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Psychological evaluation of a primary headache patient

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SUMMARY

A patient's experience with headache is influenced, not only by the frequency and pain of the attacks, but also by the patient's perception of the controllability of the attacks, their willingness to engage in activities despite attacks and their attitude towards the medications used to treat the headaches. Clinicians are often aware of the need to evaluate their patients for the existence of comorbid psychiatric disorders but may be less aware of the importance of these nonpathological beliefs/attitudes that are present to some degree in every headache sufferer. This article gives an overview (by no means exhaustive) of several important psychological constructs, with an emphasis on how these constructs can be assessed in headache patients using freely available paper-pencil questionnaires.

Migraine and tension-type headache are among the world's leading health concerns [1,2]. Approximately 11% of adults in western countries suffer from migraine [3]. In the USA alone, an estimated 45 million individuals suffer from chronic or episodic headaches [4]. There is no cure for persistent headache but the impact of headache on an individual's wellbeing can be successfully managed. In order to manage headache, clinicians are well advised to consider a wide variety of influential elements, including psychological and social factors.

Psychological factors & headache

In 1977, Engel published a call for a biopsychosocial approach to illness [5]. He advocated for an approach that considers an array of influences on illness, including biological (physiological), psychological (behavioral) and social (environmental) factors. This paradigm shift was meant to replace the biomedical model, which assumes that illness and suffering are largely the sum of their purely physiological parts. It was assumed that such a paradigm could account for the high degree of variability in experience that two patients might report when both exhibited the same degree of tissue damage or physiological insult. In headache research, Engel's call only served to enhance a movement that already had a rich history of considering factors such as personality, stress and psychiatric illness [6].

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In headache management, biopsychosocial influences could impact disease burden in numerous ways. First, patients with psychological and social risk factors are susceptible to experiencing more attacks. Stress is widely reported as the most potent headache trigger but it is not simply an objective quantity [7]. Perceived stress, or how the individual interprets an event, is crucial to how that event affects the body [8]. For example, two individuals may stand in a long line but only the individual who interprets the line with hostility will experience the stress response of an increase in heart rate, blood pressure and cortisol that comes from being thwarted by delay. A second event in which psychosocial factors impact headache disease burden is adjustment to an attack. Headaches are an aversive state for everyone but two individuals may differ substantially in their perceived control over the attack and in their coping with the pain of an attack. For example, two individuals may both experience the same number of headaches but only the individual that has learned that headache attacks are unpredictable and/or unmanageable will live in fear of the next attack, perhaps withdrawing from normal functioning as a result. A final aspect in which psychosocial influences impact headache disorders is the behaviors used to manage headaches. Although medications are a vital tool for most sufferers, the endless search for a cure is unfruitful and so too is frequent medication use that actually leads to increased attack frequency and enhanced healthcare costs. These diverse and potent influences make the consideration of psychological factors in headache a paramount part of the evaluation of a primary headache patient [9].

Psychological versus psychiatric evaluation

A large amount of biopsychosocial research has been conducted on headache disorders and how to best evaluate/treat patients who suffer from recurrent headache [10]. Much of this attention has focused on psychiatric disorders that can co-occur with primary headache disorders. For example, there is an association between the coexistence of migraine and affective disorders, such as major depressive disorder (2.2- to fourfold increased risk), generalized anxiety disorders (four- to five-fold increased risk) and obsessive compulsive disorder (fivefold risk) [11]. When present, the assessment of comorbid psychiatric disorders is an important treatment consideration [12] for which there is an array of screening tools [13]. However, despite this association, the vast majority of headache patients do not suffer from psychiatric disorders.

This review focuses on the psychological, rather than the psychiatric, evaluation of a primary headache patient. A formal psychological evaluation typically consists of an interview conducted by a trained practitioner. This review is intended only to alert headache clinicians of several psychological constructs worthy of attention. The reviewed psychological constructs all have several common traits. First, they represent an aspect of normal functioning. Unlike psychiatric constructs, such as the presence or absence of a Diagnostic and Statistical Manual of Mental Disorders (fourth edition) condition, psychological constructs are present in every headache sufferer to varying degrees. The tools that are provided to assess these constructs can be used to evaluate the degree to which the constructs are displayed by the individual. Second, each of the constructs has some literature to support its importance in understanding the experience of the headache patient. To ensure maximum impact, the included constructs were also selected based on their applicability to headache patients independent of specific headache diagnosis. Finally, each of the reviewed constructs is associated with a freely available assessment tool that has been previously validated for use in this population. Studies have found that all of the recommended instruments have a good level of reliability. The psychological constructs are now reviewed and their various assessment tools are listed in Table 1.

