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The Relationship Between Temporomandibular Disorders, Tension-Type Headache And Somatization: Introducing A Grading System For Somatization.

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Abstract:
Introduction: *The association between temporomandibular disorders, headache and psychological factors including anxiety, depression and somatization has been recognized in many clinical and experimental studies.*
Aim: *Introduce a new grading system or classification of somatization in temporomandibular disorder patients presenting with Tension-Type Headache and discuss its clinical utility.*
Methods: *Clinical evaluation, pain history and description, palpation of muscles and joints, questionnaires, evaluation of sign and symptoms of temporomandibular disorders and an instrument for somatization were used to assess consecutive patients that were classified as "temporomandibular disorders with tension-type headache" or as "non TMDs and no tension-type headache". Data were stored in a database for future studies. In a second step, the first 149 patients with temporomandibular disorders and Tension-Type Headache were retrieved, their scores in somatization were examined and graded based on their response to a 32-questions of the Rief and Hiller instrument and were compared to a group of 41 controls subjects with neither Temporomandibular Disorders nor Tension-Type Headache. Criteria for temporomandibular disorders, Tension-Type Headache and 32 signs or symptoms of the Rief and Hiller questionnaire for somatization were used to evaluate both control and experimental patients. Controls and patients were considered as demonstrating no, mild, moderate, severe and very severe scores in somatization based on the presence of 0-2, 3-5. 6-11. 12-16 and 17 or higher positive responses in the somatization instrument, respectively. Basic statistics, Kruskal-Wallis with Dunn´s, Mann-Whitney and Fisher´s exact test were used to analyze data.*
Outcome: *Mean age in the experimental group was about 31,2 (SD=11,8, Range=11—66) as compared to 32,8 (SD=12,5, Range=17—59) in the control group. Age was not statistically and significantly different when both groups were compared (Unpaired t-test with Welch´s correction p=0,43). Mean in somatization was about 10,7 (SD=5,6, Range=1—24) in the experimental group as compared to 4,14 (SD=3,3, Range=0—16) in the control group: Unpaired t-test with Welch´s correction p<0,0001), an extremely significant statistically difference. The frequency of somatization in the TMDs and TTH subgroup was about 142/149=95,3% as compared to 25/41=61% in the control no TMDs no TTH group (Fisher´s exact test p<00001), an extremely statistically significant difference. Using the previously described method to grade somatization symptoms or signs, the frequencies of no, mild, moderate, severe and very severe somatization in the experimental and control groups are described as follows: 7/149=4,7%; 23/149= 15,4%; 57/149=38,3%; 38/149=25,5% and 24/149=16,1%, respectively (experimental group), and 16/41=39%; 14/41=34,1%; 10/41?24,4%; 1/41=2,4% and 0/41=0%, respectively in the control group. Taken together data indicate that subgroups of individuals with no and mild somatization (30/41=73,2%) predominated in the control subgroup as compared to (57/149=38,8% (moderate) and (38/149=25,5%) severe somatization in the TMDs and TTH group. Because 24/149=16,1% subjects in the TMDs and TTH group demonstrated somatization scores of 17 or higher, it can be stated that very severe somatization occurred with "some frequency" in the TMD and TTH subgroup.*
Conclusion: *Temporomandibular disorders and tension-type headache patients can be classified in those presenting with mild, moderate, severe and very severe levels of somatization. High frequencies of moderate, severe and very severe levels of somatization can be found in temporomandibular disorder patients and tension-type headache. The presence of severe and very severe somatization in the experimental subgroup indicates the need to complement treatment using psychological interventions. Further investigations are needed to compare data regarding groups with very severe scores in somatization.*

Keywords: *Temporomandibular Disorders. Tension – Type Headache. Somatization. Grading System.*

