TMD and Chronic Fatigue Syndrome: Pain, Fatigue, & Autonomic Symptoms

Paula Niven,[1,2] Quoc C. Vuong, [3,4] Antonia Stergiou, [4,5] Justin Durham, [1,2] James R. Allison [1,2]

Introduction

Patients with temporomandibular disorders (TMD) usually present with pain in the muscles of mastication or temporomandibular joint, or with symptoms of jaw dysfunction, such as limited opening or locking. However, other symptoms, such as fatigue and symptoms relating to dysfunction of the autonomic nervous system (e.g., orthostatic intolerance, palpations, cognitive problems, anxiety, issues with gut motility, bladder function, vision, and temperature regulation) are not uncommon in patients with TMD.

In particular, the condition chronic fatigue syndrome (CFS; also known as myalgic encephalomyelitis), which constitutes debilitating fatigue, post-exertion malaise, sleep disturbance, and cognitive problems, appears to be more prevalent in people with TMD (0-10%) than the general population (0.2%). Autonomic symptoms and pain are also common in CFS, and TMD may be more common in this population (~30%) compared to the general population (~5%). The reasons for the apparent comorbidity between TMD and CFS are unclear, as is the contribution of the autonomic nervous system to both conditions.

This study aims to explore symptoms of pain, fatigue, and autonomic symptoms in TMD and CFS. Preliminary analyses of the data from the first 20 participants recruited are reported.

Methods

Participants with myalgia TMD (according to DC/TMD), CFS (according to NICE criteria), or neither condition (control) were recruited. All CFS participants were examined clinically, and the presence/absence of TMD was determined. Groups were: control (*n*=6); TMD (*n*=3); CFS-TMD (*n*=8); CFS+TMD (*n*=3).

Symptom questionnaires were completed for pain (graded chronic pain scale [GCPS]), fatigue (checklist individual strength [CIS]), and autonomic symptoms (composite autonomic symptom score 31 [COMPASS 31]). Descriptive statistics were used to explore the data.

Results

The first 20 participants recruited into the study are reported. Mean age was 38.7 years (SD=15.5) and 15/20 participants were female.

Characteristic pain intensity (mean [SD]) from the GCPS was lowest in controls (1.1 [2.7]), followed by CFS-TMD (10.7 [6.8]), then TMD (32.2 [35.3]), with the CFS+TMD group showing the highest scores (47.8 [28.7]). Subjective fatigue from the CIS was higher in TMD (30.7 [20.3]) than controls (22.8 [7.7]) but was highest in CFS-TMD (53.6 [7.98]) and similar in CFS+TMD (53.3 [9.0]). Autonomic symptoms from total COMPASS 31 score were similar in controls (16.1 [11.2]) and TMD (18.6 [15.8]), however scores were higher in the CFS-TMD group (26.0 [14.0]), and highest in the CFS+TMD group (32.5 [11.8]).

