Psihometrijske karakteristike hrvatske verzije Upitnika izbjegavanja i ustrajanja te razlike u odgovorima na bol s obzirom na vrstu i trajanje boli

/ Psychometric Properties of the Croatian Version of the Avoidance-Endurance Questionnaire and Differences in Pain Responses Regarding Pain Type and Duration

Marina Njegovan[1], Ivanka Živčić-Bećirević[2]

[1]Thalassotherapia Opatija, Opatija, Hrvatska; [2]Filozofski fakultet, Sveučilište u Rijeci, Rijeka, Hrvatska

/ [1]Thalassotherapia Opatija, Opatija, Croatia; [2]Faculty of Humanities and Social Sciences, University of Rijeka, Rijeka, Croatia

ORCID iD:
0000-0003-2710-4769 (Marina Njegovan)
0000-0002-8295-0223 (Ivanka Živčić-Bećirević)

Psihološki čimbenici ključne su odrednice u razvoju i održavanju boli. Cilj ovog istraživanja bio je prilagoditi hrvatskoj populaciji Upitnik izbjegavanja i ustrajanja, instrument koji ispituje različite strategije suočavanja s boli. Istraživanje je provedeno online na uzorku od 313 ispitanika opće populacije s trenutnim ili nedavnim iskustvom boli. Na dobivenim podatcima provedena je eksploratorna faktorska analiza te ispitana pouzdanost ekstrahiranih ljestvica (Cronbach α). U odnosu na originalno istraživanje, rezultati su potvrdili identičnu faktorsku strukturu za dijelove upitnika koji ispituju kognitivne i afektivne odgovore na bol, dok je za ponašajne odgovore, umjesto četverofaktorske strukture, dobiveno dvofaktorsko rješenje. Sve ljestvice imaju zadovoljavajuće koeficijente unutarnje konzistencije. Kako bi se utvrdila kriterijska valjanost upitnika, provedene su korelacijske analize dobivenih podljestvica s dvije varijable, intenzitetom boli i razinom onesposobljenosti zbog boli. Također su ispitane razlike u odgovorima na bol s obzirom na lokaciju i trajanje boli. Hrvatska verzija Upitnika izbjegavanja i ustrajanja pokazala se pouzdanom mjerom za ispitivanje kognitivnih, afektivnih i ponašajnih odgovora na bol. Razlike utvrđene s obzirom na vrstu i trajanje boli otvaraju važna pitanja za buduća klinička istraživanja.

/ Psychological factors are key determinants of pain development and maintenance. This study aimed to adapt the Avoidance-Endurance Questionnaire (AEQ), an instrument that examines various pain responses, for the Croatian population. The study was conducted online with a sample of 313 participants from the general population with current or recent pain experience. Exploratory factor analysis was performed, and the reliability of the resulting scales was tested (Cronbach's α). Compared to the original research, the results confirmed an identical factor structure for components of the questionnaire that examine cognitive and affective responses to pain. However, for behavioral responses, a two-factor solution was obtained instead of the original four-factor structure. All scales demonstrated satisfactory internal consistency coefficients. To establish the criterion validity of the questionnaire, correlation analyses were conducted between the obtained subscales and two variables: pain intensity and pain-related disability. Additionally, differences in pain responses regarding the location and duration of pain were examined. The Croatian version of the AEQ proved to be a reliable measure for assessing cognitive, affective, and behavioral responses to pain. The differences identified regarding pain type and duration raise important questions for future clinical research.

ADRESA ZA DOPISIVANJE / *CORRESPONDENCE*:
Marina Njegovan, univ. spec. sanit. publ.
Thalassotherapia Opatija
Maršala Tita 188
51410 Opatija, Hrvatska
E-pošta: marina.njegovan@gmail.com

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UVOD

Prema biopsihosocijalnim modelima boli, iskustvo boli kao i njezin prijelaz iz akutnog u kronično stanje određeno je međudjelovanjem različitih bioloških, psiholoških i socijalnih faktora. Paralelno s razvojem bolnog stanja uloga navedenih faktora mijenja se u svojoj relativnoj važnosti pa bol može biti potaknuta biološkim faktorima, ali psihološki i socijalni faktori često zauzimaju primarnu ulogu u njezinom održavanju i pogoršanju (1). Kognitivno-bihevioralni modeli boli naglašavaju važnost kognitivnih procesa te afektivnih i ponašajnih odgovora u iskustvu boli i ishodima prilagodbe na bol. Primjerice, Model straha i izbjegavanja (engl. *Fear-Avoidance Model*) polazi od pretpostavke da način reagiranja na bol i razvoj kronične boli nisu direktno povezani s trenutnom jačinom boli, već su rezultat specifičnih očekivanja, vjerovanja i interpretacija koje čine kontekst za percepciju boli (2,3). Sama percepcija boli obuhvaća procjenu značenja boli te razine njezine štetnosti. Većina ljudi procijenit će bol kao neugodnu, ali ne i indikativnu za ozbiljniju prijetnju osobnom dobrom stanju. U skladu s tim privremeno će prilagoditi ili smanjiti svoje aktivnosti kako bi omogućila zacjeljivanje tkiva, a zatim će ih postupno povećavati do potpunog oporavka. Navedeno opisuje adaptivni odgovor na bol koji vodi prema smanjenju boli i većoj razini funkcionalnosti u odnosu na neadaptivne odgovore. Jedan dio bolesnika s iskustvom boli pribjegava ekstremno

INTRODUCTION

According to biopsychosocial models of pain, the experience of pain and its transition from an acute to chronic state is determined by the interaction of various biological, psychological, and social factors. Parallel to the development of a painful condition, the role of these factors changes in their relative importance; while pain may be provoked by biological factors, psychological and social factors often play a primary role in its maintenance and exacerbation (1). Cognitive-behavioural models of pain emphasize the importance of cognitive processes, as well as affective and behavioral responses, in the experience of pain and adaptation outcomes. For instance, the Fear-Avoidance Models are based on the assumption that the way one reacts to pain and the development of chronic pain are not directly related to current pain intensity, but are rather the result of specific expectations, beliefs, and interpretations that form the context for pain perception (2,3). Pain perception itself involves evaluating the meaning of pain and its level of harmfulness. Most people will perceive pain as unpleasant but not indicative of a serious threat to personal well-being. Accordingly, they will temporarily adapt or reduce their activities to allow for tissue healing and then gradually increase them until full recovery is achieved. This describes an adaptive response to pain, which leads to pain reduction and higher levels of functionality

negativnoj interpretaciji boli, tj. sklon je katastrofiziranju što dovodi do emocionalnog odgovora straha (od boli i ponovnog ozljeđivanja) te izbjegavanja potencijalno rizičnih aktivnosti (2). Kod ove skupine bolesnika bol traje duže od očekivanog vremena potrebnog za normalno zacjeljivanje (1). Dugoročno gledano, izbjegavanje aktivnosti dovodi do pada razine tjelesne spreme, zatim do funkcionalne onesposobljenosti, snižene razine osobne dobrobiti te porasta osjećaja nezadovoljstva i depresivnosti (2-4).

Osim opisanog načina reagiranja na bol postoji i drugi obrazac također neadaptivnog suočavanja koji doprinosi razvoju i održavanju kronične boli i to suprotnim ponašajnim mehanizmom. Prema Modelu ustrajanja (engl. *Endurance-Related Responses*), ustrajanje u aktivnostima unatoč boli te posljedično tjelesno preopterećenje također mogu biti medijatori u odnosu boli i onesposobljenosti (4). Pretjerano ustrajanje može rezultirati ozljedama mišićnih vlakana, živaca, kostiju i ligamenata što, uz ponavljajuće iskustvo boli, ometa normalan tijek oporavka. Model ustrajanja prepoznaje dva podtipa suočavanja s boli koji se međusobno razlikuju prema dominantnim kognitivnim i afektivnim odgovorima: distres-ustrajanje i eustres-ustrajanje (4). U distres-ustrajanje odgovoru (engl. *Distress-Endurance Response*) glavni kognitivni odgovor na bol jest potiskivanje misli o boli (4). Potiskivanje misli definirano je kao svjestan i namjeran pokušaj da se ne misli o neželjenom podražaju (5). U brojnim eksperimentalnim istraživanjima pokazalo se kako je uputa da se ne misli o određenom podražaju manje efikasna od usmjerene distrakcije, odnosno promišljanja o specifičnom drugom podražaju (6). Funkcija strategije potiskivanja u kontekstu boli jest suprimiranje percepcije boli i/ili prekida aktivnosti do kojeg bi bol inače dovela (7). Međutim, s obzirom na to da je potiskivanje kontraproduktivna strategija i paradoksalno rezultira još učestalijim mislima o boli (tzv. *rebound effect*), popraćena je osje-

compared to maladaptive responses. A certain number of patients experiencing pain resort to an extremely negative interpretation of pain, i.e., they are prone to catastrophizing, which leads to an emotional response of fear (of pain and reinjury) and avoidance of potentially risky activities (2). In this group of patients, pain lasts longer than the expected time required for normal healing (1). In the long term, activity avoidance leads to a decline in physical fitness, followed by disability, a reduced sense of personal well-being, and an increase in feelings of dissatisfaction and depression (2-4).