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I. Introduction

Temporomandibular Disorders or TMDs constitute collective terms used in the medical sciences to describe a set of signs and symptoms in the temporomandibular joints (TMJs), masticatory muscles and adjacent musculoskeletal structures characterized by pain, limitation of jaw movements and other signs and symptoms [1]. TMDs constitute a set of complexed disorders intermingled with some or many psychosocial impairment [2] as a result of anxiety, stress, depression or somatization. Tension-Type Headache (TTH) is a common headache disorder in TMDs patients described as bilateral, constant, aching, lasting hours or days, pressing or constricting, mild or moderate in intensity, reported in the anterior part of the head sometimes associated with nausea and rarely with vomiting [3]. Clinical and epidemiological investigations in clinical and nonclinical populations indicate that TTH is the most common headache type in TMDs patients [4]. Headache is one of the most common painful conditions occurring very frequently in the general population and is closely associated with TMDs. Both migraine (Mig) and TTH are observed frequently during the examination process of TMD patients [5].

Psychological factors are now recognized as influencing behavior and pain variables in the medical field both in clinical and experimental studies. Investigations relating TMDs with anxiety, depression, stress and somatization abound in the current medical literature. Somatization is a psychiatric disorder characterized by frequent and diffuse complaints in a diversity of anatomic sites in the body. Some researchers describe somatization as a mechanism of unconscious expression of psychological conflicts in the psychic apparatus and in the body in the form of signs or symptoms. It has been reported that chronic myofascial pain, pain and other functional disorders in the TMJs, are directly associated with physical disability, depression and somatization in patients with orofacial pain [6]

Because psychosocial disorders including anxiety, stress, depression and somatization are observed frequently in subgroups of TMDs patients with or without headache and such disturbances contribute with both greater chronicity and difficulties to respond satisfactorily to a diversity of treatment modalities, additional clinical and experimental research is necessary to evaluate both the frequency, intensity of somatization and its negative effects in the presentation of TMDs signs and symptoms. Consequently, this investigation was designed to:

1. Retrospectively evaluate the frequency of somatization in TMDs + TTH and in Control no TMDs no TTH subjects.
2.Introduce a grading system of severity of somatization in subgroups of TMDs and TTH patients.
3.Test the hypothesis that a subgroup with very high scores in somatization can be found in those presenting with signs and symptoms of TMDs and TTH.

II. Material And Methods

Sample: The clinical records of 149 patients presenting with signs and symptoms of TMDs, TTH and scores in somatization that had been examined and stored in a database for future retrospective studies were alphabetically retrieved and retrospectively examined regarding scores in somatization. During clinical patients examination the principles of the Helsinki declaration were followed rigorously: Patients were informed that there was no absolute risk for their health during clinical examination and use of proper questionnaires, that any physical or psychological discomfort warranted the discontinuity of the evaluation, that a comprehensive evaluation was necessary in order to gather reliable data and establish proper diagnosis before treatment planning, that the principal examiner was an experienced and scientifically qualified professional and that there were potential scientific and clinical benefits if his/her data were used for research purposes. Further, it was explained that anonymity was warranted for all patients. Patients signed a formal consent and were informed that their social, demographic and clinical data could be used for research objectives. Thus, a prospective study was conducted in 149 patients previously classified as presenting TMDs and TTH. Controls (n=41) were those patients that were consecutively evaluated in the same period of time but did not demonstrate neither clinical characteristics of TMDs nor signs and symptoms of TTH. Such patients also responded to a questionnaire assessing somatization.

Inclusion criteria for TMDs: Patients were assigned to a TMDs group if they presented at least three of the following characteristics or signs and symptoms: A complaint of pain in the masticatory system, joint noises, difficulties to perform normal jaw movements, tenderness to palpation of muscles and TMJs and headache of musculoskeletal origin. Further, pain as a complaint was usually described as dull, aching and constant usually associated with jaw and muscle function. Controls were those individuals without signs or symptoms of TMDs and TTH referred consecutively and examined over the same period of time and stored in a database. A

prerequisite in both experimental subjects during data retrieval was the presence of data about TMDs, TTH and somatization scores (experimental group), and no TMDs, no TTH but data on somatization in the control group.

Inclusion Criteria for TTH: Headache described as bilateral, constricting or pressure or band-like, lasting hours, mild or moderate in intensity more frequent than severe, nausea occurring occasionally, no vomiting, pain described in the temporal and frontal region, a report of tension and stiffness in the cervical region, presence of cervical trigger points in the cervical and shoulders region.

