the main reason of non-dental orofacial pain^[1]. The group of conditions affecting the temporomandibular joint (TMJ) called the Temporomandibular disorders (TMDs)^[2]. Disorders of jaw joint, could be functional pain distinguished by discomfort, muscle pain, joint internal derangement, which includes a disc displacement, jaw dislocation, or trauma to condyle. Arthritis cite to an inflammatory, degenerative, disorders influence TMJ. TMDs etiological factors may be, predisposing factors (strengthen developing) initiating one (cause disease onset) and perpetuating (prevent healing, elevate TMDs propagation).

Prevalence of TMDs range from (20%-50%). The differences might be credit by various race-related origins, sampling skill, diagnostic measures. According to studies done on university students, TMDs were observed to be frequent between them, Males manifest a low prevalence of TMDs signs, symptoms than in Females^[3,4]. TMDs announced to be (three times) more in females^[5].

The multiplex etiology, wide period, collection of manifestations, the reasons for the importance of the epidemiology of TMDs and the understanding of it, addition to management requires, need numerous diagnostic and therapeutic procedure to diminish the signs and symptoms. An early diagnosis and management are of great benefit. A self-handle questionnaire holding of Fonseca's anamnestic index initially developed by (Da Fonseca et al 1994) for Brazilian population, for surveying severity of TMDs depend on signs and symptoms^[6].

Oliveira mention^[7], a simple questionnaire suggest benefit of faster application, low cost, makes epidemiological surveys and managements follow-up more feasible. Also it is provide a guide with less influence by tester and less variability measures.

Difficulty overlook by TMDs investigators, was the identification of etiological factors, which keep back sample standardization. To compare results from various clinical studies for the severity of TMDs, there was a need for a reliable, simple questionnaire. The anamnestic, clinical indexes done by Helkimo^[8] in 1974 were attain from clinical observations, Fonseca in 1992 modified Helkimo's indices and developed his questionnaires, classifying TMDs as (light, moderate, or severe, or non-TMDs)^[9].

Aim of This study be helpful to identify TMDs among the undergraduate students in college of Dentistry at Baghdad city at early stage of the diseases. So this Identification may aid to arrest the disease progression

MATERIALS AND METHODS

Study design: This study involve, 365 undergraduate students from Ibn Sina University of Medical and Pharmaceutical Sciences-College of Dentistry, in Baghdad, Iraq. The study started from January 2020 and end into May 2022. From The 365 precipitants there were 125 (34.2%) male students and 240 (65.8%) females Fig. 1 the students ages ranged (18-24) years.

The selected students have no history of musculoskeletal, neurological or systemic disorders.

A printed paper Fig. 2 contain the study questionnaires prepared specially for this study was given for Each student, as proposed by Fonseca and modified by the researchers^[10].

Material collection: The questionnaire designed by Fonseca used to analyses the level of TMDs, The settled questionnaire involve questions, look on the individual symptoms of TMDs and probable hazard factors, which included the pain present in the TMJ, head and back region and other several parameters. The subjects were informed to choose one of three answers written in the case sheet, "Yes," "No," and "sometimes," Fig. 2.

Statistical analysis: The questionnaire answers, were replanned a scoring guideline; A score "10" is for every

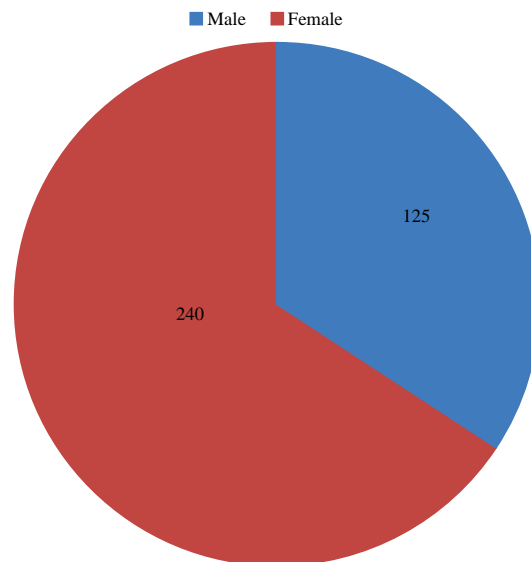


Fig. 1: Distribution of gender in the study The sample = 365 Male 125 (34.2%) Female 240 (65.8%)

Modified Fonseca's Questionnaire to assess the temporo mandibular disorders

NO: _____ Age: _____ Gender: Male Female
 Educational or stage level: _____ College: _____