In addition to the described response pattern, there is an alternative pattern of maladaptive coping that also contributes to the development and maintenance of chronic pain through an opposite behavioral mechanism. According to the Endurance-Related Responses model, persisting in activities despite pain and the resulting physical overload can also act as mediators in the relationship between pain and disability (4). Excessive endurance can result in injuries to muscle fibers, nerves, bones, and ligaments, which, alongside the repetitive experience of pain, interferes with the natural course of recovery. The Endurance Model recognizes two subtypes of pain coping that differ in their dominant cognitive and affective responses: Distress-Endurance and Eustress-Endurance (4). In the Distress-Endurance response, the main cognitive response to pain is thought suppression (4). Thought suppression is defined as a conscious and intentional attempt to avoid thinking about an unwanted stimulus (5). Numerous experimental studies have shown that the instruction not to think about a specific stimulus is less effective than focused distraction, that is, thinking about a specific alternative stimulus (6). In the context of pain, the function of suppression is to inhibit the perception of pain and/or the interruption of activity that pain would otherwise cause (7). However, given that suppression is

ćajem bespomoćnosti i depresivnim raspoloženjem (5,6,8).

Eustres-ustrajanje odgovor (engl. *Eustress-Endurance Response)* obilježen je minimiziranjem značenja boli, ignoriranjem senzacija boli i korištenjem distrakcija što je popraćeno pozitivnim raspoloženjem i ustrajanjem u aktivnostima unatoč boli (4). Model izbjegavanja i ustrajanja (engl. *The Avoidance-Endurance Model of Pain*) svojevrsni je kompozit prethodno opisanih obrazaca suočavanja s boli, odnosno pretpostavlja da i obrazac straha i izbjegavanja i obrazac ustrajanja mogu biti medijatori u razvoju i održavanju kronične boli i onesposobljenosti (4). U usporedbi s ranije opisanim adaptivnim načinom suočavanja (koji je predviđen i ovim modelom), neadaptivni obrasci suočavanja povezani su s većom razinom boli kod bolesnika s križoboljom u razdoblju praćenja od šest mjeseci (9).

Izravna mjera konstruirana za ispitivanje opisanih odgovora na bol jest Upitnik izbjegavanja i ustrajanja (engl. *Avoidance-Endurance Questionnaire, AEQ*), autora Hasenbring, Hallner i Rusu (10). Upitnik se sastoji od tri dijela koji ispituju kognitivne, afektivne i ponašajne odgovore na bol. Kognitivni odgovori na bol obuhvaćeni su podljestvicama katastrofiziranje, potiskivanje misli i bespomoćnost/beznađe. Afektivni odgovori na bol sadrže podljestvice anksioznost/depresivnost i pozitivno raspoloženje unatoč boli, a ponašajni odgovori na bol podljestvice izbjegavanje društvenih aktivnosti, izbjegavanje tjelesnih aktivnosti, humor i distrakcija te perzistiranje unatoč boli.

Glavna prednost ovog upitnika leži u njegovoj sposobnosti razlikovanja između obrazaca straha i izbjegavanja te specifičnih obrazaca ustrajanja kao bitno različitih odgovora na bol. Budući da je prepoznavanje takvih obrazaca preduvjet za kreiranje efikasnih i individualiziranih tretmana regulacije boli, nametnula se potreba za prilagodbom instrumenta hrvat-

a counterproductive strategy and paradoxically results in even more frequent pain-related thoughts (*the rebound effect*), it is accompanied by feelings of helplessness and depressive mood (5,6,8).

The Eustress-Endurance response is characterized by minimizing the significance of pain, ignoring pain sensations, and using distractions, which is accompanied by a positive mood and persistence in activities despite the pain (4). The Avoidance-Endurance Model of Pain is a composite of the previously described coping patterns; it assumes that both the fear-avoidance and endurance patterns can mediate the development and maintenance of chronic pain and disability (4). Compared to the previously described adaptive coping style (also accounted for by this model), maladaptive coping patterns are associated with higher pain levels in patients with low back pain over a six-month follow-up period (9).

A direct measure designed to assess the described pain responses is the Avoidance-Endurance Questionnaire (AEQ), developed by Hasenbring, Hallner, and Rusu (10). The questionnaire consists of three parts examining cognitive, affective, and behavioral responses to pain. Cognitive responses are covered by the subscales: Catastrophizing, Thought suppression, and Helplessness/hopelessness. Affective responses include the subscales: Anxiety/depression and Positive mood despite pain. Behavioural responses include the subscales: Avoidance of social activities, Avoidance of physical activities, Humour and distraction, and Pain persistence.

The main advantage of this questionnaire lies in its ability to differentiate between fear-avoidance patterns and specific endurance patterns as fundamentally distinct pain responses. Since identifying such patterns is a prerequisite for developing effective and individualized pain management treatments, a need emerged to adapt the instrument for the Croatian popu-

skoj populaciji. Sukladno tome, primarni cilj istraživanja bio je ispitati faktorsku strukturu i unutarnju konzistenciju upitnika, a potom i njegovu kriterijsku valjanost. Nastojalo se ispitati mogu li se, na temelju odgovora na bol mjerenih Upitnikom izbjegavanja i ustrajanja, razlikovati ispitanici različite lokacije (križobolja i glavobolja) i trajanja boli.

Spoznaje o stabilnosti naspram varijabilnosti obrazaca odgovora na bol tijekom vremena su rijetke. Osim toga, trenutno nema dostupnih informacija koje bi otkrivale koji situacijski zahtjevi, motivacijski čimbenici ili aspekti povijesti učenja dovode do individualnog obrasca straha i izbjegavanja ili pak obrasca ustrajanja (11). Model izbjegavanja i ustrajanja sugerira da su obrasci odgovora na bol relativno stabilni tijekom vremena. Promjene se mogu prirodno dogoditi tijekom dugotrajnog procesa kronifikacije boli. Iskustvo dugotrajne boli koja se ne umanjuje na primjenu medicinske terapije može, na primjer, dovesti do promjene iz eustres-ustrajanje obrasca suočavanja u distres-ustrajanje ili čak obrazac straha i izbjegavanja (11).

U pogledu vrste boli, istraživanja pokazuju da se pacijenti s glavoboljom razlikuju od ostalih pacijenata s kroničnom boli. Intenzitet boli, razina onesposobljenosti, psihološki distres i kvaliteta života značajno su izraženiji ili narušeniji kod pacijenata s boli drugog tipa u usporedbi s pacijentima koji pate od glavobolje (12). Međutim, pacijenti s kroničnom migrenom pokazuju težak stupanj onesposobljenosti u svakodnevnim aktivnostima i ozbiljno su opterećeni vlastitim sindromom (13). S obzirom na navedeno mogle bi se očekivati razlike u odgovorima na bol između osoba s različitim vrstama boli.

Upitnik izbjegavanja i ustrajanja prethodno je prilagođen i drugim populacijama, primjerice španjolskoj, danskoj i u jednom dijelu (ponašajni odgovori na bol) korejskoj populaciji (14-16).

lation. Accordingly, the primary goal of this study was to examine the factor structure and internal consistency of the questionnaire and subsequently its criterion validity. Furthermore, the study aimed to investigate whether participants with different pain locations (low back pain and headache) and pain durations could be differentiated based on their pain responses measured by the Avoidance-Endurance Questionnaire.

Knowledge of the stability versus variability of pain response patterns over time is rare. In addition, there is currently no information available revealing which situational demands, motivational factors, or aspects of learning history lead to an individual fear-avoidance or endurance pattern (11). The avoidance-endurance model suggests that pain response patterns are relatively stable over time. Changes can occur naturally during the long-term process of pain chronification. For example, the experience of long-term pain that does not diminish with medical therapy may lead to a shift from a eustress-endurance coping pattern to distress-endurance or even a fear-avoidance pattern (11).

Regarding the type of pain, research shows that headache patients differ from other chronic pain patients. Pain intensity, disability level, psychological distress and quality of life are significantly more pronounced or impaired in patients with other types of pain compared to those suffering from headaches (12). However, patients with chronic migraine exhibit a severe degree of disability in daily activities and are seriously burdened by their condition (13). Given the above, differences in pain responses could be expected between individuals with different types of pain.

The Avoidance-Endurance Questionnaire has previously been adapted for other populations as well, such as Spanish, Danish, and partially (for behavioral pain responses) the Korean population (14-16).

METODA

Istraživanje je provedeno online putem LimeSurvey platforme tijekom svibnja 2022. godine na prigodnom uzorku punoljetnih građana. Poveznica na istraživanje distribuirana je putem društvenih mreža, a sudionici su regrutirani metodom snježne grude. Postupak prikupljanja podataka bio je u potpunosti anoniman, a sudjelovanje dobrovoljno. Ispitanicima je na početnoj stranici upitnika objašnjena svrha istraživanja te zajamčena povjerljivost. U bilo kojem trenutku mogli su odustati od ispitivanja.

Glavni uključni kriterij za sudjelovanje bio je da ispitanici imaju osobno iskustvo boli u posljednjih 14 dana (bilo akutne, bilo kronične), što je regulirano uputom na samom početku ispitivanja.

Istraživanje je odobrilo Etičko povjerenstvo Thalassotherapije Opatija te Etičko povjerenstvo za znanstvena istraživanja Filozofskog fakulteta u Rijeci.

