Improvement and care seeking for temporomandibular-pain complaints: The complexity of chronic pain

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Chapter 1

Introduction
Musculoskeletal disorders are characterized by pain or soreness in the muscles and/or joints, and functional problems. Most common musculoskeletal disorders are low back and neck pain. Less common is when pain and functional problems arise from the temporomandibular joint and/or the masticatory muscles “Temporomandibular Disorders” (TMD). TMD pain is usually mild, fluctuates over time, and aggravates during oral functions (like eating, yawning) (1, 2). The prevalence of TMD pain in adult populations is around 5-10% (3-5). It is estimated that about half of the people suffering from TMD-pain attend a health-care practitioner (6). Within The Netherlands, primary care for TMD-patients is mainly provided by specialized dentists and physiotherapists. In secondary care, TMD care is often provided by a multidisciplinary team (specialized dentists, physiotherapists and psychologists) in specialized TMD-clinics or by oral surgeons.

Nowadays, the common assumption is that pain and its resulting disability are not only influenced by somatic pathology, but by psychological and social factors as well (7). The biopsychosocial model is a commonly accepted model that illustrates the interaction between the biological origin of pain and the psychological, and social influences on this pain (8). Although most episodes of musculoskeletal pain, including TMD pain, resolve within a couple of weeks (acute pain) (9, 10), some patients have symptoms which persist for years (chronic pain) (11, 12). In chronic patients, the pain complaints last (far) beyond the normal healing time of the original tissue damage. In this subgroup of pain patients, the complaints usually become more complex, which is illustrated by the poor treatment outcome in this group. In search for pain relief, these patients may attend various health-care practitioners or receive long-lasting treatments. Subsequently, the healthcare costs for musculoskeletal pain patients are substantial (13, 14). It is assumed that especially in these chronic pain complaints psychological, and social factors play an important role (8). This is illustrated by the high level of stress, depression, somatization, anxiety and passive coping strategies that are often found in chronic pain patients (15). Better insight in how these biopsychosocial factors interact in TMD-pain patients may help to improve current treatment strategies for those with long lasting pain complaints.

To get a better understanding of the way biopsychosocial factors play a role in TMD-pain patients, in this thesis two different approaches were chosen. The first approach was to compare those who attend a health care provider for their TMD-pain complaints (care seekers) with those who do not (non-care seekers). Like for other pain conditions, most knowledge on (chronic) TMD pain is obtained in a clinical setting and therefore automatically derived from care seekers. As mentioned before, there is a considerable number of people with TMD-pain complaints who do not consult a health care practitioner (16). In other words, current knowledge on the complexity of chronic pain is largely based on a one-sided perspective (based on care seekers). The patient characteristics of non-care seekers might be well different from those who do seek care. For example, non-care seekers may have found a way to cope with the pain in such a way that they do not feel the urge to seek care. These strategies may be helpful in improving therapy for care seekers. Therefore in this thesis, differences in characteristics
between those who do not seek care for musculoskeletal pain and those who do are examined. The second approach was to compare patients who show improvement after a treatment period, to those who do not. In literature often a vicious cycle of chronic pain and a variety of biopsychosocial symptoms is described. It is suggested that as a result of pain, people avoid physical activities, reduce social activities and experience all kind of psychological symptoms like depression, somatization and anxiety, resulting in long periods of pain (17). However, follow up studies to support this assumption are scarce. Interestingly, even after a long period of pain complaints, there are still some patients who show improvement. Possibly, insight in characteristics of these people as compared to the characteristics of those in which pain complaints last could improve treatment strategies. Patients hold important factors for improvement. Therefore, the influence of biopsychosocial factors on the long-term course of TMD-pain was investigated by comparing patients who show improvement to those who do not show improvement.

To study which biopsychosocial factors are involved in care seeking behavior and in improvement of chronic pain, a questionnaire was developed that covers a wide range of potential factors. For this purpose, a variety of validated measures were available. However, for two constructs that could be of value in this line of research, measures were not suitable to use in TMD-pain. First: In low back pain, an instrument is regularly used to measure outcomes that are tailored to the individual patient, the so-called “patient specific approach” (PSA) (18). In this approach, a patient’s main complaint related to pain is measured and followed over-time. As compared to generic measurements, the PSA is better capable to measure improvement in only those complaint that are relevant to the individual patient (18). This approach may not only be a promising tool in low back pain, but also in TMD pain. Therefore, it was modified in such a manner, that it can be used as a measurement in evaluating improvement in TMD-patients (Chapter 2). Second, the social support that someone perceives while suffering from pain, could be of influence in care seeking, as well as in improvement of pain. However, an instrument that specifically measures social support when someone suffers from pain was not available. Therefore, the social support and pain questionnaire (SPQ) was developed to be measured in subjects with TMD-pain complaints as well as in other chronic pain conditions (Chapter 3). In chapters 2 and 3 the development of these instruments and its clinometric properties are presented.

In the period 2007-2009, questionnaire that consisted of several biopsychosocial measures, including the PSA and SPQ, was allocated to a group of care seekers and non-care seekers. Participants were recruited from seven specialized dental clinics throughout The Netherlands and from community places in the same areas. In Chapter 4 differences between non-care seekers and care seekers are described. Even though several aspects were revealed that differentiate care seekers from non-care seekers, the results indicated that closed answer questionnaire did not fully reflect the thoughts of people and the processes involved in care seeking. Perhaps, these thoughts and processes could be better grasped in the stories that patients tell. Therefore, to further reveal differences between non-care seekers and care seekers, a subsample of the care seekers and non-care seekers were invited for semi-structured interviews on this topic.
Finally, the care seekers received a follow-up questionnaire after 6 months to investigate which factors from baseline could predict improvement. In Chapter 6, a prediction model for 6-months improvement is presented.

**SYNOPSIS:**

The aim of this thesis was to improve the understanding of the role of biopsychosocial factors in the development of TMD-pain complaints and care seeking behavior. This was approached from different perspectives. First, those who did seek care for their TMD-pain complaints (care seekers) were compared to those who did not (non-care seekers). Additionally, the group of care seekers was further studied with respect to the number of care practitioners they attended. Finally, patient characteristics of patients who showed improvement (after a 6-month follow-up) were compared to those who did not improve.
References:


