

Symptoms of Temporomandibular Joint Disorders in University Students – A Correlational Study

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Introduction:

The term temporomandibular disorder or dysfunction (TMD) has been associated with a set of musculoskeletal manifestations located at the temporomandibular joint (TMJ). These manifestations can be translated as symptoms of pain of the masticatory muscles at the TMJ or associated structures, restriction of movement, muscle tension, and articular sounds. All of these signs and symptoms may occur isolated or in combination (1). About 60 to 70% of the World population will demonstrate at least one sign or symptom of TMD during their life span. However, only 5% will actually seek treatment for their condition. To that extent, some authors have investigated the prevalence of TMD in the Brazilian University population, using the Fonseca Questionnaire (2). This research tool can help to define the level of severity of TMD and obtained a significant level of correlation with the Helkimo Index ($r=0.6169$, $p<0.05$), which can be used to assess TMD in a specified population (2).

As such, the purposes of this study were to analyze the prevalence of TMD symptoms in University students of Physical Therapy Degree (every academic year) of Escola Superior de Saúde Egas Moniz (ESSEM) and to verify if a correlation existed between the descriptive variables and the Fonseca's questionnaire results.

Materials and Methods:

An informed consent form and the questionnaires (sample characterization and Fonseca) were distributed during classes to all participants ($n=200$), irrespectively of their course year. The initial analysis of the Fonseca Questionnaire answers provided the categorization into two groups (with TMD and without TMD). This categorization enabled the posterior analysis of correlational data between the answers of the Fonseca Questionnaire and their status in relation to TMD. The Fonseca Questionnaire was composed by 10 questions of multiple choice. Each question had three options of response ("none" – 0 points, "sometimes" – 5 points, "always" – 10 points). After summing up all partial scores it was possible to obtain a final score that helped to categorize subjects by level of TMD severity ("absent" – 0 to 15 points, "mild" – 16 to 40 points, "moderate" – 41 to 65 points, and "severe" – 66 to 100 points). This study follows all the principles of the Declaration of Helsinki.

References

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Results:

We were able to obtain answers from 156 students (78% response rate), with an average age of 22 years. The majority were females (65%). A total of 65 students (42%) were classified as suffering from TMD (figure 1).

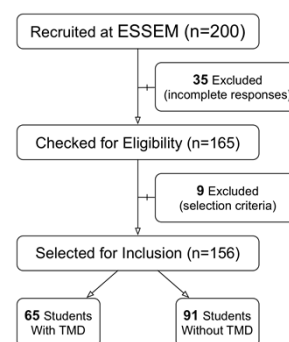


Figure 1 – Study Flow Diagram

Of those with TMD, 53 (34%) were classified as mild, 11 (7%) as moderate, and 1 (0.6%) as severe conditions (table 1).

Gender	Without TMD	With TMD		
		Mild (n=53)	Moderate (n=11)	Severe (n=1)
Females	55 (60%)	38 (58%)	9 (13%)	1 (2%)
Males	36 (40%)	15 (24%)	2 (3%)	-

Table 1 – Gender and TMD severity

We found correlations between gender and frequent headaches ($p=0.004$), as well as being nervous ($p=0.004$). We also found that TMJ pain correlated with difficulties opening their mouth ($p=0.000$), mandibular movement ($p=0.000$), and TMJ sounds ($p=0.000$). Correlations were also found between age and teeth loss ($p=0.02$).

Discussion and Conclusions:

A significant prevalence of TMD symptoms was identified in University students with different levels of severity. The most common level of severity was classified as "mild". These results are in agreement with other studies (3,4). We also found some correlations concerning pain to movement disorders and sounds surrounding the TMJ which may predispose subjects to developed TMD. Further studies, using other tools, are advised to research these issues.