Inclusion criteria to grade somatization. Absence of somatization or somatization grade 0, mild, severe and very severe somatization scores were considered as such when patients in the TMDs and TTH and in the control group scored 0-2 (no somatization), 3-5 (mild somatization), 6-11 (moderate somatization), 12-16 (severe somatization) and 17 or higher (very severe somatization), respectively according to a list of 32 signs and symptoms obtained from instruments developed by Rief and Hiller [7,8].

The control group: This group was evaluated consecutively in the same period of time and demonstrated neither signs or symptoms of TMDs nor characteristics of TTH pain. Patients in this group were seeking treatment for a variety of clinical complains although they could not be included in a group of TMDs and TTH patients. Even though subjects in the control had no characteristics of TMDs or TTH, they sought consultation in the area of TMD and their complaints consisted of cervical, ear or shoulder pain.

Exclusion criteria: Patients in the experimental group were excluded in they did not demonstrate signs and symptoms of TMDs and TTH, presence of neurological disorders, for instance Parkinson disease, cognitive impairment, severe psychiatric disorders and intellectual difficulties to respond properly to verbal questions or to any questionnaire. Presence of TMDs, headache, cognitive, motor and or psychiatric disturbances precluded the inclusion of subjects in the control group.

Assessment of Somatization: Thirty-two items from the Rief and Hiller questionnaire [7] for somatization were used to evaluate this psychiatric disorder in both the experimental and the control group. Rief and Hiller [7.8] assert that many somatic symptoms adopted in some tests evaluating somatization do not exhibit the necessary psychometric characteristics and occur rarely. On the other hand, thirty-two somatic questions may show satisfactory psychometric properties including performance and correlations. Thus, 32 items selected from another test to quantify somatization and developed by the same researchers, may be sufficient and adequate to evaluate somatization in patients and controls. Both patients (n=149) and control subjects (n=41) reporting 0-2, 3-5, 6-11, 12-16 and 17 or higher were classified as demonstrating no, mild, moderate, severe and very severe levels of somatization. This grading system was used in the current study to classify controls and TMDs + TTH subjects.

III. Data Analysis

Basic statistics including means, standard deviation and range were used in the current investigation. Unpaired t-test with Welch correction was used to compared means in age and somatization in the experimental and control groups. Fisher´s exact test was used to compare frequencies of somatization in both groups. Significance was accepted if $p<0.05$.

IV. Outcome

Mean age in the TMDs and TTH subgroup was about 33,3 (SD=12,4, range=17-59) as compared to 31,2 (SD=11,9, range=11-66) in the control group. Mean age was not statistically and significantly different when both subgroups where compared (unpaired t test with Welch´s correction, $p>0,33$). There were 139/149=93,3% females in the TMDs and TTH subgroup and 26/41=63,41 females in the control one. Because it is well known that females predominate in subgroups of TMDs individuals, a statistical test to compare both groups, was deemed unnecessary. See Table 1 for additional details.

Mean in somatization in the TMDs and TTH subgroup (n=149) was about 10,7 (SD=5,6, range=1-24) as compared to 4,14 (SD=3,3, range=0-16) in the Control no TMDs no TTH subgroup. Because unpaired t-test with Welch´s correction $p<0,0001$, it can be stated that the difference was statistically and extremely significant. The frequency of somatization in the experimental group of TMDs and TTH subjects was about 142/149=95,3% as compared to 25/41=61% in the control group: Fisher´s exact test $p<0,0001$, a statistically extremely significant difference. Using the previous grading system for somatization, the method was used in a group of 149 TMD subjects retrieved consecutively from a database in whom the main requirements for selecting subjects consecutively was the presence of information about TMDs, TTH and scores in somatization. The requirement in the control group was the absence of signs and symptoms of TMD and TTH. Using this protocol the frequencies