SUDIONICI

U istraživanju je sudjelovalo ukupno 313 ispitanika u dobi od 18 do 73 godine (M = 41,97; SD 11,65), od čega su 85 % uzorka činile žene. Većina ispitanika bila je visoko obrazovana, 47 % imalo je završen diplomski studij, 20,1 % poslijediplomski studij, 13,4 % preddiplomski studij, 18,5 % srednju školu te 1 % ispitanika osnovnu školu. Najveći broj ispitanika izvijestio je o glavobolji (28,4 %) i križobolji (27,5 %), a potom o bolovima u ramenu (10,9 %), menstrualnim bolovima (8,6 %), bolovima u vratu (8 %), bolovima u koljenu (4,2 %) i dr. S takvom vrstom boli većina se nosila godinama (57,5 % ispitanika). Nešto manji broj (22 %) naveo je kako takve bolove ima duže od tri mjeseca, dok ostali ispitanici imaju bolove manje od tri mjeseca. Najveći broj ispitanika imao je bolove i u trenutku ispunjavanja upitnika (46,6 %) ili pak u razdoblju od proteklih tjedan dana (42,8 %).

METHOD

The study was conducted online via the LimeSurvey platform during May 2022 on a convenience sample of the adult general population. The link to the survey was distributed through social media, and participants were recruited via snowball sampling. The data collection process was entirely anonymous, and participation was voluntary. On the initial page of the questionnaire, the purpose of the study was explained, and confidentiality was guaranteed. Participants were informed that they could withdraw from the study at any time.

The key inclusion criterion for participation was that respondents had personal experience with pain (either acute or chronic) within the past 14 days, which was regulated by instructions at the very beginning of the study.

The study was approved by the Ethics Committee of Thalassotherapia Opatija and the Ethics Committee for Scientific Research of the Faculty of Humanities and Social Sciences in Rijeka.

PARTICIPANTS

A total of 313 participants aged 18 to 73 years (M = 41.97; SD 11.65) took part in the study, with women comprising 85% of the sample. The majority of participants were highly educated; 47% completed a graduate degree, 20.1% a postgraduate degree, 13.4% an undergraduate degree, 18.5% high school, and 1% completed elementary school. The largest proportion of participants reported headaches (28.4%) and low back pain (27.5%), followed by shoulder pain (10.9%), menstrual pain (8.6%), neck pain (8%), knee pain (4.2%), and others. Most participants had been dealing with this type of pain for years (57.5%). A smaller number (22%) reported having such pain for more than three months, while the remaining participants had experienced pain for less than three months. The majority of participants were in

Učestalost boli u razdoblju od posljednja dva tjedna procijenjena na ljestvici od 0 (nikada) do 10 (konstantno) bila je M = 6,11 (SD 2,97). Najčešći intenzitet boli u posljednja dva tjedna procijenjen na ljestvici od 0 (nikakva bol) do 10 (najgora bol koju mogu zamisliti) bio je M = 4,92 (SD 1,73), što indicira umjerenu bol.

PRIJEVOD UPITNIKA

Upitnik je s engleskog jezika preveo na hrvatski jezik klinički psiholog, a potom ponovno s hrvatskog jezika na engleski profesorica engleskog jezika i književnosti te osoba koja engleski jezik koristi dugi niz godina u svakodnevnoj profesionalnoj i osobnoj komunikaciji. Konačnu povratnu informaciju o integriranoj verziji na hrvatskom jeziku dala je psihologinja te su napravljena dodatna prepravljanja prijevoda. Prije uporabe upitnika u samom istraživanju primijenjen je na uzorku od pet ispitanika iz opće populacije kako bi se provjerila razumljivost čestica.

INSTRUMENTARIJ

Prikupljeni su opći podatci o sudionicima (spol, dob, razina obrazovanja) te o obilježjima boli prema uzoru na prethodna istraživanja boli (npr. 17).

Intenzitet boli procijenjen je numeričkom ljestvicom procjene (engl. *Numerical Rating Scale* – NRS) po uzoru na Jensen i suradnike (18), gdje su ispitanici procjenjivali intenzitet boli od 0 (nikakva bol) do 10 (najgora bol koju mogu zamisliti). Prikupljene su ukupno četiri procjene koje se odnose na razdoblje od proteklih 14 dana, i to najčešći/uobičajeni intenzitet boli, najjači i najslabiji intenzitet te trenutna razina boli. U svrhu ispitivanja valjanosti Upitnika izbjegavanja i ustrajanja rezultati na podljestvicama korelirani su s procjenom najčešćeg intenziteta boli (M = 4,92 (SD 1,73)).

pain at the time of completing the questionnaire (46.6%) or had experienced it within the past week (42.8%). Pain frequency over the last two weeks, assessed on a scale from 0 (never) to 10 (constantly), was M = 6.11 (SD 2.97). The average pain intensity during the last two weeks, assessed on a scale from 0 (no pain) to 10 (worst pain imaginable), was M = 4.92 (SD 1.73), indicating moderate pain.

QUESTIONNAIRE TRANSLATION

The questionnaire was translated from English to Croatian by a clinical psychologist, followed by a back-translation from Croatian to English by a professor of English language and literature and an individual who has been using the English language for many years in their daily professional and personal communication. Final feedback on the integrated Croatian version was provided by a psychologist, after which additional revisions were made to the translation. Prior to the main study, the questionnaire was administered to a pilot sample of five participants from the general population to ensure the clarity of the items.

INSTRUMENTS

General data regarding the participants (sex, age, and education level) and pain characteristics were collected, following previous pain research (e.g., 17).

Pain intensity was assessed using a Numerical Rating Scale (NRS) based on Jensen et al. (18), where participants rated their pain intensity from 0 (no pain) to 10 (worst pain imaginable). A total of four ratings referring to the past 14 days were collected: the most frequent/usual pain intensity, worst and least pain intensity, and the current pain level. To examine the validity of the Avoidance-Endurance Questionnaire, the subscale scores were correlated with the rating of the most frequent pain intensity (M = 4.92 (SD 1.73)).

Odgovori na bol ispitani su primjenom Upitnika izbjegavanja i ustrajanja, engl. *Avoidance-Endurance Questionnaire* (10). Radi se o upitniku samoprocjene koji se sastoji od tri dijela pri čemu oni ispituju afektivne, kognitivne i ponašajne odgovore na bol. Upitnik se sastoji od 49 čestica s odgovorima na ljestvici Likertovog tipa koji se kreću u rasponu od 0 (nikad) do 6 (uvijek). Autori navode devet faktora: anksioznost/depresivnost, pozitivno raspoloženje unatoč boli, bespomoćnost/beznađe, katastrofiziranje, potiskivanje misli, izbjegavanje društvenih aktivnosti, izbjegavanje tjelesnih aktivnosti, humor i distrakcija, perzistiranje unatoč boli. Koeficijenti pouzdanosti u originalnom istraživanju kreću se u rasponu od α = ,76 do α = ,92. Ispitanici su dobili uputu da ispune upitnik s obzirom na vlastito iskustvo boli u posljednjih 14 dana. Od autora je dobivena suglasnost za prijevod upitnika na hrvatski jezik te korištenje u planiranim istraživanjima.

Razina onesposobljenosti zbog boli procijenjena je primjenom Indeksa onesposobljenosti zbog boli (19) koji mjeri razinu do koje bol interferira sa sedam područja života – obitelj, rekreacija, socijalne aktivnosti, posao, seksualni život, briga o sebi, temeljne životne aktivnosti (spavanje, jedenje). Za svako područje ispitanici biraju odgovor u rasponu od 0 (bez onesposobljenosti) do 10 (najgora onesposobljenost). Ukupni rezultat izračunan je kao aritmetička sredina (prosjek) procjena iz svih sedam kategorija. Koeficijent pouzdanosti upitnika dobiven u ovom istraživanju iznosi α = ,89, a prosječni rezultat M = 3,10 (SD 2,02).

Pain responses were assessed using the Avoidance-Endurance Questionnaire (10). This is a self-report instrument consisting of three parts designed to examine affective, cognitive, and behavioral responses to pain. The questionnaire comprises 49 items with Likert-type responses ranging from 0 (never) to 6 (always). The authors identify nine factors: Anxiety/depression, Positive mood despite pain, Helplessness/hopelessness, Catastrophizing, Thought suppression, Avoidance of social activities, Avoidance of physical activities, Humor and distraction, Pain persistence. The reliability coefficients in the original study ranged from α = .76 to α = .92. Participants were instructed to complete the questionnaire based on their own experience of pain over the last 14 days. Consent was obtained from the authors to translate the questionnaire into Croatian and to use it in the planned research.

The level of pain-related disability was assessed using the Pain Disability Index by Tait, Chibnall, and Krause (19), which measures the degree to which pain interferes with seven different areas of life: family/home responsibilities, recreation, social activity, occupation, sexual behavior, self-care, and life-support activity (eating, sleeping). For each category, participants select a response ranging from 0 (no disability) to 10 (worst disability). The total score was calculated as the average of the ratings across all seven categories. The reliability coefficient of the questionnaire obtained in this study was α = .89, with a mean score of M = 3.10 (SD 2.02).

