Original Contributions

Benefits of implementing pain-related disability and psychological assessment in dental practice for patients with temporomandibular pain and other oral health conditions

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ABSTRACT

Background. Evidence in the field of dentistry has demonstrated the importance of pain-related disability and psychological assessment in the development of chronic symptoms. The Diagnostic Criteria for Temporomandibular Disorders offer a brief assessment for the diagnostic process in patients with orofacial pain (Axis II). The authors describe relevant outcomes that may guide general oral health care practitioners toward tailored treatment decisions and improved treatment outcomes and provide recommendations for the primary care setting.

Methods. The authors conducted a review of the literature to provide an overview of knowledge about Axis II assessment relevant for the general oral health care practitioner.

Results. The authors propose 3 domains of the Axis II assessment to be used in general oral health care: pain location (pain drawing), pain intensity and related disability (Graded Chronic Pain Scale [GCPS]), and psychological distress (Patient Health Questionnaire-4 [PHQ-4]). In the case of localized pain, low GCPS scores (0-II), and low PHQ-4 scores (0-5), patients preferably receive treatment in primary care. In the case of widespread pain, high GCPS scores (III-IV), and high PHQ-4 scores (6-12), the authors recommend referral to a multidisciplinary team, especially for patients with temporomandibular disorder (TMD) pain.

Conclusions. The authors recommend psychological assessment at first intake of a new adult patient or for patients with persistent TMD pain. The authors recommend the pain-related disability screening tools for all TMD pain symptoms and for dental pain symptoms that persist beyond the normal healing period.

Practical Implications. A brief psychological and pain-related disability assessment for patients in primary care may help the general oral health care practitioner make tailored treatment decisions.

Key Words. Orofacial pain; primary health care; general practice.

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In their daily activities, health care providers encounter patients with chronic conditions and patients who respond poorly to treatment. To improve treatment outcomes, health care providers should recognize factors that are known to interfere with healing and treatment adherence, and they should account for these factors in their treatment plans. Clinicians widely accept the biopsychosocial model as the most heuristic approach to understand and manage chronic pain. In the biopsychosocial model, pain and disability are part of a complex and dynamic interaction among physiological, psychological, and social factors, and it has replaced the outdated biomedical model.[1] In contrast to the biomedical approach, in which clinicians assume symptoms occur because

of physical damage that needs repair, the biopsychosocial model recognizes how psychological and social factors interact with health problems. Health care providers, therefore, need to take the patients' cognitive, emotional, and behavioral profiles into account in patient care.[1] Specific patient characteristics may influence how a patient reacts to and deals with a pain problem, which in turn may result in helpful or adverse coping strategies.

Also in the field of dentistry, and especially in the management of chronic pain, the biopsychosocial model now is embedded strongly in the up-to-date clinical approach. Within the field of orofacial pain, in 1992, Dworkin and LeResche[2] introduced the Research Diagnostic Criteria for Temporomandibular Disorders (RDC/TMD). This classification system offered a unique opportunity to gather information on 2 axes: the physical symptoms from the masticatory system (Axis I) and associated psychological distress and pain-related disability (Axis II).[2] Since then, evidence demonstrating the importance of psychological assessment and disability within the field of dentistry has been growing. For example, patients with pain related to a temporomandibular disorder (TMD) show higher levels of stress, anxiety, depression, somatic awareness, pain catastrophizing, and kinesiophobia than do controls.[3-6] In addition, depression, mood, and perceived stress predict a 2-fold to 3-fold increase in risk of experiencing first-onset TMD-related pain,[7] and investigators in other studies demonstrated that psychological comorbidities contribute to the persistence of TMD pain.[8-11] Psychological factors now are considered at least as important for treatment outcome as are pain intensity and physical diagnoses.[12-14] Although most evidence within the field of dentistry originates from patients with orofacial pain, a better understanding of the factors relevant in the development of chronic symptoms also may guide general oral health care practitioners toward tailored treatment decisions in patients with other types of dental pain and may help improve treatment outcomes.[15,16]

The revised RDC/TMD has been published as the Diagnostic Criteria for Temporomandibular Disorders (DC/TMD), including updated and new validated tools for both the physical diagnosis (Axis I) and the psychological and disability assessment (Axis II).[17] The new DC/TMD is evidence based and promotes the use of the dual-axis classification system by primary care providers in general dental practice. The Axis II assessment offers 2 options: a brief assessment with a minimal number of short screening instruments for the most important variables that may influence the development or perpetuation of symptoms or an expanded assessment involving a more comprehensive set of instruments, some specific to orofacial pain.[4,17,18] The brief assessment is considered useful for all persistent orofacial pain conditions, and, within the field of TMD, is proposed as being mandatory in cases of pain lasting for more than 6 months or in the event of prior treatment with poor outcome.[17]

In June 2016, at the International Association for Dental Research meeting held in Seoul, Republic of Korea (http://www.iadr.org/IADR/Meetings/Past-Meetings/Meeting-Page-Archives/IADR-APR-General-Session-Exhibition/2016-Seoul), the International RDC/TMD Consortium Network (renamed *International Network for Orofacial Pain and Related Disorders Methodology* as of May 27, 2017, http://www.iadr.org/INfORM) hosted a 1-day invitational workshop titled, "Optimizing the Clinical and Research Utility of DC/TMD Axis II," attended by 18 participants and 2 chairpeople. The attendees were placed into 1 of 3 work groups. The goal for 1 work group—and the topic of this article—was optimizing the usefulness of Axis II in clinical assessment and decision making in general dental practice. The goals for the other 2 work groups, broadly, were to review the use of psychological and psychosocial assessment in dental education and to develop recommendations for future Axis II research in relation to health care settings and to clinical decision making; we will report the outcomes of those discussions separately. Therefore, in this article, we provide an overview of the knowledge regarding DC/TMD Axis II assessment relevant for the general oral health care practitioner and recommendations for its use in the primary care setting.

ABBREVIATION KEY

CPI: Characteristic pain intensity.
DC/TMD: Diagnostic Criteria for Temporomandibular Disorders.
GCPS: Graded Chronic Pain Scale.
JFLS-8: Jaw Functional Limitation Scale, short form.
NA: Not applicable.
OBC: Oral Behaviors Checklist.
PHQ-4: Patient Health Questionnaire-4.
RDC/TMD: Research Diagnostic Criteria for Temporomandibular Disorders.
TMD: Temporomandibular disorder.

DIAGNOSTIC CRITERIA FOR TEMPOROMANDIBULAR DISORDERS AXIS II SCREENING INSTRUMENTS

The Axis II screening instruments of the DC/TMD cover 5 domains: pain location (pain drawing), pain intensity and related disability (Graded Chronic Pain Scale [GCPS]), psychological distress (Patient Health Questionnaire-4 [PHQ-4]), jaw parafunctional activities (Oral Behaviors Checklist [OBC]), and jaw functional limitations (Jaw Functional Limitation Scale [JFLS-8] short form).[4,8,17] Each domain contributes to the construct of Axis II in a complementary manner, with the OBC and the JFLS-8 as disease-specific physical functioning scales for patients with TMD. Because the aim of