of no, mild, moderate, severe and very severe somatization in the experimental and control groups are described as follows. Experimental group: 07/149=4,7%; 23/149=15,4%; 57/149=38,3%; 38/149=25,5,% and 24/149=16,1%, respectively. Control group: 16/41=39%, 14/41=34,1%, 10=24,4%, 1/41=2,4% and 0/41=0%, respectively. As a whole, subgroups of individuals with no and mild somatization (30/41=73,2%) predominated in the control group as compared to moderate (57/149=38,8%) and severe somatization (38/149=25,5%) observed in the TMDs and TTH group. Because 24/149=16,1% patients in the experimental group with TMDs and TTH demonstrated somatization scores of 17 or higher, it can be stated that very severe somatization occurred with "some frequency" in the TMD and TTH subgroup. See Table 2 for further details.

V. Discussion

Somatization in TMDs patients with TTH and in controls without TMDs and no TTH: One objective of the current investigation was to investigate and compare somatization scores in TMDs subjects with TTH signs and symptoms and in a group of control subjects without. Because in the current investigation higher scores in somatization were reported in the TMDs and TTH subgroup as compared to the Control one, such findings are congruent with a similar investigation[9] reporting that "affective disorders, physical and psychological stressors correlate with chronic TMDs and tension–type headache". Further, the frequency of primary headaches, for instance, migraine and TTH is high in patients presenting with psychiatric disorders[10].

Most patients in the TMDs and TTH subgroup demonstrated signs and symptoms of diurnal, nocturnal or mixed bruxing behavior. In actuality and during the clinical procedure to diagnose signs and symptoms of TMDs and types of bruxing behavior and headache, most patients reported different severities and types of bruxing behavior combined with pain in multiple sites indicating somatization. Thus, such considerations are in line with one investigation[11] indicating that there is a frequent association between signs and symptoms of TMDs, headache, bruxism and somatization. Further, multiple pain complaints and signs and symptoms of bruxing behavior indicate somatization. In the current study, we found that higher scores in somatization were more likely to be reported in TMDs and TTH patients as compared to Control subjects. Consequently, such observations are in agreement with a similar investigation [12] in TMDs subjects demonstrating signs and symptoms of TTH, migraine or headache attributed to TMDs occurring concomitantly. Investigators reported that "in patients with headache attributed to TMDs, somatization came out as the strongest variable in the multiple regression analysis". Further, anxiety, depression and somatization contributed to greater pain intensity and predominated in such group of patients [12].

Even though a major goal in this investigation was not to assess prevalence of somatization in dysfunctional patients and control ones, it seems reasonable to state that high scores in somatization were observed in many TTH and TMDs patients in whom different types of bruxing behavior predominated. Such scores are undoubtedly related to the fact that musculoskeletal disorders including, bruxing behavior and TMDs are considered by many as disorders significantly influenced by psychological factors including somatization. Further, signs and symptoms of TTH are observed frequently in individuals with muscle disorders in the head, neck and cervical structures. These observations are substantiated by other investigations asserting that "TMDs and headaches are associated with bruxism and psychological variables including stress, depression and somatic symptoms" [12]. Thus, there is a correlation between somatic symptoms and headaches such as migraine and TTH and between somatic symptoms and painful TMDs. Because somatization is strongly correlated with anxiety and depression, such psychiatric disorders may also influence the development of headache, bruxing behavior and musculoskeletal symptoms in general. Diurnal and nocturnal bruxing behavior occurs more frequently in subjects presenting with signs and symptoms of TTH than in subjects without [13]. The frequency of moderate to severe somatization is very high in individuals presenting with signs and symptoms of chronic temporomandibular disorders. The outcome in the current investigation is also in line with one research[14] in which even though researchers did not report data about frequency and types of headaches, they found a frequency of 55% of moderate to severe somatization in TMDs patients. Most common headaches, for instance, TTH, migraine and combination headache may also be caused by internal derangements of the TMJs and by the development of peripheral trigger points. Inflammation and persistent trigger points cause headache associated with central sensitization as a result of chronic bombardment of the brain by excessive discharge of nociceptive signals. This point of view is in line with a new concept of headache induced by pain and inflammation in TMJs[15]

Subgroups of TMDs and TTH subjects demonstrating mild, moderate, severe and even very high scores in somatization were observed in the current investigation.