Locus of control

The locus of control involves a person's perception of the level of control he or she has over an occurrence of some event, either internal or external. If an individual perceives an event to be totally under his or her control, their locus of control for this event would be completely internal. On the other hand, a completely external locus of control would exist in a situation where an individual perceives that he or she has no impact on the event (i.e., the control of the event is external to the self). In most situations, a person's locus of control will fall somewhere between these two points. Lower internal locus of control typically has a negative influence on an individual's response to the situation [14–16].

In headache patients, a higher internal locus of control has been shown to be associated with enhanced treatment outcomes [17]. Those patients with a higher internal locus of control also experience less disability due to their headaches [18]. The opposite is true for headache sufferers with a lower internal locus of control. These patients are less likely to take responsibility for managing their headache pain and preventing headache attacks. Similarly, patients with a higher external locus of control believe that they have little influence on their headache attacks and headache pain, and are less likely to engage in management behaviors [19]. However, there are several limitations to interpreting locus of control beliefs generally across situations. For example, high external locus of control beliefs can be detrimental to a self-management program but might be conducive to adherence of physician recommendations. These beliefs should be considered as specifically as possible in the context of the situation in which they are measured.

A useful tool for measuring locus of control in headache patients is the Headache-Specific Locus of Control Scale [19]. This 33 item instrument measures perceptions of the determinants of headache and headache relief. Specifically, this scale assesses an individual's beliefs that headache and headache relief are determined by the individual (internal), chance (external) or healthcare professionals (external).

Self-efficacy

Self-efficacy is a person's belief that he or she can be successful at achieving a desired result [20,21]. People possess efficacy beliefs about all aspects of their behavior, ranging from simple tasks (e.g., the ability to put in contact lenses) to more complex actions (e.g., the ability to lose weight). Self-efficacy beliefs are situation-specific and can change in response to experiences within a situation or context. Self-efficacy beliefs are malleable and can be enhanced through repeated successes, or either direct (e.g., social encouragement) or indirect (e.g., watching others succeed) social influences.

Headache-specific self-efficacy is a headache sufferer's confidence that he or she can successfully prevent headache attacks or manage the pain of headache attacks that do occur [22]. The importance of self-efficacy beliefs for these behaviors in predicting good outcomes has been well supported [9]. For example, headache patients with low self-efficacy report a lower quality of life than headache patients with high self-efficacy [23]. One way that higher self-efficacy may help to improve quality of life is through its potential to shield against the effects of stress on headache [24].

The Headache Management Self-Efficacy Scale is a 25-item instrument that assesses an individual's belief in his or her ability to prevent headaches and manage headache pain [22]. Although the scale measures the two different aspects of a patient's self-efficacy beliefs, the two concepts are quite well correlated, so the authors recommend viewing these beliefs as one underlying dimension. Thus, patients who report a high degree of confidence in their

ability to prevent attacks will also probably be confident that they can manage attacks once they occur.

Medication attitudes

In the following section, the authors take a more general approach to medication attitudes, without looking specifically at any class of medications, such as headache preventatives or abortive medications.

Individuals can substantially vary in their beliefs concerning the value of pain medication. Issues, such as potential side effects, fears of tolerance or dependence, social stigma, costs, and fears of withdrawal, can differ from one person to another [25], yet these beliefs may not be well recognized by clinicians. Nearly all migraine sufferers (98%) use medication to treat their headache attacks [26] and it is likely that a similarly high percentage of tension-type and cluster headache sufferers use abortive medications to treat their attacks. Headache sufferers have a wide range of choices to treat their attacks and many individuals may use several different types of medications [27], presumably due to implicit cost–benefit calculations comparing the various options. Although preventative medications are less commonly used than acute pain medications, beliefs about this treatment option are also relevant for headache patients.

