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CATASTROPHIC PERCEPTION OF PAIN IN MIGRAINE PATIENTS AND ITS CORRECTION VIA COGNITIVE-BEHAVIORAL THERAPY

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ANNOTATSIYA: Maqolada migren bemorlarida keng tarqalgan psixologik fenomen — og'riqni katastrofik idrok etish (pain catastrophizing) muammosi va uni kognitiv-bixevioral terapiya (KBT) vositasida korreksiyalash imkoniyatlari xalqaro adabiyotlar tahlili va o'zimizning klinik kuzatuvlarimiz asosida yoritilgan. Migren tashxisi qo'yilgan 37 nafar bemor (13 erkak, 24 ayol) bilan klinik-psixologik suhbatlar o'tkazilgan, suhbat yozuvlari sifat tahlili (qualitative content analysis) asosida katastrofizatsiyaning uch komponenti — kuchaytirish, umidsizlik va ruminatsiya bo'yicha kodlangan. Ikkala jinsda ham kuchaytirish komponenti yetakchi o'rinni egallagani, ayol bemorlarda bundan tashqari ruminatsiya ham sezilarli darajada uchragani aniqlandi. Bemorlarning bir qismi (24 nafar ayol) bilan 6 hafta davomida KBT elementlaridan foydalanilgan holda qo'shimcha ishlangan, buning natijasida katastrofik fikrlash belgilarining susayganini va umumiy ahvolning yaxshilanganini bemorlar o'zlari ta'kidladi. Olingan natijalar tavsifiy (deskriptiv) xarakterga ega bo'lib, kelgusi standartlashtirilgan tadqiqotlar uchun asos bo'lib xizmat qilishi mumkin.

Kalit so'zlar: migren, og'riqni katastrofik idrok etish, pain catastrophizing, kognitiv-bixevioral terapiya, ruminatsiya, sifat tahlili, Pain Catastrophizing Scale.

АННОТАЦИЯ: В статье рассматривается проблема катастрофизации боли — широко распространённого психологического феномена у пациентов с мигренью, а также возможности его коррекции с помощью когнитивно-бихевиоральной терапии (КБТ), на основе анализа международной литературы и собственных клинических наблюдений. С 37 пациентами (13 мужчин, 24 женщины) с диагнозом мигрень были проведены клинико-психологические беседы; записи бесед были подвергнуты качественному контент-анализу и закодированы по трём компонентам катастрофизации — усилению, беспомощности и руминации. Установлено, что у обоих полов преобладал компонент усиления, при этом у женщин также значительно выражена руминация. С частью пациенток (24 женщины) в течение 6 недель дополнительно проводилась работа с использованием элементов КБТ, в результате чего пациентки отметили снижение признаков катастрофического мышления и общее улучшение состояния. Полученные результаты носят описательный характер и могут служить основой для последующих стандартизированных исследований.

Ключевые слова: мигрень, катастрофизация боли, когнитивно-бихевиоральная терапия, руминация, качественный анализ, Pain Catastrophizing Scale.

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ABSTRACT: This article addresses pain catastrophizing, a widespread psychological phenomenon among migraine patients, and its correction through cognitive behavioral therapy (CBT), drawing on international literature and the authors' own clinical observations. Clinical-psychological interviews were conducted with 37 patients (13 men, 24 women) diagnosed with migraine; session notes were analyzed through qualitative content analysis and coded according to the three components of catastrophizing — magnification, helplessness, and rumination. Magnification predominated in both sexes, while rumination was also notably present among female patients. A subset of patients (24 women) additionally received 6 weeks of work incorporating CBT elements, after which patients reported a reduction in catastrophic-thinking symptoms and overall improvement in their condition. These descriptive findings may serve as a basis for future standardized research.

Keywords: migraine, pain catastrophizing, cognitive behavioral therapy, rumination, qualitative analysis, Pain Catastrophizing Scale.

INTRODUCTION

Migraine is one of the most common neurological disorders worldwide, significantly negatively affecting an individual's physical, emotional, and social functioning. The level of disability associated with migraine cannot be explained solely by the objective characteristics of the pain—such as intensity, duration, and frequency; numerous studies have shown that the patient's cognitive-emotional response to pain is a crucial mediating factor.

One of the most extensively studied constructs in this regard is "pain catastrophizing." The Pain Catastrophizing Scale (PCS), developed by Sullivan, Bishop, and Pivik, measures catastrophizing through three components: magnification (overestimating the threat posed by the pain), helplessness (feeling unable to cope with the pain), and rumination (an inability to stop negative thoughts about the pain) [1]. This scale has been translated into more than 27 languages

and is widely used in pain clinics around the world. The theoretical roots of catastrophic thinking lie in cognitive psychology—specifically in Beck's theory of cognitive distortions—which posits that individuals react to stressors with automatic negative thoughts that exacerbate emotional distress [2]. In migraine patients, this mechanism manifests as equating a pain attack to a "catastrophe," harboring a constant fear of future attacks, and feeling a lack of control over one's condition.