ANALIZA PODATAKA

Statistička obrada provedena je u programu IBM SPSS 25. S ciljem ispitivanja faktorske strukture konstrukata provedene su eksploratorne faktorske analize uz primjenu metode glavnih komponenti i oblimin kosokutnu rotaciju (koja pretpostavlja korelacije među fak-

DATA ANALYSIS

Statistical analysis was conducted using the IBM SPSS 25 software package. To examine the factor structure of the constructs, exploratory factor analyses (EFA) were performed using the principal component analysis method with oblique Oblimin rotation (which assumes cor-

torima). Provedene su tri odvojene faktorske analize, zasebno za svaku kategoriju odgovora na bol, prema uzoru na postupke provedene u razvoju originalnog upitnika. Kako bi se odredio broj faktora razmatrani su Kaiser-Guttmanov kriterij (zadržavanje faktora koji imaju svojstvenu vrijednost veću od 1) i Cattellov *scree-test*. U priloženim tablicama prikazana su konačna faktorska rješenja, odabrana kao zadovoljavajuća, nakon razmatranja svih kriterija te izostavljanja čestica tamo gdje je to bilo nužno. Za sve ljestvice dobivene temeljem provedenih faktorskih analiza ispitana je pouzdanost računanjem koeficijenta unutarnje konzistencije Cronbach α.

REZULTATI

Ispitana je prikladnost korelacijskih matrica za provedbu faktorske analize putem Kaiser-Meyer-Olkin (KMO) vrijednosti (veća od ,60) i Bartlettovog testa sfericiteta ($p < ,05$). Ovaj uvjet je zadovoljen za sve faktorske analize.

Afektivni odgovori na bol

Dio upitnika koji ispituje afektivne odgovore na bol sastoji se od deset čestica. Provedena faktorska analiza upućuje na ekstrakciju dvaju faktora kojima je objašnjeno 71,31 % varijance. Prvi faktor predstavlja ljestvicu anksioznost/depresivnost, a drugi ljestvicu pozitivno raspoloženje unatoč boli. Rezultati su prikazani u tablici 1. Rezultati analize pouzdanosti upućuju na visoku pouzdanost obje ljestvice. Koeficijent unutarnje konzistencije za ljestvicu anksioznost/depresivnost iznosi $\alpha = ,90$, a za ljestvicu pozitivno raspoloženje unatoč boli $\alpha = ,93$.

Kognitivni odgovori na bol

Kognitivne odgovore na bol ispituje 16 čestica. Rezultati faktorske analize upućuju na ekstrakciju triju faktora kojima je objašnjeno 64,44 %

relations among factors). Three separate factor analyses were conducted, one for each category of pain response, following the procedures used in the development of the original questionnaire. To determine the number of factors to be retained, the Kaiser-Guttman criterion (retaining factors with eigenvalues greater than 1) and Cattell's scree test were considered. The attached tables present the final factor solutions, selected after considering all criteria and omitting items where necessary. For all scales derived from the factor analyses, reliability was tested by calculating Cronbach's alpha internal consistency coefficient.

RESULTS

The suitability of the correlation matrices for factor analysis was assessed using the Kaiser–Meyer–Olkin (KMO) value (greater than .60) and Bartlett's test of sphericity ($p < .05$). This condition was satisfied for all factor analyses.

Affective Pain Responses

The part of the questionnaire examining affective responses to pain consists of ten items. The factor analysis indicated the extraction of two factors, which explained 71.31% of the total variance. The first factor represents the Anxiety/depression scale, and the second represents the Positive mood despite pain scale. The results are presented in Table 1. The results of the reliability analysis indicate high reliability for both scales. The internal consistency coefficient for the Anxiety/depression scale was $\alpha = .90$, and for the Positive mood despite pain scale, $\alpha = .93$.

Cognitive Pain Responses

Cognitive responses to pain were examined using 16 items. The factor analysis results suggested the extraction of three factors, explaining 64.44% of the variance. The first factor rep-

TABLICA 1. Konačno faktorsko rješenje s faktorskim zasićenjima za afektivne čestice; aritmetička sredina i standardna devijacija za svaku česticu.
TABLE 1. Final Factor Solution with Factor Loadings for Affective Items; Means and Standard Deviations for Each Item.

		Faktor / Factor		M	SD
Redni broj čestice / Item number	**U posljednjih 14 dana, kad sam bio/la u bolovima, osjećao/la sam se / Over the past 14 days, when I was in pain, I felt**	**1**	**2**		
6.	Neodlučno/oprezno / Hesitant/wary	**.87**	.28	2.53	1.62
4.	Žalosno, utučeno / Sad/blue	**.77**	-.10	2.26	1.51
1.	Potišteno / Down	**.77**	-.09	2.57	1.58
8.	Ranjivo, osjetljivo / Vulnerable, sensitive	**.74**	-.12	3.15	1.49
7.	Nervozno, nelagodno / Nervous, uneasy	**.70**	-.16	3.22	1.36
3.	Anksiozno, napeto / Anxious, tense	**.69**	-.19	2.90	1.55
10.	Depresivno/turobno / Depressed/gloomy	**.67**	-.24	2.03	1.62
2.	Sretno, bez obzira na bol / Happy, despite the pain	-.05	**.90**	3.18	1.40
9.	Optimistično, bez obzira na bol / Optimistic, despite the pain	-.04	**.88**	3.34	1.37
5.	Veselo, dobre volje, unatoč boli / Cheerful, in good mood, despite the pain	-.14	**.85**	3.14	1.39
	Svojstvena vrijednost / Eigenvalue	5.96	1.18		
	% varijance / % variance	59.56	11.75		
Faktor 1 / Factor 1	Anksioznost/depresivnost / Anxiety/depression				
Faktor 2 / Factor 2	Pozitivno raspoloženje unatoč boli / Positive mood despite pain				

varijance. Prvi faktor predstavlja ljestvicu bespomoćnost/beznađe, drugi potiskivanje misli, a treći katastrofiziranje. Rezultati su prikazani u tablici 2. Koeficijent unutarnje konzistencije za ljestvicu bespomoćnost/beznađe iznosi α = ,91, za ljestvicu katastrofiziranje također α = ,91, a za ljestvicu potiskivanje misli α = ,79.

Ponašajni odgovori na bol

Ponašajne odgovore na bol ispituju 23 čestice. Originalni upitnik konstruiran je tako da postoje zasebne procjene o ponašanju u dva uvjeta: u slučaju blage boli te u slučaju jake boli. S obzirom da su dobiveni rezultati faktorske analize na ovom uzorku isti za oba uvjeta, bit će prikazana struktura rezultata dobivenih na procjenama ponašanja za jaku bol. Daljnje analize također su provedene na procjenama za jaku bol. Kaiser-Guttmanov kriterij ukazuje na četiri faktora, a Cattellov *scree-plot* na dva faktora (moguće i četiri faktora, iako je puno veći pad svojstvene vrijednosti nakon drugog faktora). Rješenje od četiri faktora nije zadovoresents the Helplessness/hopelessness scale, the second the Thought suppression scale, and the third the Catastrophizing scale. The results are presented in Table 2. Internal consistency coefficients were α = .91 for Helplessness/hopelessness, α = .91 for Catastrophizing, and α = .79 for Thought suppression.

Behavioral Pain Responses

Behavioral responses to pain were examined using 23 items. The original questionnaire is designed to provide separate assessments for two conditions: mild pain and severe pain. Since the factor analysis results obtained on this sample were identical for both conditions, only the structure for severe pain is presented. Further analyses were also conducted on the assessments for severe pain. While the Kaiser-Guttman criterion suggested four factors, Cattell's scree plot indicated two (potentially four, although the drop in eigenvalue was significantly sharper after the second factor). The four-factor solution was unsatisfactory due to

TABLICA 2. Konačno faktorsko rješenje s faktorskim zasićenjima za kognitivne čestice; aritmetička sredina i standardna devijacija za svaku česticu.
TABLE 2. Final Factor Solution with Factor Loadings for Cognitive Items; Means and Standard Deviations for Each Item.

		Faktor / Factor			M	SD
Redni broj čestice / Item number	**Kad postanem svjestan/na svoje boli, ova misao prođe mi kroz glavu / When I become aware of my pain, the following thought crosses my mind**	**1**	**2**	**3**		
9.	Ništa više ne pomaže! / Nothing helps anymore!	**.85**	-.04	-.03	1.40	1.62
14.	Koliko dugo još moram trpiti ovakvu bol? / How long do I have to put up with pain like this?	**.81**	.01	-.06	2.31	1.77
6.	Uskoro neću moći više izdržati. / I will not be able to endure it any longer.	**.75**	.03	.05	1.39	1.42
2.	Čini se da bol neće nikada popustiti. / It seems the pain will never ease up.	**.75**	.01	.04	2.39	1.68
3.	Ova prokleta bol sve pokvari. / This damned pain spoils everything.	**.75**	.06	.00	2.47	1.75
1.	Zašto moram nositi ovako težak teret? / Why do I have to bear this heavy burden?	**.74**	.06	-.04	1.79	1.66
11.	Život nije vrijedno živjeti s ovakvom boli. / Life is hardly worth living with pain like this.	**.74**	-.14	.00	0.70	1.30
8.	Jao, nikad mi neće biti bolje. / Oh, it is not going to get any better.	**.70**	.05	.15	1.44	1.57
12.	Što da radim ako se ponovno pogorša? / What will I do if it gets worse again?	**.59**	.04	.18	1.99	1.68
16.	Važno je da se sad ne prepustim. / It is important not to let myself go now.	-.05	**.83**	.04	2.42	1.91
10.	Saberi se! / Pull yourself together!	.09	**.81**	.00	2.54	1.87
13.	Ne radi toliku frku! / Don't make such a fuss!	-.14	**.78**	.10	2.14	1.75
5.	Važno je da se sad držim. / It is important for me now to hold on.	.16	**.71**	-.13	3.19	1.74
15.	Nije valjda neka ozbiljna bolest? / It is not a serious illness, is it?	.05	.00	**.92**	1.39	1.57
4.	Nemam valjda tumor? / I can't have a tumor, can I?	-.01	.00	**.90**	1.18	1.43
7.	Pitam se imam li istu ozbiljnu bolest kao … / I wonder if I have the same serious illness as …	.10	.02	**.86**	1.34	1.52
	Svojstvena vrijednost / Eigenvalue	6.64	2.18	1.49		
	% varijance / % variance	41.50	13.60	9.34		
Faktor 1 / Factor 1	Bespomoćnost/beznađe / Helplessness/hopelessness					
Faktor 2 / Factor 2	Potiskivanje misli / Thought suppression					
Faktor 3 / Factor 3	Katastrofiziranje / Catastrophizing					