Nonadherence to prescribed headache medication is very common in headache sufferers and can reduce the effectiveness of treatment [28]. Up to 20% of triptan prescriptions are never filled by patients and nearly 50% of patients are noncompliant with preventative headache medications [29]. Two recent reviews have highlighted the high rates of nonadherence with headache medications and lamented the potential benefits from treatment strategies that have been lost due to nonadherence issues [27,30]. Kati and colleagues have proposed a patient decision-making model that partitions adherence decisions into disease factors, patient characteristics, medication factors and physician characteristics [27]. This innovative model considers several different aspects of the problem and places special emphasis on patients' perceptions of the controllability of the disease, their providers, and the prescribed medications.

The measurement of a patient's beliefs about his or her medications can be evaluated using the Pain Medication Attitudes Questionnaire [25]. The Pain Medication Attitudes Questionnaire is a 47-item scale that is easily administered in the office. There are seven subscales that each measure a different aspect of medication beliefs: fear of addiction, perceived need, unfavorable scrutiny by others, adverse side effects, tolerance, mistrust of prescribing doctor and withdrawal. These subscales are related to different aspects of medication adherence (e.g., underuse of medications or overuse of medications) in chronic pain populations [25]. At the time of writing, this scale had not been extensively normed in primary headache populations but the generically worded items are certainly applicable to either acute or preventative headache medications.

Acceptance

Acceptance is pragmatically defined as “willingness to experience psychological states as they are” [31]. The role of acceptance in headache is not a simple one-time judgment by the patient that their headaches may never improve but, instead, is a dynamic experience that can be characterized as a patient's willingness to encounter pain and other related negative experiences (e.g., associated symptoms, thoughts and feelings) that go with the pain experience. Unlike in traditional cognitive–behavioral formulations, these negative internal states are not considered to be problematic in themselves (i.e., they do not need to be reduced) but are viewed in a contextual framework for how they interact with an

individual's goals and values. Individuals with a high degree of acceptance have shifted their focus away from labeling their internal states as the focus of the problem (e.g., "I have a headache, so I cannot meet with friends") and have shifted attention to how these states interact with quality of life (e.g., "I will still be able to meet with friends, despite the headache").

On first encounter, the concept of acceptance of aversive internal states, whether they are thoughts, emotions or pain, can be counterintuitive to both clinicians and patients alike. Yet, an increasing body of literature demonstrates that prolonged attempts to reduce aversive experiences are not often successful and may even lead to paradoxical increases in these experiences [32]. Interventions that aim to facilitate high levels of acceptance in chronic pain patients are associated with better adjustment to pain, even during long-term follow-up [33]. In headache, treatments that are designed to increase acceptance have been effective at reducing headache-related disability and improved function [34]. Higher levels of acceptance are associated with lower levels of catastrophizing and pain-related interference, as well as higher levels of perceived control [35], and these associations appear to be important in adolescents as well [36].

The measurement of acceptance in chronic pain conditions, including headache, can be evaluated using the Chronic Pain Acceptance Questionnaire [37]. The Chronic Pain Acceptance Questionnaire is a 20-item scale that is easily administered in the office. There are two subscales that are measured through the items, the activity engagement subscale and the pain willingness subscale. Activity engagement relates to attitudes about participation in daily activities while acknowledging the presence of pain. Pain willingness assesses the extent that pain is allowed, without specific efforts to avoid or control it [38]. Although there are several existing scales used to assess the acceptance construct, a recent review found that the Chronic Pain Acceptance Questionnaire had the most desirable measurement properties [39].

Conclusion & future perspective

This review covered the concepts of locus of control, self-efficacy, pain medication attitudes and acceptance beliefs in the evaluation of a primary headache patient. The review highlights the importance of considering these psychological constructs and provides links to the publicly available tools that can be used to assess them. In contrast with psychiatric illnesses that are only present in a portion of headache sufferers, these psychological issues are present in every sufferer but can also have a profound impact on treatment outcomes or adjustment to headache. There are many psychological constructs that could have been chosen for this review (e.g., catastrophizing or hypervigilance); these constructs are likely to be important in understanding headache but, at the time of writing, were not chosen for inclusion either due to space considerations and/or a lack of evidence. At the time of writing, there are a large number of psychological constructs that have received considerable attention in chronic pain conditions but that were not well researched using headache outcomes [40]. The reviewed concepts in this paper are by no means a definitive coverage of psychological factors that could/should be considered.