Subjects in the control subgroup reported no or mild scores in somatization. On the other hand, patients in the TMDs and TTH subgroup (n=149), a combination of mild (24/149=16,1%); moderate 57/149=38,8%; severe, 38/149=25,5% and even very severe scores, 24/149=16,1% predominated. Consequently, moderate, severe and very severe scores in somatization were reported more frequently than mild ones in TMDs and TTH patients. Thus, regarding the TMDs and TTH subgroup of 149 patients, the outcome of the current study is in

line with some investigations in this field: Rief and Hiller[7,8] discerned on different severities of psychosomatic symptoms, higher somatization scores in female patients with TMDs; patients subgroups with headache, TMDs, bruxing behavior and somatization, have been detected in some investigations[11,] Further, headache and minimal, low, moderate and severe somatization scores and different intensities of somatization, depression and pain impairment have been reported in subjects with chronic TMDs[17]. The outcome in the current investigation regarding different subgroups with different levels of somatization is also supported by one investigation[17] in which even though researchers did not report the frequency of TTH, they found moderate to severe levels of depression and somatization in 44% and 74,1% of TMD patients. The frequency of psychiatric comorbidity is higher in TTH individuals as compared to those with signs and symptoms of migraine and chronic TTH, but without pericranial muscle disorder [18].

A subgroup of TMDs and TTH patients with very high scores in somatization was identified in the current investigation.

Because in the current study we identified subgroups of TMDs and TTH patients reporting moderate, severe and very severe levels of somatization, such observation is congruent with a recent investigation[9] reporting that high levels of somatization are associated with both chronic pain in subjects presenting signs and symptoms of TMDs and TTH. In addition, using the SCL-90 scale to detect non specifical physical symptoms Canales and associates[17] detected a high prevalence of severe or moderate somatization levels. Twenty-four patients in the subgroup of 149 individuals with TMDs and TTH in the current investigation reported very high scores in somatization. Consequently, this outcome is endorsed by one investigation[7,8] discerning about one of group of 34 individuals presenting with elevated scores for somatization. Because there is a proven correlation between somatization, headache, bruxism and TMDs[9], it is very likely that intense and chronic somatization have a major role increasing pain intensity and frequency of TMDs and TTH patients. Such somatization type may also operate through different neurophysiological, psychological and/ or biochemical mechanism, for instance, decreasing the pain threshold, increasing the central representation area for peripheral pain, decreasing endorphin secretion, increasing muscle tension and even facilitating the development of multiple trigger points. Studies are clearly needed in these interrelated areas. In the current investigation, we report two subgroups of TMDs and TTH presenting with severe and very severe scores in somatization. Thus, such findings are congruent with one investigation [9] in patients presenting with signs and symptoms of TMDs and chronic TTH reporting a frequency of 61,9% of severe somatization. A recent investigation [9] reinforces the idea that high levels of depression and somatization associated to more intense pain and disability correlate with both TMDs and TTH. It may be that certain pain disorders and behaviors, for instance, chronic headache and bruxism are strongly correlated and even maintained or reinforced by a major psychiatric disorder. This assumption is echoed by one investigation[11] reporting that signs and symptoms of TMDs and headache usually occur in combination with somatic complains and bruxing behavior.

Clinical Implications

Combination of various pain disorders: The review of the literature suggests that there is usually an association between chronic TMDs, headache, bruxing behavior and high scores in somatization, anxiety and depression. A combination of such disorders occurs with some frequency particularly in chronic cases. Thus, a careful evaluation of all variables that contribute to the maintenance of pain is mandatory. Such a procedure encourages careful treatment planning and optimization of treatment methods selected in each particular case. A treatment planning that takes into consideration some clinical variables including many psychological and clinical disorders, greater chronicity of pain, anxiety, depression and somatization, the possibility of longer treatment duration, patient collaboration during treatment and use of different methods aiming at managing different mechanisms that produce more longer and severer pain, are more likely to produce better treatment effects when compared to the use of limited treatment methods which do not take into account the many variables that contribute to severer pain and chronicity. If the clinicians consider the importance of a combination of disorders and higher somatic scores according to the current grading system discussed in the current study when applied to a particular clinical case, he or she is more likely to obtain better clinical results in the treatment process. During treatment planning, the clinician or specialist should assume that it is very likely that his or her patients present various combinations of somatization and headache[5], chronic pain, depression, somatization[6], TMDs, headache[13] and anxiety[16.]