ljavajuće zbog višestrukih saturacija i sadržajne neinterpretabilnosti. Ispitano je dvofaktorsko rješenje te su tri čestice isključene zbog višestrukih saturacija (12. *... održim svoje dogovore, iako mi nije do toga*, 13. *... od srca se smijem, bez obzira na bol*, 19. *... nastavljam raditi to što radim, bez obzira na sve*). Nakon isključivanja ovih čestica dobiveno je zadovoljavajuće dvofaktorsko rješenje, kojim je objašnjeno 52,76 % varijance. Čestica 15. *... kažem si: „Nemam sad vremena za ovo!"* je zadržana i pridružena faktoru s većom

cross-loadings and a lack of substantive interpretability. Consequently, a two-factor solution was tested. Three items were excluded due to cross-loadings (12. *...I keep my appointments, even if I don't feel up to it*, 13. *...I laugh heartily, anyway*, 19. *...I carry on doing what I'm doing, no matter what).* After excluding these items, a satisfactory two-factor solution was obtained, explaining 52.76 % of the variance. Item 15. *...I tell myself: 'I don't have time for this right now!'* was retained and assigned to the factor with

saturacijom (2. faktor). Prvi faktor predstavlja ljestvicu izbjegavanje društvenih i tjelesnih aktivnosti, a drugi ponašanje ustrajanja. Rezultati su prikazani u tablici 3. Koeficijent unutarnje konzistencije za ljestvicu izbjegavanje društvenih i tjelesnih aktivnosti iznosi α = ,94, za ljestvicu ponašanje ustrajanja α = ,77.

Korelacije između dobivenih faktora prikazane su u tablici 4.

the higher loading (Factor 2). The first factor represents the Avoidance of social and physical activities scale, and the second represents Behavioral endurance. The results are shown in Table 3. The internal consistency coefficient for Avoidance of social and physical activities was α = .94, and for Behavioral endurance α = .77.

The correlations between the obtained factors are shown in Table 4.

TABLICA 3. Konačno faktorsko rješenje s faktorskim zasićenjima za ponašajne čestice; aritmetička sredina i standardna devijacija za svaku česticu.
TABLE 3. Final Factor Solution with Factor Loadings for Behavioral Items; Means and Standard Deviations for Each Item.

Redni broj čestice / Item number	Kad me boli… / When I am in pain…	Faktor / Factor		M	SD
		1	2		
7.	Otkažem privatne dogovore / I cancel private appointments	**.90**	.07	3.25	1.71
8.	Otkažem posjet nekom događaju / I cancel a visit to an event	**.86**	.08	3.41	1.84
14.	Prekinem sastanak s prijateljima / I break off meeting with friends	**.83**	.12	2.59	1.77
21.	Izbjegavam društvo drugih ljudi / I avoid other people's company	**.83**	.00	3.19	1.73
2.	Izbjegavam posjećivati prijatelje / I avoid visiting friends	**.82**	.04	3.37	1.85
18.	Nazovem svoje goste kako bih otkazao/la poziv / I call my guests to cancel the invitation	**.81**	.02	2.51	1.88
9.	Izbjegavam fizički naporne aktivnosti / I avoid physically strenuous activities	**.80**	-.10	3.95	1.57
10.	Izbjegavam bavljenje sportom / I avoid doing sports	**.76**	-.07	4.06	1.79
1.	Prestanem raditi fizički zahtjevne aktivnosti / I stop physically demanding activities	**.71**	-.08	3.86	1.51
3.	Odmorim se / I take a rest	**.69**	-.13	4.23	1.37
20.	Prepustim drugima naporne aktivnosti / I hand over strenuous activities	**.61**	-.15	3.25	1.59
11.	Kažem si: "Ne radi toliku frku!" / I tell myself: "Don't make such a fuss!"	.00	**.76**	2.36	1.86
23.	Odvraćam si pažnju tako što radim sitne poslove po kući / I distract doing little jobs at home	-.23	**.62**	2.26	1.62
6.	Stisnem zube / I clench my teeth	-.03	**.61**	3.56	1.72
15.	Kažem si: "Nemam sad vremena za ovo!" / I tell myself: "I don't have time for this right now!"	**.34**	**.60**	2.77	1.73
17.	Pustim svojoj obitelji da me nagovore na stvari, iako mi nije do toga / I let my family persuade me to do things, even when I don't feel like it	-.25	**.55**	2.17	1.54
22.	Odvraćam si pažnju nekom tjelesnom aktivnosti / I distract with physical activity	-.30	**.53**	2.03	1.68
5.	Nastojim ne obraćati pažnju na bol / I try not to take any notice of it	-.25	**.48**	2.98	1.53
16.	Gledam na to sa smijehom / I take it with a laugh	-.30	**.47**	2.09	1.67
4.	Pobrinem se da se ne prepustim / I take care not to let myself go	.22	**.44**	3.47	1.73
	Svojstvena vrijednost / Eigenvalue	7.92	2.63		
	% varijance / % variance	39.61	13.16		
Faktor 1 / Factor 1	Izbjegavanje društvenih i tjelesnih aktivnosti / Avoidance of social and physical activities				
Faktor 2 / Factor 2	Ponašanje ustrajanja / Behavioral endurance				

TABLICA 4. Korelacije između dobivenih faktora Upitnika izbjegavanja i ustrajanja.
TABLE 4. Correlations Between the Obtained Factors of the Avoidance-Endurance Questionnaire.

	ADS	PMS	HHS	CTS	TSS	AAS	BES
ADS	1						
PMS	-.65**	1					
HHS	.59**	-.48**	1				
CTS	.37**	-.31**	.53**	1			
TSS	.13*	.06	.29**	.23**	1		
AAS	.37**	-.28**	.24**	.14*	.11	1	
BES	-.16**	.32**	-.01	-.04	.38**	-.35**	1

**p<.01; *p<.05
ADS – Anksioznost/depresivnost; PMS – Pozitivno raspoloženje unatoč boli; HHS – Bespomoćnost/beznađe; CTS – Katastrofiziranje; TSS – Potiskivanje misli; AAS – Izbjegavanje društvenih i tjelesnih aktivnosti; BES – Ponašanje ustrajanja
/ ADS – Anxiety/depression; PMS – Positive mood despite pain; HHS – Helplessness/hopelessness; CTS – Catastrophizing; TSS – Thought suppression; AAS – Avoidance of social and physical activities; BES – Behavioral endurance

Kriterijska valjanost

U svrhu utvrđivanja kriterijske valjanosti Upitnika izbjegavanja i ustrajanja provedene su korelacijske analize podljestvica s mjerama intenziteta boli i razine onesposobljenosti zbog boli. Ove dvije varijable najčešće su ispitivane mjere ishoda u studijama, npr. križobolje (10). Rezultati pokazuju da su sve varijable sadržane u odgovoru straha i izbjegavanja (anksioznost/depresivnost, bespomoćnost/beznađe, katastrofiziranje, izbjegavanje društvenih i tjelesnih aktivnosti) u pozitivnoj korelaciji s intenzitetom boli, kao i varijabla potiskivanja misli (Pearsonovi koeficijenti korelacije kreću se u rasponu od r = ,15 do r = ,40; p < ,01). Pozitivno raspoloženje unatoč boli u negativnoj je korelaciji s intenzitetom boli (r = -,24; p < ,01), dok ponašanje ustrajanja nije u značajnoj korelaciji s intenzitetom boli. Nadalje, sve varijable odgovora straha i izbjegavanja u pozitivnoj su korelaciji s onesposobljenošću (Pearsonovi koeficijenti korelacije kreću se u rasponu od r = 0,30 do r = 0,53; p < ,01), dok su afektivne i ponašajne varijable odgovora ustrajanja (pozitivno raspoloženje unatoč boli i ponašanje ustrajanja) u negativnoj korelaciji s onesposobljenošću zbog boli (r = -,42 i r = -,17; p < ,01). Potiskivanje misli pokazuje tendenciju k pozitivnoj povezanosti s razinom onesposobljenosti (r = ,12; p < ,05). Rezultati su prikazani u tablici 5.