Clinical studies have shown that high levels of catastrophizing in women with obesity and migraines are associated with greater pain-related disability and emotional distress [3]. In patients with chronic migraines, the catastrophic thinking profile reflects specific patterns of pain perception, and this indicator may serve as a crucial criterion for patient stratification in clinical practice.

While pharmacological treatments aim to manage the neurophysiological aspects of migraines, they do not alter the patient's maladaptive cognitive schemas regarding pain. Consequently, in recent years, cognitive-behavioral therapy (CBT) has come to be regarded as a vital component of

the comprehensive treatment of migraine patients. Several systematic reviews and meta-analyses have confirmed the efficacy of CBT in improving migraine frequency, pain intensity, and HIT-6/MIDAS scores [4]. Meanwhile, a systematic review of interventions combining patient education with CBT elements found heterogeneous results, yet most studies reported positive changes in cognitive-emotional indicators, including levels of catastrophizing [5]. Furthermore, a recent meta-analysis on chronic musculoskeletal pain demonstrated that CBT significantly reduces catastrophizing levels (SMD = -0.77) [6], thereby confirming the mechanism of CBT as being rooted in the cognitive reappraisal of pain.

Nevertheless, the phenomenon of catastrophic perception among migraine patients—and the potential to address it through CBT—remains virtually unstudied in the context of Uzbekistan. In local clinical practice, migraine is primarily assessed from a neurological-pharmacological perspective, while the patient's cognitive-emotional profile is often overlooked. This situation underscores both the scientific novelty and the practical necessity of research in this area.

OBJECTIVE OF THE STUDY

To determine, through qualitative analysis of clinical-psychological interviews with migraine patients, the extent to which the three components of catastrophic pain perception (magnification, helplessness, and rumination) are manifested, and to characterize the impact of cognitive-behavioral therapy (CBT)-based interventions on the patients' subjective state.

MATERIALS AND METHODS

The study involved 37 patients (13 men, 24 women) diagnosed with migraine. Clinical-psychological interviews were conducted with all patients. A subset of the patients—specifically the 24 women—underwent additional individual sessions over a six-week period incorporating elements of CBT (cognitive reappraisal, decatastrophizing techniques, and relaxation).

As no standardized scale (such as the PCS) was used for quantitative measurement at this stage, the study design was classified as a qualitative content analysis: notes and observations from each interview were retrospectively coded according to the three components of the Pain Catastrophizing Scale—magnification, helplessness, and rumination. Coding was performed by a single specialist (the author) based on typical verbal expressions found in the clinical interview records (e.g., describing pain in exaggerated terms, a sense of lacking control over one's condition, and an inability to stop thinking about the pain). The subsequent subjective state of the patients who received CBT was also documented descriptively based on the interview records.

RESULTS AND DISCUSSION

Analysis of the interviews revealed the catastrophic thinking profiles of 37 patients. Among the 13 male patients, the "magnification" component (exaggerating pain and describing it as "unbearable") was dominant in 9 (69.2%), while the "helplessness" component prevailed in 4 (30.8%). Among the 24 female patients, magnification was prominent in 12 (50%), rumination in 8 (33.3%), and helplessness in 4 (16.7%). Overall, magnification was identified as the leading component in 21 (56.8%) of the 37 patients, followed by helplessness in 8 (21.6%) and rumination in 8 (21.6%); thus, magnification emerged as the most common component across both genders, while rumination was also notably observed among female patients.

Following a six-week intervention incorporating elements of CBT with the 24 female patients, the majority reported subjective positive changes in their condition, noting a reduction in signs of catastrophic thinking (such as excessive magnification and rumination) and an improvement in their overall well-being. This observation aligns with international meta-analytic evidence confirming the ability of CBT to mitigate catastrophizing—specifically its cognitive-emotional components [4, 6].

The finding that the amplification component is prominent in both genders, while rumination is additionally significant in female patients, is an interesting observation; further interpretation of this difference requires standardized measurement tools (such as the PCS) and statistical analysis. Nevertheless, this observation suggests that specific attention should be paid to the amplification and rumination components when planning psychological support for migraine patients.

CONCLUSION

An analysis of clinical interviews with migraine patients revealed that, among the three components of catastrophic pain perception, the "magnification" component is predominant in both genders, while female patients also exhibit significant levels of rumination. A six-week intervention incorporating elements of CBT was observed to have a positive impact on patients' subjective states, specifically by reducing catastrophic thinking and improving overall well-being. These preliminary findings highlight the need for a more in-depth study of catastrophizing in migraine patients—utilizing standardized scales (PCS, MIDAS, HIT-6) and a control group—which would serve as a foundation for future research in this field within the context of Uzbekistan.

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