The psychological issues that were reviewed are themselves intertwined and might be expected to be associated with each other. For example, it is unlikely that an individual with a low degree of internal locus of control will have a high degree of self-efficacy beliefs about preventing their headaches. Furthermore, high degrees of acceptance are not likely to be found with high degrees of perceived need for medications. In this regard, practitioners could assemble profiles of their patients' attitudes and beliefs to be used in a comprehensive treatment plan. For example, it is important to have free and open discussions with patients

who express a high sense of social scrutiny about medications. These patients may be unlikely to take certain prescriptions (e.g., opioid pain relievers) or use certain delivery systems that might draw unwanted social attention (e.g., a needle-based triptan delivery system). Knowledge of these beliefs is useful in directing care specifically attuned to the patient's needs. To obtain reference points for the development of treatment plans, practitioners may assemble their own normative data from their clinics or they may contact the authors of the published literature for the original normative data.

Future directions for this line of research should involve the development of delivery methods that allow primary care physicians and other medical practitioners to assist their patients in fostering the positive aspects of these psychological constructs. At the time of writing, there are clinic-based approaches and even minimal contact interventions to foster internal locus of control, self-efficacy beliefs and acceptance/value-based strategies. However, these approaches typically require mental health professionals to deliver the interventions. The approaches primarily consist of a mental health professional guiding the patient in learning that they do have control over many aspects of their own physiology and the headache experience (locus of control). Through successful manipulations of their own experience, patients then learn that they are able to influence events (self-efficacy) or meet goals despite ongoing negative experiences (acceptance). Interested practitioners can find descriptions of these interventions [41] or even brief physician-delivered interventions [42] in the literature. Because most professionals who treat headache are not actively collaborating with a mental health professional, most patients do not benefit from these approaches at present. However, an increased awareness of these concepts and the tools used to measure them in the clinic are good first steps for making informed treatment decisions and facilitating the development of healthy psychological states in patients suffering from headache.

References

Papers of special note have been highlighted as:

■ of interest

■ of considerable interest

1. Blumenfeld AM, Varon SF, Wilcox TK, et al. Disability, HRQoL and resource use among chronic and episodic migraineurs: results from the International Burden of Migraine Study (IBMS). *Cephalalgia*. 2011; 31(3):301–315. [PubMed: 20813784]
2. Stovner LJ, Hagen K, Jensen R, et al. The global burden of headache: a documentation of headache prevalence and disability worldwide. *Cephalalgia*. 2007; 27(3):193–210. [PubMed: 17381554]
3. Scher, AI.; Stewart, WF.; Lipton, RB. Migraine and headache: ameta-analytic approach. In: Crombie, IK., editor. *Epidemiology of Pain*. IASP Press; Seattle, WA, USA: 1999. p. 159-170.
4. Lipton RB, Bigal ME, Diamond M, et al. Migraine prevalence, disease burden, and the need for preventive therapy. *Neurology*. 2007; 68(5):343–349. [PubMed: 17261680]
5. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science*. 1977; 196(4286):129–136. [PubMed: 847460]
- 6■. Rains JC, Penzien DB, McCrory DC, Gray RN. Behavioral headache treatment: history, review of the empirical literature, and methodological critique. *Headache*. 2005; 45(Suppl 2):S92–S109. Provides a detailed review of behavioral treatment for headache. [PubMed: 15921506]
7. Houle TT, Butschek RA, Turner DP, Smitherman TA, Rains JC, Penzien DB. Stress and sleep duration predict headache severity in chronic headache sufferers. *Pain*. 2012; 153(12):2432–2440. [PubMed: 23073072]
8. Houle T, Nash JM. Stress and headache chronification. *Headache*. 2008; 48(1):40–44. [PubMed: 18184284]

