

## Biopsychosocial Pain Model and TMD Diagnosis

Respected sir,

This letter is in reference to the editorial<sup>1</sup> in the *Journal of Orofacial Pain*, vol 25, issue 4. I felt the issue addressed was appropriate and timely. I have a few suggestions on this topic:

1. The Research Diagnostic Criteria for Temporomandibular Disorders (TMD) are very exhaustive in nature and its clinical application is time consuming. It is an ideal diagnostic tool where the approach is organized and institutionalized.
2. Any disease pattern involving a psychological component is bound to have regional and cultural variation. Does the RDC/TMD scale consider this variation? For eg, a 35-year-old working mother will have different psychosocial problems in the United States compared with India or Africa, owing to a diametrically variant social system.
3. Can this *Journal*, with its access to the best researchers and academics in the field, come up with a more condensed set of guidelines useful for initial screening? A lengthy diagnostic protocol dissuades a clinician from using it and we must remember that more than 90% of the population is first seen by a general practitioner.
4. It has often been noticed that whenever a comprehensive review of past studies on TMD is done, more than half of the studies have to be excluded from the review as they are encumbered with design or execution flaws. This is a serious drain on time, manpower, and money. Hence, although we have hundreds of studies undertaken each year, very few results are valid and acceptable. Can there be universal standardized guidelines for study design, execution, and reporting?
5. There are very few studies worth mentioning from the Indian subcontinent. It is of clinical interest as India has a unique multicultural, multi-linguistic social pattern. This pattern is currently undergoing rapid changes due to the increasing number of young and educated working class striving for higher economic status. A break from the traditional joint family, male-dominant social system is becoming evident, heralding an increase in psychosocial stress and, thereby, increasing the number of TMD patients.

With respect to the editorial, the psychological, behavioral, and cognitive characteristics cannot be

addressed unless the vast biopsychosocial variations are accepted and understood, leading to application failure of the RDC/TMD scale. This problem can be corrected only by better interspeciality interaction between the community of scientists, clinicians, and social workers. It is not lack of knowledge but of integrating the available information on a common platform.

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### Reference

1. Palla S. Biopsychosocial pain model crippled? *J Orofac Pain* 2011;25:289–290.

### Response

I very much appreciated Dr Bhat's comments on my editorial "Biopsychosocial pain model crippled?"<sup>1</sup> in which she raises important issues regarding the diagnosis of temporomandibular disorders (TMD) patients, in particular their psychological, behavioral, and cognitive characteristics. Unfortunately, she ends her commentary with a negative statement, ie, that these characteristics cannot be addressed unless the cultural-related biopsychosocial variations are accepted and understood.

It is correct that our culture, along with gender, family structure, social organization, and religion, define our relationship to the world and that perceptions, emotions, belief systems, and behaviors are all defined by the culture we live in. Accordingly, all these factors also explain how patients deal with pain. How patients perceive and react to pain is, therefore, culture-bound, the result of family and past experiences, and the personal meaning of the pain experience. On the other hand, it is also well recognized that today pain cannot be considered simply within a biomedical model but must take into account how the patient reacts to it on

the psychological and social level, eg, the mental, emotional, and behavioral aspects of pain and how he or she interacts with other people. Consequently, the psychological, behavioral, and cognitive characteristics of a pain patient must be addressed not only for research purposes but also in clinical practice, independently of cultural, ethnic, or racial differences. Of course, the psychosocial assessment must be adapted to these different realities.

The Research Diagnostic Criteria for TMD (RDC/TMD) have been translated in a number of languages, the translations validated, and the psychosocial assessment, ie, the diagnosis of the degree of depression, unspecific symptoms, and pain-related disability (the Axis II) evaluated in TMD patients in different cultures. While a study pointed out that the interpretation of the psychosocial status collected with the Axis II questionnaire must be interpreted with caution because the values used to define the cutoff values for some of the psychological variables were derived from a large group of United States citizens,<sup>2</sup> it is remarkable that, for instance, the level of pain-related psychosocial disabling, as measured by the Graded Chronic Pain Scale (GCPS),<sup>3</sup> was fairly similar in Asian patients compared with US and European patient groups. The prevalence of patients with high impairment (GCPS III and IV), ie, of those patients who are difficult to manage, varied between 13% and 20%, except for one study with a lower prevalence of 4%.<sup>2,4-7</sup> The Axis II depression and GCPS instruments have clinically relevant and acceptable psychometric properties; they are also useful as instruments for identifying TMD patients with high levels of distress, pain, and disability that can interfere with treatment response.<sup>8</sup>