Criterion Validity

To establish the criterion validity of the Avoidance-Endurance Questionnaire, correlation analyses were conducted between the subscales and measures of pain intensity and pain-related disability. These two variables are most commonly used as outcome measures in, for example, low back pain studies (10). The results indicate that all variables comprising the fear-avoidance response (anxiety/depression, helplessness/hopelessness, catastrophizing, avoidance of social and physical activities) are positively correlated with pain intensity, as is the thought suppression variable (Pearson correlation coefficients ranged from r = .15 to r = .40; p < .01). Positive mood despite pain is negatively correlated with pain intensity (r = -.24; p < .01), whereas behavioral endurance is not significantly correlated with pain intensity. Furthermore, all variables of the fear-avoidance response are positively correlated with pain disability (Pearson correlation coefficients ranged from r = .30 to r = .53; p < .01), whereas the affective and behavioral variables of the endurance response (positive mood despite pain and behavioral endurance) are negatively correlated with pain-related disability (r = -.42 and r = -.17; p < .01). Thought suppression shows a tendency toward a positive correlation with the level of disability (r = .12; p < .05). The results are presented in Table 5.

TABLICA 5. Pearsonovi koeficijenti korelacije između podljestvica Upitnika izbjegavanja i ustrajanja i validacijskih varijabli (intenzitet boli i onesposobljenost zbog boli).
TABLE 5. Pearson Correlation Coefficients Between the Avoidance-Endurance Questionnaire Subscales and Validation Measures (Pain Intensity and Pain-Related Disability).

Odgovor na bol / Pain response	Intenzitet boli / Pain intensity	Onesposobljenost zbog boli / Pain-related disability
Anksioznost/depresivnost / Anxiety/depression	.35**	.47**
Pozitivno raspoloženje unatoč boli / Positive mood despite pain	-.24**	-.42**
Bespomoćnost/beznađe / Helplessness/hopelessness	.40**	.49**
Katastrofiziranje / Catastrophizing	.20**	.30**
Potiskivanje misli / Thought suppression	.19**	.12*
Izbjegavanje društvenih i tjelesnih aktivnosti / Avoidance of social and physical activities	.15**	.53**
Ponašanje ustrajanja / Behavioral endurance	.10	-.17**

**p<.01; *p<.05

Razlike u odgovorima na bol između ispitanika s različitom lokacijom boli

Kako bi se ispitale eventualne razlike u odgovorima na bol između ispitanika s različitom lokacijom boli, odnosno onih koji su imali glavobolju (N = 89) i onih koji su imali križobolju (N = 86) proveden je niz t-testova za nezavisne uzorke. Potrebno je naglasiti da je pritom provedeno više usporedbi na različitim kriterijskim mjerama. Zbog eksploratorne naravi istraživanja nije primijenjena korekcija za višestruka testiranja pa dobivene statistički značajne razlike treba interpretirati s oprezom. Rezultati pokazuju da se ispitanici razlikuju u rezultatima na ljestvici pozitivno raspoloženje unatoč boli (t (173) = 2,55, p < ,05, *d* = 0,39) i ljestvici izbjegavanje društvenih i tjelesnih aktivnosti (t (173) = 2,11, p < ,05, *d* = 0,32). Ispitanici s glavoboljom imaju u prosjeku niži rezultat na ljestvici pozitivno raspoloženje unatoč boli i viši rezultat na ljestvici izbjegavanje društvenih i tjelesnih aktivnosti u odnosu na ispitanike s križoboljom. Dobivene vrijednosti Cohenovog *d* u oba slučaja ukazuju na efekte male do srednje veličine. U ostalim odgovorima na bol nisu pronađene statistički značajne razlike. Rezultati su prikazani u tablici 6.

Differences in Pain Responses Between Participants with Different Pain Locations

To examine potential differences in pain responses between participants with different pain localizations, specifically headache (N = 89) and low back pain (N = 86), a series of independent samples t-tests was conducted. It should be noted that multiple comparisons were conducted across different criterion measures. Due to the exploratory nature of the study, no correction for multiple testing was applied; therefore, the obtained statistically significant differences should be interpreted with caution. The results show that participants differ significantly on the Positive mood despite pain scale (t (173) = 2.55, p < .05, *d* = 0.39) and the Avoidance of social and physical activities scale (t (173) = 2.11, p < .05, *d* = 0.32). Specifically, participants with headaches had, on average, lower scores for Positive mood despite pain and higher scores for Avoidance of social and physical activities compared to those with low back pain. In both instances, the calculated Cohen's *d* values indicate small to medium effect sizes. No other statistically significant differences were found in pain responses. The results are presented in Table 6.

TABLICA 6. Razlike u odgovorima na bol između ispitanika s glavoboljom i ispitanika s križoboljom.
TABLE 6. Differences in Pain Responses Between Participants with Headache and Participants with Low Back Pain.

Odgovor na bol / Pain response	Vrsta boli / Type of pain	N	M	SD	t	df	p	Cohenov *d* / Cohen's *d*
Pozitivno raspoloženje unatoč boli / Positive mood despite pain	Glavobolja / Headache	89	2.95	1.33	2.55*	173	.012	.39
	Križobolja / Low back pain	86	3.44	1.18				
Izbjegavanje društvenih i tjelesnih aktivnosti / Avoidance of social and physical activities	Glavobolja / Headache	89	3.65	1.31	2.11*	173	.037	.32
	Križobolja / Lower back pain	86	3.27	1.07				

*p<.05

Razlike u odgovorima na bol između ispitanika s različitim trajanjem boli

Ispitane su i razlike u odgovorima na bol s obzirom na trajanje boli. Ispitanici su podijeljeni u tri skupine: *Imam bolove manje od tri mjeseca* (N = 64), *Imam bolove više od tri mjeseca* (N = 69) i *Imam bolove godinama* (N = 180). Bol koja traje ili se ponavlja duže od tri mjeseca definirana je kao kronična bol (20) pa je taj kriterij uzet kao osnova za podjelu ispitanika. Sudionici koji imaju bol manje od tri mjeseca čine skupinu s akutnom boli, dok preostali ispitanici ulaze u kategoriju kronične boli. Kako bi se unutar kronične faze napravila razlika između onih koji su tek prešli u fazu kronifikacije boli i onih koji su u njoj duže vrijeme, podijeljeni su u skupinu kod koje bol traje više od tri mjeseca i skupinu kod koje bol traje godinama. Proveden je niz jednosmjernih ANOVA. Kao i za prethodno istraživačko pitanje, zbog eksploratorne naravi istraživanja nije primijenjena korekcija za višestruka testiranja pa dobivene statistički značajne razlike treba interpretirati s oprezom. Za varijable pozitivno raspoloženje unatoč boli, bespomoćnost/beznađe i katastrofiziranje nije bio zadovoljen preduvjet homogenosti varijance testiran Levenovim testom pa su za ove zavisne varijable navedeni rezultati Welch F testa. Provedeni postupci upućuju na značajan efekt trajanja boli na pozitivno raspoloženje unatoč boli (F_{Welch} (2, 143,51) = 3,70, p < ,05, ω^2 = 0,04). Games-Howell *post hoc test* pokazuje da ispitanici koji imaju bolove manje od tri

Differences in Pain Responses Among Participants with Different Pain Durations

Differences in pain responses were also examined regarding pain duration. Participants were divided into three groups: *I've been having pain for less than three months* (N = 64), *I've been having pain for more than three months* (N = 69), *I've been having pain for years* (N = 180). Pain that persists or recurs for longer than three months is defined as chronic pain (20), hence, this criterion was used as the basis for dividing the participants. Participants experiencing pain for less than three months formed the acute pain group, while the remaining participants fell into the chronic pain category. To distinguish between early and late stages within the chronic phase, participants were divided into a newly transitioned group (pain lasting more than three months) and a long-term group (pain persisting for years). A series of one-way ANOVAs was conducted. As with the previous research question, due to the exploratory nature of the study, no correction for multiple testing was applied; therefore, the obtained statistically significant differences should be interpreted with caution. For the variables Positive mood despite pain, Helplessness/hopelessness and Catastrophizing, the assumption of homogeneity of variance (Levene's test) was violated, so Welch's F-test results are reported. The analysis indicated a significant effect of pain duration on Positive mood despite pain (F_{Welch} (2, 143.51) = 3.70, p < .05, ω^2 = 0.04). The Games-Howell post hoc

mjeseca imaju značajno viši prosječan rezultat u usporedbi s ispitanicima koji imaju bolove godinama. Između ostalih skupina nisu dobivene značajne razlike. Dobiven je također značajan efekt trajanja boli na rezultate na ljestvici bespomoćnost/beznađe (F_{Welch} (2, 146,58) = 4,82, p < ,01, ω^2 = 0,05). Games-Howell *post hoc* test pokazuje da osobe koje imaju bolove manje od tri mjeseca imaju značajno niži prosječan rezultat u usporedbi s osobama koje imaju bolove godinama. Dobivene vrijednosti omega-kvadrata u oba slučaja ukazuju na efekte male do srednje veličine. Između ostalih skupina nisu dobivene značajne razlike. Rezultati su prikazani u tablici 7.

U ostalim odgovorima na bol ispitanici različitog trajanja boli se ne razlikuju.

test showed that participants with pain that lasted less than three months had significantly higher average scores compared to those who had been in pain for years. A significant effect was also found for Helplessness/hopelessness (F_{Welch} (2, 146.58) = 4.82, p < .01, ω^2 = 0.05). The Games-Howell post hoc test revealed that individuals with pain for less than three months had significantly lower average scores than those who had been in pain for years. The obtained omega-squared values in both cases suggest small to medium effect sizes. No significant differences were found between other groups. Results are presented in Table 7.

No significant differences were found across the remaining pain responses among participants with different pain durations.