VI. Conclusions

Based on the outcome of the current study supported by the use of appropriate statistical tests and the evaluation of related current literature, it seems reasonable to conclude that:

1.High frequency of moderate and severe somatization was observed more frequently in the TMDs and TTH subgroup as compared to mild somatization in the control subgroup.

2.The high frequency of moderate and severe somatization in the dysfunctional group with headache, indicate the use of psychological tests to evaluate somatization levels and also the use of a combination of therapy modalities including one to treat causes and effects of somatization.
3.A subgroup of patients with very high levels of somatization was identified in those demonstrating signs and symptoms of TMDs and TTH.
4.Because there are many different subgroups of individuals with signs and symptoms of TMDs, acute and chronic pain and many psychological profiles, further investigations are needed to compare and discuss the results observed in the current investigation. Further, a psychological approach may be indicated in those cases with high and very high scores in somatization.

References

[1]. Dimitroulos G. Temporomandibular Disorders: A Clinical Update. BMJ 1998; 317: 190-4.
[2]. Fantoni F, Salvetti G, Manfredini D, Bosco M. Current Concepts On The Functional Somatic Syndromes And Temporomandibular Disorders. Stomatologija 2007; 9: 3-9.
[3]. Molina OF, Peixoto MS, Santos ZC, Sobreiro MA, Fregonesi M, Torres SP, Hassumi MY. Tension – Type Headache Of Longer Duration Is Associated With Higher Frequency Of Nausea And Vomiting In Temporomandibular Disorder Individuals. IOSR Journals 2019; 18: 42-46.
[4]. Mommayezzi M, Fallahzadeh H, Mommayezzi M. Prevalence Of Migraine And Tension Type Headache In Yazd, In. Zahedan J Res Med 2015; 17: 966-72.
[5]. Di Paolo C, D´Urso A, Di Sabato F, Rosella D, Pompa G, Polimeni A. Temporomandibular Disorders And Headache: A Retrospective Analysis Of 1198 Patients. Pain Res Management 2017; 2017: 1-8.
[6]. Silva T, Albergo RS, Ilha RS, Dutra TFH, Tomazzoni F, Chami VO, Do Nascimento LP Et Al. Association Between Chronic Pain, Depression, Somatization And Temporomandibular Disorders In A Southern Brazilian Population. Acta Scintiarium Health Sciences 2023; 45: 1'7.
[7] Rief W, Hiller W. A New Approach To The Assessment Of The Treatment Effects Of Somatoform Disorders. Psychosomatics 2003; 44: 492-98.
[8] Rief W, Hiller W. A New Approach To The Assessment And Treatment Effects Of Somatoform Disorders. Psychosomatics 2003; 44: 492-98.
[9] Emshoff R, Bertram F, Schnabl D, Emshoff I. Association Between Chronic Tension -Type Headache Coexistent With Chronic Temporomandibular Disorder Pain And Limitations In Physical And Emotional Functioning: A Case-Controls Study. Journal Of Oral, Facial Pain And Headache. 2017; 31: 55-60.
[10] Gentili C, Panicucci P, Guazzelli M. Psychiatric Comorbidity And Chronification In Primary Headache. J Headache Pain 2005; 6: 338-40.
[11] Dibello V,Lozupone M, Sardone R, Ballini A, Lafornara D, Dibello A Et Al. Temporomandibulr Disorders As Contributors To Primary Headaches: A Systematic Review. J Oral Facial Pain And Headache 2023; 37: 91-100.
[12] Van Der Meer HA, Speksnijder CM, Engelbert RH, Lobbezoo F, Van Der Sanden MWG, Visscher CM. The Association Between Headaches And Temporomandibular Disorders Is Confounded By Bruxism And Somatic Symptoms. Clin J Pain 2017; 33; 835-843-
[13] Graff-Radford SB. Temporomandibular Disorders And Headache. Dental Clinics 2007; 51: 129'44.
[14] Yap AU, Kurniawan F, Pragustine Y, Marpaung C. Temporomandibular Disorder And Somatic Symptoms: Relations To "Fear Of Missing Out" And Other Emotional Negative States. Acta Odont Scand 2024; 83: 340-47.
[15] Tchivileva IA, Ohrbach R, Fillingim RB, Ling FC, Lim PF, Arbes SJ Et Al. Clinical, Psychological, And Sensory Characteristics Associated With Headache Attributed To Temporomandibular Disorders In People With Chronic Myogenous Temporomandibular Disorder And Primary Headaches. The Journal Of Headache And Pain 2021; 22: 1-11.
[16] Lajnert V, Franciskovic T, Grzic R, Pavicic D, Bakarcic D, Bukovic D Et Al. Depression, Somatization And Anxiety In Female Patients With Temporomandibular Disorders Or Tmds. Coll Antropol 2010; 34: 1415-19.
[17] Canales G, Guarda-Nardini L, Rizzatti-Barbosa C, Conti P, Manfredini D. Distribution Of Depression, Somatization And Pain–Related Impairment In Patients With Chronic Temporomandibular Disorders. JAOS 2019; 27: 1-6.
[18] Puca F, Guazzelli M, Sciruicchio V, Libro G, Sarchielli P, Alberti A Et Al. Psychiatric Disorders In Chronic Daily Headache: Detection By Means Of The SCID Interview. J Headache Pain 2000; 1: 33-37.