- 9■. Nicholson RA, Houle TT, Rhudy JL, Norton PJ. Psychological risk factors in headache. *Headache*. 2007; 47(3):413–426. Provides an in-depth review of psychological factors and their involvement in headache disorders. [PubMed: 17371358]
10. Penzien DB, Rains JC, Andrasik F. Behavioral management of recurrent headache: three decades of experience and empiricism. *Appl Psychophys Biof*. 2002; 27(2):163–181.
11. Smitherman TA, Baskin SM. Headache secondary to psychiatric disorders. *Curr Pain Headache R*. 2008; 12(4):305–310.
12. Maizels M. Psychiatric screening for headache patients. *Headache*. 2012; 52(Suppl 1):S26–S29.
13. Maizels M, Smitherman TA, Penzien DB. A review of screening tools for psychiatric comorbidity in headache patients. *Headache*. 2006; 46(Suppl 3):S98–S109. [PubMed: 17034404]
14. Ajzen I. Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *J Appl Soc Psychol*. 2002; 32(4):665–683.
15. Overmier J, Seligman M. Effects of inescapable shock upon subsequent escape and avoidance responding. *J Comp Physiol Psychol*. 1967; 63(1):28–33. [PubMed: 6029715]
16. Overmier J. On learned helplessness. *Integr Phys Beh Sci*. 2002; 37(1):4–8.
17. Hudzyski L, Levenson H. Biofeedback behavioral treatment of headache with locus of control pain analysis: a 20-month retrospective study. *Headache*. 1985; 25(7):380–386. [PubMed: 4077494]
18. Scharff L, Turk DC, Marcus DA. The relationship of locus of control and psychosocial behavioral response in chronic headache. *Headache*. 1995; 35(9):527–533. [PubMed: 8530276]
- 19■. Martin NJ, Holroyd KA, Penzien DB. The headache-specific locus of control scale: adaptation to recurrent headaches. *Headache*. 1990; 30(11):729–734. The Headache-Specific Locus of Control Scale is freely available in this article. [PubMed: 2074167]
20. Bandura A, O’Leary A, Taylor C, Gauthier J, Gossard D. Perceived self-efficacy and pain control: opioid and nonopioid mechanisms. *J Pers Soc Psychol*. 1987; 53(3):563–571. [PubMed: 2821217]
21. Bandura, A. *Self-Efficacy: the Exercise of Control*. WH Freeman and Company; NY, USA: 1997.
- 22■. French DJ, Holroyd KA, Pinell C, Malinoski PT, O’Donnell F, Hill KR. Perceived self-efficacy and headache-related disability. *Headache*. 2000; 40(8):647–656. The Headache Management Self-Efficacy Scale is freely available in this article. [PubMed: 10971661]
23. Smith TR, Nicholson RA, Banks JW. Migraine education improves quality of life in a primary care setting. *Headache*. 2010; 50(4):600–612. [PubMed: 20148982]
24. Marlowe N. Self-efficacy moderates the impact of stressful events on headache. *Headache*. 1998; 38(9):662–667. [PubMed: 15613177]
- 25■. McCracken LM, Hoskins J, Eccleston C. Concerns about medication and medication use in chronic pain. *J Pain*. 2006; 7(10):726–734. The Pain Medication Attitude Questionnaire is freely available in this article. [PubMed: 17018333]
26. Diamond S, Bigal ME, Silberstein S, Loder E, Reed M, Lipton RB. Patterns of diagnosis and acute and preventive treatment for migraine in the United States: results from the American Migraine Prevalence and Prevention study. *Headache*. 2007; 47(3):355–363. [PubMed: 17371352]
27. Kati BJ, Krause SJ, Tepper SJ, Hu HX, Bigal ME. Adherence to acute migraine medication: what does it mean, why does it matter? *Headache*. 2010; 50(1):117–129. [PubMed: 19817884]
28. Rains JC, Lipchik GL, Penzien DB. Behavioral facilitation of medical treatment for headache – part I: review of headache treatment compliance. *Headache*. 2006; 46(9):1387–1394. [PubMed: 17040335]
29. Rains JC, Penzien DB, Lipchik GL. Behavioral facilitation of medical treatment for headache – part II: theoretical models and behavioral strategies for improving adherence. *Headache*. 2006; 46(9):1395–1403. [PubMed: 17040336]
30. Bigal M, Krymchantowski A, Lipton R. Barriers to satisfactory migraine outcomes. What have we learned, where do we stand? *Headache*. 2009; 49(7):1028–1041. [PubMed: 19389137]
31. Thompson M, McCracken LM. Acceptance and related processes in adjustment to chronic pain. *Curr Pain Headache Rep*. 2011; 15(2):144–151. [PubMed: 21222244]
32. Wenzlaff RM, Wegner DM. Thought suppression. *Ann Rev Psychol*. 2000; 51:59–91. [PubMed: 10751965]

