

First evidence-based diagnostic criteria published for temporomandibular disorders

February 4 2014, by Bob Kuska

(Medical Xpress)—The first evidence-based diagnostic criteria have been developed to help health professionals better diagnose temporomandibular disorders (TMD), commonly known as TMJ, a group of often-painful jaw conditions that affect an estimated 10 to 15 percent of Americans. The diagnostic criteria, developed by researchers in North America, Europe and Australia, are professional recommendations on how best to detect a disease or condition.

The new criteria, supported in part by the National Institutes of Health, comprise an improved screening tool to help researchers and [health professionals](#) including dentists more readily differentiate the most common forms of TMD and reach accurate diagnoses that are grounded in supportive scientific evidence. Historically, diagnostic criteria for TMD have been based on a consensus of expert opinion and often reflect a shared clinical perspective. None have been rigorously tested by scientists.

"We've had diagnostic criteria for years," said Eric Schiffman, D.D.S., a co-lead author on the article, who studies TMD at the University of Minnesota School of Dentistry, Minneapolis. "What is unique here is instead of a panel of experts empirically deciding best practices, we relied on science as a methodology to test our best assumptions and see if we were actually correct."

Called DC/TMD, the latest criteria are published today in the winter issue of the *Journal of Oral and Facial Pain and Headache*. They are

available online at the International RDC/TMD Consortium Network website: [www.rdc-tmdinternational.org/T ... Diagnosis/DCTMD.aspx](http://www.rdc-tmdinternational.org/T...Diagnosis/DCTMD.aspx)

Although TMD is commonly considered a jaw problem, researchers have determined that most people with chronic temporomandibular problems also contend with other ailments. In 1992, the Research Diagnostic Criteria for TMD (RDC/TMD) reflected this awareness. They were the first to integrate biological, psychological, and social factors into two distinct protocols, or axes. Axis I was designed to evaluate the physical diagnoses, while Axis II characterized the nature of a person's pain, distress, and disability. The criteria were translated into 18 languages and become the most widely used diagnostic system among TMD researchers.

But the RDC/TMD dual axes represented a first step with biopsychosocial diagnostic criteria. In the early 2000s, the NIH's National Institute of Dental and Craniofacial Research (NIDCR) assembled a group of experts to lead the first comprehensive assessment of the criteria. The group found Axis I in particular to be less valid than previously thought, leading to a mandate from the TMD clinical and research communities to create the diagnostic equivalent of RDC/TMD 2.0.

All agreed at the outset that the "R" was no longer needed. Research criteria, while useful for scientists in the laboratory and clinic, can leave researchers and health care providers using different diagnostic terms, measures, and tools.

"A common language allows clinicians to communicate more easily to researchers about their daily diagnostic challenges," said Richard Ohrbach, D.D.S., Ph.D., a co-lead author on the publication who studies TMD at the University at Buffalo School of Dental Medicine in New York. "Conversely, a common language allows research findings to be

more easily integrated into a clinical setting and improve patient care."

The DC/TMD start with a refined version of Axis I, the physical assessment. It begins with an easily administered patient questionnaire that is specially designed to detect pain-related TMD. If TMD is detected, the protocol moves on to newly crafted diagnostic criteria to help practitioners differentiate among the common subtypes. In field tests, the [diagnostic criteria](#) for painful TMD were found to have at least 86 percent sensitivity and 97 percent specificity. Sensitivity refers to how well a test identifies a person with a given ailment, while specificity characterizes the ability to identify correctly those who are not affected.

Axis II, the psychosocial assessment, screens patients to assess pain location, pain intensity, pain-related disability, psychological distress, degree of jaw dysfunction, and presence of oral habits (i.e., e.g. grinding teeth) that may contribute to the dysfunction. If more information is needed, a more comprehensive follow-up questionnaire is available to tap into additional anxiety measures and the possible presence of other pain-causing physical ailments. Both instruments have been scientifically validated.

"By diagnosing the person, beyond only the physical condition, a whole avenue of treatment options opens up," said Schiffman. "Instead of prescribing mouth guards, exercises, or surgery, practitioners can consider trying bio-behavioral treatments including relaxation techniques and biofeedback to help the patient successfully manage their TMD. In short, you can better customize the treatment to fit the whole person, not just their disorder."

Provided by National Institutes of Health

Citation: First evidence-based diagnostic criteria published for temporomandibular disorders

(2014, February 4) retrieved 9 April 2024 from
<https://medicalxpress.com/news/2014-02-evidence-based-diagnostic-criteria-published-temporomandibular.html>

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