Table 1: Social and Demographic data in the group of TMDs and TTH subjects (n=149) and in the Control Comparison group (n=41).

Data	Experimental Group	Control
AGE		
Mean	31,2	32,8*
SD	11,8	12,4
Range	11—66	17—59
GENRE		
Females	139=93,3%	26=63,4
Males	10 = 6,7%	15=36,6%
Totals	149=100%	41=100%

*Unpaired t-test with Welch´s correction p=0,43, a statistically nonsignificant difference.

Table 2: Frequency of somatization in the experimental (n=149) and control group (n=41) and in those classified by the severity of somatization.

SOMATIZATION	TMDs + TTH group=149	No TMD No TTH=41
Frequency		
Yes	142/149=95,3%	25/41=61%**

No	7/149 =4,7%	16/41=39%
TOTALS	149 =100%	41 =100%
Mean	10,68	4,14 ***
SD	5,6	3,3
Range	1—24	0—16
No somatization	7/149=7,4%	16/41=34,1%****
Mild somatization	23/149=15,4%	14/41=34,1%
Moderate somatization	57/149=38,3%	10/41=24,4%
Severe somatization	38/149=25,5%	1/41 =2,4% *****
Very severe somatization	24/149=16,1%	0/41 =0%
TOTALS	149=100%	41=100%

**Fisher´s exact test p<0,0001, an extremely statistically significant difference.

***Unpaired t-test with Welch´s correction p<0,0001, an extremely statistically significance difference.

****Pooled mild and moderate somatization in the TMD and TTH group (n=80/149=53,7%) compared to the control group (24/41=58,5%), Fisher´s exact test p=0,60, a statistically nonsignificant difference.

*****Pooled severe and very severe somatization scores in the TMD and TTH group (62/149=41,6%) compared to severe and very severe somatization scores in the control group (1/41=2,4%), Fisher´s exact test p<0,0001, an extremely significant difference. Thus, there was no statistically significant difference in the frequency of mild and moderate somatization in the TMD + TTH group as compared to the control group. Notwithstanding this, there was an extremely significant difference in the comparison of severe and very severe somatization in the TMD and TTH group compared to the control one. Thus, the prevalence of somatization was higher and statistically significant in the TMD + TTH subgroup and severe and very severe somatization predominated in this group.