Self-reported pain, fatigue, and autonomic symptoms

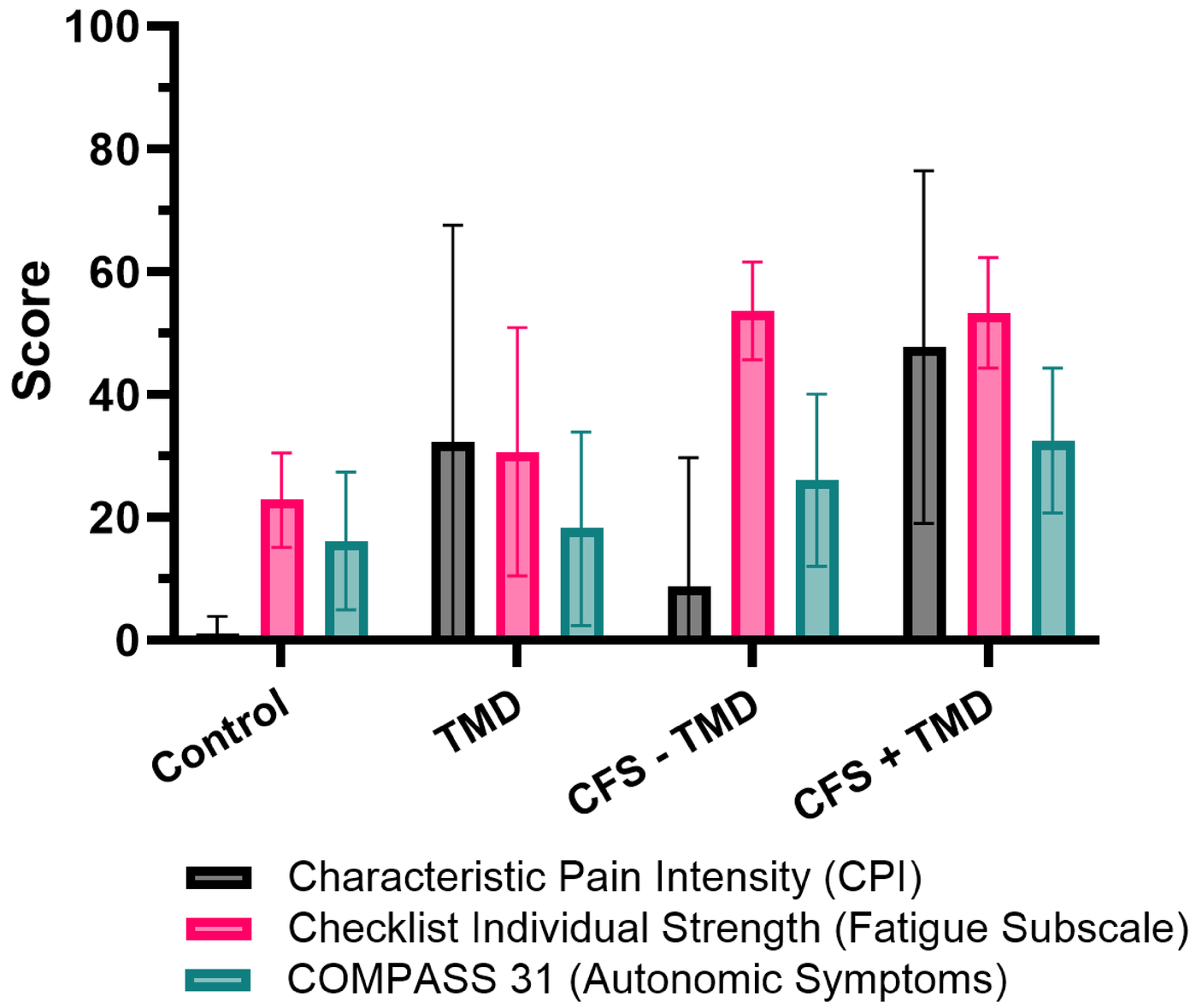

Figure 1. Participants' self-reported symptoms. Characteristic Pain Intensity (CPI) derived from the Graded Chronic Pain Scale (GCPS). Bars show mean score for that scale, error bars show standard deviation.

Conclusion

Participants with both CFS and TMD had higher pain severity scores than those with CFS or TMD alone. Autonomic symptom scores in TMD were similar to controls, however although TMD scores were similar to those reported previously, scores for healthy participants are lower in other studies (~8) suggesting more symptoms than expected in the present control group. Fatigue was greater in TMD than controls, but greatest in CFS, irrespective of the presence of TMD. This study demonstrates the burden of symptoms in TMD and the effect of comorbidity with CFS. More research is needed to understand the link between TMD and CFS, and the contribution of the autonomic nervous system, especially due to wide variability in this small incomplete sample.

Paula.niven@nhs.net

1: School of Dental Sciences, Faculty of Medical Sciences, Newcastle University, UK
2: Newcastle upon Tyne Hospitals NHS Foundation Trust, Newcastle upon Tyne, UK
3: School of Psychology, Faculty of Medical Sciences, Newcastle University, UK
4: Biosciences Institute, Faculty of Medical Sciences, Newcastle University, UK
5: Hertfordshire Partnership University NHS Foundation Trust, Essex, UK

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