RASPRAVA

Cilj ovog istraživanja bio je prilagoditi Upitnik izbjegavanja i ustrajanja hrvatskoj populaciji. Rezultati su pokazali da prva dva dijela upitnika, oni koji ispituju afektivne i kognitivne odgovore na bol, imaju faktorsku strukturu istovjetnu originalnoj verziji. U dijelu upitnika koji ispituje ponašajne odgovore na bol, slika je ponešto drukčija. Autori upitnika navode izdvajanje četiri faktora: izbjegavanje društvenih

DISCUSSION

The aim of this study was to adapt the Avoidance-Endurance Questionnaire for the Croatian population. The results demonstrated that the first two parts of the questionnaire, which assess affective and cognitive responses to pain, have a factor structure identical to the original version. However, regarding the section of the questionnaire examining behavioral responses to pain, the results were somewhat

TABLICA 7. Razlike u odgovorima na bol između ispitanika različitog trajanja boli.
TABLE 7. Differences in Pain Responses Between Participants with Different Pain Durations.

Odgovor na bol / Pain response	Trajanje boli / Pain duration	N	M	SD	Welch F / Welch's F	df	p	ω^2	Games-Howell (p<.05)
Pozitivno raspoloženje unatoč boli / Positive mood despite pain	< 3 mjeseca (1) / < 3 months (1)	64	3.52	1.19	3.70*	2,143.51	.027	.04	(1) > (3)
	> 3 mjeseca (2) / > 3 months (2)	69	3.36	1.14					
	Godinama (3) / Years (3)	180	3.06	1.36					
Bespomoćnost/beznađe / Helplessness/hopelessness	< 3 mjeseca (1) / < 3 months (1)	64	1.48	1.02	4.82**	2,146.58	.009	.05	(1) < (3)
	> 3 mjeseca (2) / > 3 months (2)	68	1.55	1.05					
	Godinama (3) / Years (3)	180	1.92	1.29					

**p<.01; *p<.05

aktivnosti, izbjegavanje tjelesnih aktivnosti, humor/distrakcija i perzistiranje unatoč boli (10). U ovom istraživanju dobivena je struktura od dvaju faktora pri čemu jedan čine sve čestice koje se odnose na izbjegavajuća ponašanja (bilo koje vrste aktivnosti), dok drugi čine čestice koje opisuju ponašanja ustrajanja te obuhvaćaju humor/distrakciju i perzistiranje unatoč boli. Ovakav rezultat teorijski je smislen jer obuhvaća ponašajne aspekte dvaju temeljnih obrasaca reagiranja na bol, izbjegavanje i ustrajanje. K tome u upitniku na temelju kojeg je konstruiran originalni Upitnik izbjegavanja i ustrajanja, *Kiel Pain Inventory (KPI)*, čestice koje opisuju humor i distrakciju, kao i čestice perzistiranja pripadaju istom faktoru, *Behavioral Endurance* (citirano prema 10). Radi lakše usporedivosti s istraživanjima u kojima je korišten KPI, autori Upitnika izbjegavanja i ustrajanja skloni su navoditi rezultate i za ukupnu *Behavioral Endurance* ljestvicu (10). Validacija korejske verzije upitnika također upućuje na izdvajanje dvaju faktora koje nazivaju ponašanje izbjegavanja i ponašanje ustrajanja (16). Validacija španjolske verzije ne ukazuje na točnu replikaciju faktorske strukture originala te otkriva osam faktora. Depresija i anksioznost pritom čine dva zasebna faktora, za razliku od jednog faktora u originalnoj verziji Upitnika. Dodatno, čestice koje izvorno čine faktor pozitivno raspoloženje unatoč boli pokazale su najveća zasićenja na faktoru depresije, ali u inverznom smjeru. Ostali dobiveni faktori su: katastrofiziranje, bespomoćnost/beznađe, izbjegavanje društvenih i tjelesnih aktivnosti, ponašanje perzistiranja/distrakcija, ignoriranje boli i humor (14). S druge strane, danska validacija otkriva dobro pristajanje modela za afektivne čestice, dobro do prihvatljivo za kognitivne čestice te prihvatljivo do slabo pristajanje modela za ponašajne čestice (15).

Rezultati dobiveni na hrvatskom uzorku ukazuju na stabilnu faktorsku strukturu i afektivnih i kognitivnih čestica, dok se struktura

different. While the original authors identified four distinct factors: Avoidance of social activities, Avoidance of physical activities, Humor/distraction, and Pain persistence (10), this study yielded a two-factor structure. The first factor comprises all items related to avoidance behaviors (across all activity types). The second factor comprises items describing endurance behaviors, encompassing both humor/distraction and pain persistence. This result is theoretically sound as it captures the behavioral components of the two fundamental patterns of pain response: avoidance and endurance. Furthermore, in the *Kiel Pain Inventory (KPI),* the instrument upon which the AEQ was originally based, items describing humor/distraction, as well as persistence, belong to the same factor: Behavioral Endurance (as cited in 10). To facilitate comparability with studies using the KPI, the authors of the AEQ tend to report results for the total Behavioral Endurance scale as well (10). Finally, the validation of the Korean version of the questionnaire also suggests the extraction of two factors, labeled Avoidance behavior and Endurance behavior (16). The validation of the Spanish version did not yield an exact replication of the original factor structure and points to eight factors. In that version, Depression and Anxiety constitute two separate factors, unlike the single factor in the original version. Additionally, items originally comprising the Positive mood despite pain factor showed the highest loadings on the Depression factor, albeit in the inverse direction. Other obtained factors included Catastrophizing, Helplessness/hopelessness, Avoidance of social and physical activities, Persistence/distraction behavior, Ignoring pain, and Humor (14). On the other hand, the Danish validation revealed a good model fit for affective items, good to acceptable fit for cognitive items, and acceptable to poor fit for behavioral items (15).

In conclusion, the results obtained on the Croatian sample indicate a stable factor structure

ponašajnih čestica, sukladno drugim prilagodbama, razlikuje od originala. Sve ljestvice dobivene faktorskim analizama pokazuju zadovoljavajuću pouzdanost (α > ,70). U svrhu utvrđivanja kriterijske valjanosti Upitnika izbjegavanja i ustrajanja provedene su korelacijske analize podljestvica s mjerama intenziteta boli i razine onesposobljenosti zbog boli. Dobiveni rezultati u velikoj mjeri prate teorijske postavke modela izbjegavanja i ustrajanja, što potvrđuje dobru kriterijsku valjanost upitnika. Odgovor straha i izbjegavanja, kao i odgovori ustrajanja, prikazuju maladaptivne odgovore na bol koji dovode do njezina održavanja, pa se stoga očekuje da bi sve varijable koje opisuju maladaptivne obrasce suočavanja trebale biti u pozitivnoj korelaciji s intenzitetom boli. Literaturni podatci, međutim, upućuju i na određene nekonzistentnosti u pojedinim transverzalnim istraživanjima gdje se navodi izostanak korelacije ili niske pozitivne korelacije između ponašanja ustrajanja u aktivnostima i intenziteta boli (npr. 10,21). Nadalje, kao što model sugerira, varijable koje pripadaju odgovoru straha i izbjegavanja (anksioznost/depresivnost, bespomoćnost/beznađe, katastrofiziranje, izbjegavanje društvenih i tjelesnih aktivnosti) trebale bi biti pozitivno povezane s razinom onesposobljenosti, dok bi varijable koje opisuju odgovor ustrajanja (pozitivno raspoloženje unatoč boli, potiskivanje misli, ponašanje ustrajanja) trebale biti negativno povezane sa samoprocijenjenom onesposobljenošću zbog boli. Podatci iz originalnog istraživanja ukazuju na značajnu negativnu povezanost između pozitivnog raspoloženja (kao emocionalnog odgovora na bol povezanog s ustrajanjem) i onesposobljenosti, dok se korelacije između potiskivanja misli i onesposobljenosti zbog boli nisu pokazale značajnima (10). U ovom istraživanju, u skladu s očekivanim, sve varijable sadržane u odgovoru straha i izbjegavanja u značajnoj su pozitivnoj korelaciji s intenzitetom boli, kao i razinom onesposobljenosti zbog boli. U pogledu odgovora ustrajanja, odnosi su se pokazali kompleksni-

for both affective and cognitive items, while the structure of behavioral items, consistently with other adaptations, differs from the original model. All scales obtained through factor analyses demonstrated satisfactory reliability (α > .70). To establish the criterion validity of the Avoidance-Endurance Questionnaire, correlation analyses were conducted between the subscales and measures of pain intensity and pain-related disability. The obtained results largely align with the theoretical tenets of the Avoidance-endurance model, thereby confirming the good criterion validity of the questionnaire. Both the fear-avoidance response and endurance responses represent maladaptive pain responses that contribute to its maintenance; hence, all variables describing maladaptive coping patterns are expected to be positively correlated with pain intensity. However, the literature also points to certain inconsistencies in cross-sectional studies that report an absence of correlation or low positive correlations between behavioral endurance and pain intensity (e.g., 10,21). Furthermore, as suggested by the model, variables belonging to the fear-avoidance response (anxiety/depression, helplessness/hopelessness, catastrophizing, avoidance of social and physical activities) should be positively associated with the level of disability, whereas variables describing endurance response (positive mood despite pain, thought suppression, behavioral endurance) should be negatively associated with self-reported pain disability. Data from the original study indicate a significant negative association between positive mood (as an emotional pain response associated with endurance) and disability, while the correlations between thought suppression and pain-related disability did not prove to be significant (10). In the current study, as expected, all variables comprised within the fear-avoidance response are significantly and positively correlated with both pain intensity and pain-related disability. Regarding the endurance response, the relationships

jima, iako su sukladni ranije utvrđenim nekonzistentnostima: ponašanje ustrajanja nije u značajnoj korelaciji s intenzitetom boli, ali jest u očekivanoj negativnoj korelaciji s onesposobljenošću. Pozitivno raspoloženje unatoč boli u negativnoj je korelaciji s intenzitetom boli i onesposobljenošću, što se sve može povezati s teorijskim postavkama modela po kojima obrazac ustrajanja pogoduje trenutnom održavanju aktivnosti, ali njegova neefikasnost (npr. u obliku održavanja same boli) postaje vidljiva u longitudinalnim praćenjima (9). Potiskivanje misli je u pozitivnoj korelaciji s intenzitetom boli što dodatno ide u prilog neefikasnosti ove strategije suočavanja.