QUESTIONS

- 1 Do you have limitation in mouth opening?
 a. Yes b. No c. Sometimes
- 2 ave you ever had T.M. joint locking?
 a. Yes b. No c. Sometimes
- 3 Do you have followings habits.
 a. Yes b. No c. Sometimes
 a Nail biting. b-clenching of teeth c-grinding of teeth. d-biting on objects. e-chewing gums.
- 4 It is hard for you to move your mandible side to side?
 a. Yes b. No c. Sometimes
- 5 Do you have muscular pain while chewing ?
 a. Yes b. No c. Sometimes
- 6 Do you get frequent headache, neck pain or toothaches?
 a. Yes b. No c. Sometimes
- 7 Do you have pain in or around your ears, check or temple ?
 a. Yes b. No c. Sometimes
- 8 Have your noticed any T.M.J clicking while chewing or opening your mouth?
 a. Yes b. No c. Sometimes
- 9 Do you hear joint sounds?
 a. Yes b. No c. Sometimes
- 10 Do you have arthralgia in other joints in your body?
 a. Yes b. No c. Sometimes
- 11 Do your jaws get stiff,tights or tired regularly?
 a. Yes b. No c. Sometimes
- 12 Have you suffered recent trauma to your head, neck and jaws?
 a. Yes b. No c. Sometimes
- 13 Have you felt any recent changes in your bite or under want any orthodontics treatment?
 a. Yes b. No c. Sometimes
- 14 Have you had any recent treatment for unexplained pain or jaw joint problem?
 a. Yes b. No c. Sometimes
- 15 Do you consider yourself as a nervous person?
 a. Yes b. No c. Sometimes
- 16 Did your experience any pain during eruption of wisdom tooth?
 a. Yes b. No c. Sometimes
- 17 Do you have stress, or under stressful conditions?
 a. Yes b. No c. Sometimes

SIGNATURE _____ **DATE;**...../...../.....

Fig. 2: The study case sheet questionnaires

(yes) answer, A score of “5” is given for every sometimes answer, A score of “0” was given for (no) answer (absence of the symptom).

All the arithmetic sum of the scores of the individual question were described the condition of the TM.J. Disorders as criteria; No TMDs = Total (0-15 marks) Mild TMDs = Total (20-45 marks) Moderate TMDs = Total (50-75 marks) Severe TMDs = Total (80-120 marks).

RESULTS

This study from the total number of 350 students, 59 (16%) were with no Tempora-mandibular disorders (TMDs), About 170 (46.6%) of the participants had Mild TMD, the Moderate TMD found in 102 (28%) students

and 34 (9.4%) had Severe TMD problems, It is clear that subjects classified as mild TMD (46.6%) was significantly the higher than the other groups in their results Fig. 3.

From the total sample, 291 participants had a some kind of TMDs, the prevalence is (83%).

According to gender classifications, For male 125 students 25 (20%) were with no Temporo-mandibular disorders (TMDs), About 66 (53%) of the participants had Mild TMD, the Moderate TMD found in 28 (22%) students and 6 male students (5%) had Severe TMD problems, Fig. 4. While for female 240 students 34 (14%) were with no Temporo-mandibular disorders (TMDs), About 104 (43%)of the participants had Mild TMD, the Moderate TMD found in 74 (31%) students and 28 Female students (12%) had Severe TMD problems, Fig. 5.

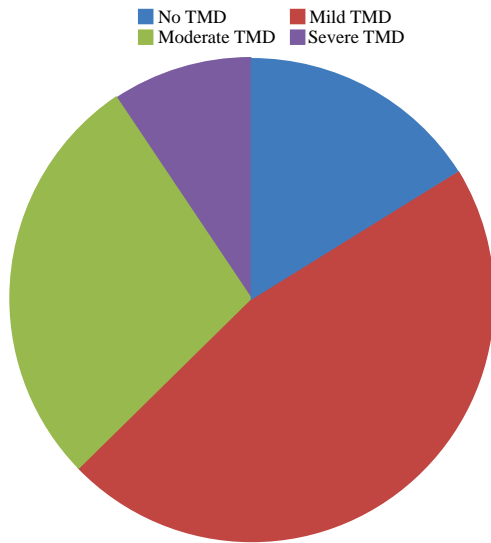


Fig. 3: TMDs (Sample students) No TMDs = 59 (16%), Mild TMDs = 170 (46.6%), Moderate TMDs = 102 (28%), Severe TMDs = 34 (9.4%)