33. Vowles KE, McCracken LM, O'Brien JZ. Acceptance and values-based action in chronic pain: a three-year follow-up analysis of treatment effectiveness and process. *Behav Res Ther.* 2011; 49(11):748–755. [PubMed: 21885034]
34. Mo'tamedi H, Rezaemaram P, Tavallaie A. The effectiveness of a group-based acceptance and commitment additive therapy on rehabilitation of female outpatients with chronic headache: preliminary findings reducing 3 dimensions of headache impact. *Headache.* 2012; 52(7):1106–1119. [PubMed: 22712503]
35. Chiros C, O'Brien WH. Acceptance, appraisals, and coping in relation to migraine headache: an evaluation of interrelationships using daily diary methods. *J Behav Med.* 2011; 34(4):307–320. [PubMed: 21258857]
36. Massey EK, Garnefski N, Gebhardt WA, van der Leeden R. A daily diary study on the independent and interactive effects of headache and self-regulatory factors on daily affect among adolescents. *Brit J Health Psych.* 2011; 16(Pt 2):288–299.
37. McCracken LM, Vowles KE, Eccleston C. Acceptance of chronic pain: component analysis and a revised assessment method. *Pain.* 2004; 107(1):159–166. The Chronic Pain Acceptance Questionnaire is freely available in this article. [PubMed: 14715402]
38. Vowles KE, McCracken LM, McLeod C, Eccleston C. The Chronic Pain Acceptance Questionnaire: confirmatory factor analysis and identification of patient subgroups. *Pain.* 2008; 140(2):284–291. [PubMed: 18824301]
39. Reneman MF, Dijkstra A, Geertzen JH, Dijkstra PU. Psychometric properties of Chronic Pain Acceptance Questionnaires: a systematic review. *Eur J Pain.* 2010; 14(5):457–465. [PubMed: 19819172]
40. Keefe FJ, Rumble ME, Scipio CD, Giordano LA, Perri LM. Psychological aspects of persistent pain: current state of the science. *J Pain.* 2004; 5(4):195–211. [PubMed: 15162342]
41. Penzien DB, Holroyd KA. Psychosocial interventions in the management of recurrent headache disorders. 2: description of treatment techniques. *Behav Med.* 1994; 20(2):64–73. [PubMed: 7803938]
42. Andrasik F, Grazi L, Usai S, D'Amico D, Leone M, Bussone G. Brief neurologist-administered behavioral treatment of pediatric episodic tension-type headache. *Neurology.* 2003; 60(7):1215–1216. [PubMed: 12682344]

Practice Points

- Psychological versus psychiatric evaluation
 - Primary headache (e.g., migraine, tension-type headache and cluster) is a widely prevalent disorder that is associated with comorbid psychopathology, yet most patients who suffer from primary headache do not also suffer from an axis-I psychiatric disorder.
 - Psychological constructs are present to some degree in all individuals and can have a profound impact on how a patient perceives his or her headaches.
- Locus of control
 - The locus of control involves a person's perception of the level of control he or she has over the occurrence of an event (e.g., headache).
- Self-efficacy
 - Self-efficacy is a person's belief that he or she can be successful at achieving a desired result (e.g., obtaining headache relief).
- Medication attitudes
 - Issues, such as potential side effects, fears of tolerance or dependence, social stigma, costs and fears of withdrawal can differ from one person to another.
- Acceptance
 - Acceptance is a dynamic experience that can be characterized as a patient's willingness to encounter pain and other related negative experiences that go with the pain.

Table 1

Assessment tools for selected psychological constructs that are important considerations in headache management.

Assessment tool	Description	Number of items	Ref.
HSLC	Assesses the belief that headaches are controllable by internal influences, by healthcare professionals or by chance influences	33	[19]
HMSE	Assesses confidence in the belief that one can take actions to prevent headache attacks or manage them when they occur	25	[22]
PMAQ	Assesses seven areas of concern that a patient may have about pain medications: addiction, perceived need, unfavorable scrutiny by others, adverse side effects, tolerance, mistrust in the prescribing doctor and withdrawal	47	[25]
CPAQ	Assesses willingness to engage in activities despite pain and the degree of willingness to experience pain without efforts to control it	20	[37]

CPAQ: Chronic Pain Acceptance Questionnaire; HMSE: Headache Management Self-Efficacy Scale; HSLC: Headache-Specific Locus of Control Scale; PMAQ: Pain Medication Attitude Questionnaire.