My editorial addressed the observation that, although the RDC/TMD proposed to use a dual axis classification for TMD patients in which the physical diagnosis was integrated within a psychosocial diagnosis, only a few studies defined their samples according to this principle. This is very surprising, especially considering that since the original RDC/TMD publication, a large body of literature on pain in general and specifically on TMD pain proved that a series of psychosocial factors, such as anxiety, depressed mood, distress, fear-avoidance beliefs, catastrophic thoughts, passive coping strategies, social isolation, and several aspects related to pain beliefs, have been recognized as risk factors for the development of chronic pain in patients with musculoskeletal disorders, to which TMD belong.<sup>9-14</sup> In addition, psychosocial factors are at least as important for the treatment outcome as the initial pain intensity and its pathophysiology.<sup>15,16</sup> Therefore, in order to study the efficacy of a treatment modality it is important

to obtain both the physical and the psychosocial diagnosis. The observation that the psychosocial aspect of pain is rarely assessed likely reflects the fact that, unfortunately, the biopsychosocial pain model is more accepted at a theoretical than clinical level. This suggests an insufficient education of the dental community in psychological and psychiatric pathophysiology.

Dr Bhat argues that the RDC/TMD are exhaustive but time consuming. While this is correct, it is necessary to remember that the RDC/TMD protocol, as it is implicit in its name, was originally developed as a research tool and was intended to facilitate comparisons across clinical and epidemiological studies by defining as precisely as possible the types of patients included in the studies. In other words, originally it was not designed for clinical practice. It is only with the second edition that the International RDC/TMD Consortium decided that the new set of criteria should be used also in clinical practice (<http://www.rdc-tmdinternational.org/>). Nevertheless, as poor and inadequate cognitive, emotional, and affective pain responses negatively influence treatment outcome, they must be addressed not only in investigations that analyze the treatment efficacy but also in the clinical setting, including the first visit by a general practitioner. Indeed, it is his or her duty to diagnose whether a TMD patient can be managed only biomedically or needs a more complex, interdisciplinary approach in order to address the pain-related cognitive, emotional, and behavioral components that generally dominate the chronic pain patient's condition. Lack of this understanding is often the cause of countless treatment failures as well as of the development of chronic pain.

Dr Bhat is absolutely correct and raises an important issue when she underlines that studies encumbered with design or execution flaws represent "a serious drain on time, manpower, and money." In addition, these studies are not improving our knowledge but, often, simply increase the confusion on a given subject. In a time in which the Universities have worldwide difficulties in finding financial support, the time has come to revise the "publish or perish policy" and for scientific journals to become much more strict in the review process. Studies with methodological limitations should be refused and should not have the possibility to be resubmitted to journals with a lower scientific standard. Indeed, it is well known that, in general, the medical and dental community prefers reading manuscripts with a lower scientific rigor because they are normally easier to read. As a consequence, studies with poor scientific quality gain access to the medical/dental community and influence, in a not evidence-based

manner, the clinical practice. The area of TMD is an example of this absurd and insane policy.

Finally, Dr Bhat raises the argument that this *Journal* should come up with a set of guidelines to be applied for initial screening, as a lengthy diagnostic protocol dissuades a clinician from using it. While this may be correct, the length of a diagnostic process cannot be the primary parameter in order to decide whether a protocol should be used. This must primarily depend upon its ability to correctly diagnose a disease/disorder. Only in cases of several valid diagnostic protocols does their length become an endorsable parameter in the selection of the diagnostic procedure. The International RDC-TMD Consortium and not this *Journal* is the best body to come up with a set of guidelines for initial screening. This consortium that comprises experts from different parts of the world aims to advance the scientific knowledge of TMD and related pain conditions through authenticated tools for international use, multisite and crosscultural research studies based on standardized assessment (<http://www.rdc-tmdinternational.org/>). It is, therefore, also the best body to develop a screening instrument because it comprises members of different specialties as well as clinicians and scientists. Therefore, it offers the interdisciplinary collaboration required for the development of a screening as well as a comprehensive protocol to diagnose patients with TMD and/or orofacial pain.

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