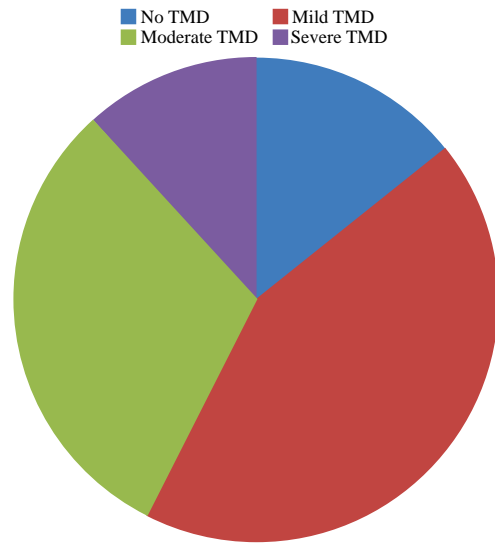


Fig. 5: TMDs (Female students) 240 person, No TMDs = 34 (14%), Mild TMDs = 104 (43%), Moderate TMD = 74 (31%), Severe TMD = 28 (12%)

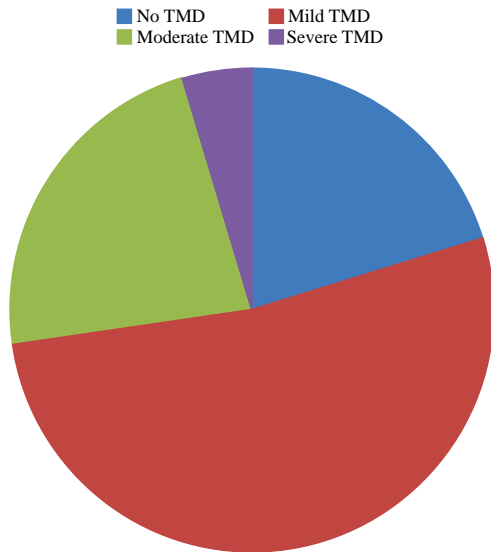


Fig. 4: TMDs (Male students) 125 PERSON, No TMDs = 25 (20%), Mild TMDs = 66 (53%), Moderate TMD = 28 (22%), Severe TMD = 6 (5%)

The overall percentage of females with no TMD disorders (57.63%) was higher than that of male (42.37%), the same for all the other mild TMD Female (61.2%) while the male (38.8%), while moderate TMD female (72.5%) higher than male (27.45%) and in severe one female (82.4%) and male (17.6%).

DISCUSSION

The goal of study to evaluate prevalence of TMDs in students in Dental College, through data obtained by applying a questionnaire. Fonseca's questionnaire was used, because it ensures collection a bulky part of information in a short duration and cheap. it is easy to understand and nearly no questioner authority^[10].

An approximately $\frac{3}{4}$ of the population may have some TMDs at some moment in life^[11], studies concerning Dental occlusion have reveal a low percentage of individuals, who completely free from TMDs. Garcia *et al.* Found by using the similar questionnaire, that 61% of under-graduates signs of TMDs. Pedroni et al in 2003, found TMDs in a 68% of the volunteers. His Study approximate that, about six million Brazilians have TMDs, most of them do not know that, with no idea about the applicable treatment and the disorder prognosis^[12]. In this study, over 84% of the precipitants had TMDs, the TMDs, prevalence is (83%). females were the more affected, in severe TMDs, females were 5 times more affected, in moderate TMDs score females were 3 times more, in mild TMDs, they were 2 times more. Difference in the result of no TMD s in females be more by 1.3% than the males group. The study results was well matched with the results of some prior studies^[9,10,13]. These data in the study are of great consequence for early TMDs diagnosis and

managements. In this study, the females TMDs prevalence close to twice as that of males. Graue et al, Solberg et al, Klineberg et al, Shiau and Chang, found similar to the results^[14,15,16]. This high TMDs amid females may be owing to physiological variations, such as regular hormonal changes, differentiations in the connective tissue and muscular structure.^[12,17,18], mild TMDs in this study were the most prevalent category reported the participants also same to that, mentioned by Pedroni *et al.*^[12].

CONCLUSIONS

This work found that simple information index, play a good role in recognizing, classifying TMD symptoms depending on severity. It will give a great benefit for Public health screening services, in a relatively short period, relatively cheap, broader population handle and correct, initial detection maybe gain. With An early treatment plan, the management of orofacial pain probable in a large number of population.

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