Sljedeći cilj istraživanja bio je provjeriti razlikuju li se ispitanici s različitom lokacijom i različitim trajanjem boli po svojim odgovorima na bol. Pokazalo se da ispitanici s glavoboljom imaju niže rezultate na ljestvici pozitivnog raspoloženja unatoč boli te su skloniji izbjegavanju aktivnosti kao odgovoru na bol u odnosu na ispitanike s križoboljom. Opisani rezultati ponešto su drukčiji od očekivanih, osim ako pretpostavimo da dio ispitanika s glavoboljom zapravo ima migrene. Migrena je definirana kao složen neurološki poremećaj koji uzrokuje iktalne i interiktalne simptome. Ne manifestira se samo glavoboljom nego i hiperosjetljivošću na pojedine podražaje, poput svjetla i zvuka, prolaznim neurološkim simptomima, kognitivnim teškoćama (22) što može dobro objasniti nužnost povlačenja osobe s napadajem migrene. Osim toga, osobe s migrenama često navode probleme raspoloženja i pojačanu anksioznost (23), kao i izražen osjećaj umora (24). U ovom ispitivanju nisu prikupljeni podatci o vrsti glavobolje koju ispitanici navode pa navedena interpretacija ostaje na razini pretpostavke koju bi valjalo provjeriti u budućim istraživanjima s jasno utvrđenim kliničkim dijagnozama.

Rezultati nadalje pokazuju kako ispitanici s višegodišnjim trajanjem boli imaju značajno

proved to be more complex, yet in line with previously established inconsistencies: endurance behavior is not significantly correlated with pain intensity, but it is in the expected negative correlation with disability. Positive mood despite pain is negatively correlated with both pain intensity and disability, which overall can be linked to the theoretical assumptions of the model; according to these, the endurance pattern promotes the immediate maintenance of activities, but its ineffectiveness (e.g., in terms of maintaining the pain itself) becomes apparent in longitudinal follow-ups (9). Thought suppression is positively correlated with pain intensity, further supporting the maladaptiveness of this coping strategy.

The next objective of the study was to examine whether participants differ in their pain responses based on pain location and pain duration. The results indicated that participants with headaches scored lower on the Positive mood despite pain scale and were more prone to activity avoidance compared to those with low back pain. These results somewhat differ from expectations, unless we assume that a subset of participants with headaches actually suffer from migraines. Migraine is defined as a complex neurological disorder that causes ictal and interictal symptoms. It manifests not only as a headache but also through hypersensitivity to specific stimuli, such as light and sound, transient neurological symptoms, cognitive difficulties, etc. (22), thereby explaining the behavioral withdrawal associated with an attack. Furthermore, migraine patients frequently report mood disturbances, increased anxiety (23), and significant fatigue (24). Since data regarding the specific type of headache reported by the participants was not collected in this study, the aforementioned interpretation remains speculative and should be verified in future research using clearly established clinical diagnoses.

Participants with long-term pain (persisting for years) had significantly lower scores on Positive

niže rezultate na ljestvici pozitivnog raspoloženja unatoč boli te značajno više rezultate na ljestvici bespomoćnosti i beznađa u odnosu na ispitanike koji imaju akutnu bol (manje od tri mjeseca). Rezultati su na tragu onog što navode Schuler i suradnici (25) o višim simptomima anksioznosti i depresije kod osoba s kroničnom boli nego kod osoba s akutnom boli. U pogledu razlika u svim varijablama Upitnika izbjegavanja i ustrajanja Teichmüller i suradnici (26) ne nalaze razlike između osoba koje su u riziku od kronifikacije boli u odnosu na one kod kojih je već utvrđena kronična bol, bez obzira na značajne razlike u trajanju boli. Moguće je da rezultati sugeriraju da su obrasci reagiranja na bol stabilne crte, ali autori navode i metodološki nedostatak u obliku malih uzoraka, što može utjecati na statističku snagu analiza za detekciju razlika malog efekta. I Ackerman i Stevens (27) navode kako pacijenti opisuju akutnu bol u senzornim terminima, za razliku od kronične koju iskazuju kroz senzorne, afektivne i evaluativne modalitete što ide u prilog neurofiziološkoj osnovi akutne boli, odnosno boli kao signalu te kroničnoj boli kao kompleksnom sindromu. Moguće je da upravo taj prijelaz iz nečeg što je prolazni signal u višegodišnji sindrom doprinosi osjećaju bespomoćnosti i težem održavanju pozitivnog raspoloženja unatoč boli. Ipak, s obzirom da se radi o transverzalnom nacrtu istraživanja, ne može se govoriti o potencijalnoj uzročno-posljedičnoj vezi pa je tako moguće i da veća razina osjećaja bespomoćnosti i beznađa pogoduje prijelazu iz akutne u kroničnu bol. Važno je još jednom ponoviti da pri ispitivanju razlika u odgovorima na bol s obzirom na lokaciju i trajanje boli, zbog eksploratorne prirode istraživanja, nisu provedene korekcije za višestruka testiranja. Potreban je, stoga, oprez u razmatranju dobivenih rezultata te daljnje provjere u istraživanjima na kliničkim uzorcima.

Unatoč doprinosu prilagodbi instrumenta provedeno istraživanje ima nekoliko ograničenja.

mood despite pain scale and significantly higher scores on the Helplessness/hopelessness scale compared to those with acute pain (less than three months). This aligns with Schuler et al. (25), who noted higher symptoms of anxiety and depression in chronic vs. acute pain patients. Regarding differences in all AEQ variables, Teichmüller et al. (26) found no differences between individuals at risk of pain chronification compared to those with established chronic pain, despite significant differences in pain duration. These results might suggest that pain response patterns are stable traits; however, the authors also note a methodological limitation in the form of small sample sizes, which may affect the statistical power of the analyses to detect small effect sizes. As noted by Ackerman and Stevens (27), acute pain is primarily described in sensory terms, whereas chronic pain is expressed through sensory, affective, and evaluative modalities. This supports the neurophysiological basis of acute pain as a signal versus chronic pain as a complex syndrome. It is possible that this very progression from a transient signal to a persistent syndrome contributes to a sense of helplessness and greater difficulty in maintaining a positive mood despite the pain. However, given the cross-sectional nature of this study, no causal relationship can be established; thus, it is also possible that higher levels of helplessness and hopelessness facilitate the transition from acute to chronic pain. Finally, it is worth repeating that because this study was exploratory in its nature, adjustments for multiple testing were not applied when examining differences in pain responses across various locations and durations. Consequently, these results should be interpreted with caution and warrant confirmation in future studies with clinical samples.

Despite the contribution to instrument adaptation, this study has several limitations. The online administration used a convenience sample, which may limit the generalizability of the results. Specifically, this approach inherently re-

Online primjena upitnika podrazumijeva korištenje prigodnog uzorka što može ograničiti generalizaciju rezultata na opću populaciju. Naime, ovakav pristup u startu smanjuje vjerojatnost sudjelovanja digitalno manje vještih skupina ili onih s ograničenim pristupom internetu. Osim toga, uzorak većim dijelom čine žene, koje su sklonije pristupiti ovakvim ispitivanjima. Budući da su ispitanici sami navodili što ih boli, bez potvrde medicinske dijagnoze i informacija o težini kliničke slike, nije moguće donositi detaljnije zaključke o grupama ispitanika (primjerice, razlika između tenzijske glavobolje i migrene može biti velika). Dobivena dvofaktorska struktura upitnika u odnosu na originalna četiri u ponašajnom dijelu upitnika može biti ograničenje koje je potrebno dodatno analizirati. Moguće je da se ponašajni odgovori u hrvatskoj populaciji drukčije manifestiraju ili da su neka pitanja ispitanicima bila nedovoljno jasna. Svakako bi bilo zanimljivo u narednim istraživanjima ispitati funkcionira li upitnik jednako na kliničkim uzorcima.

ZAKLJUČAK

Provedeno istraživanje potvrđuje da hrvatska verzija Upitnika izbjegavanja i ustrajanja ima zadovoljavajuću pouzdanost i dobru kriterijsku valjanost. S obzirom na faktorsku strukturu, afektivne i kognitivne podljestvice istovjetne su originalnom upitniku, dok je u ponašajnom dijelu upitnika utvrđena dvofaktorska struktura (ponašanje izbjegavanja i ponašanje ustrajanja). Iako ovakav rezultat donekle odudara od originala, ima teorijsko utemeljenje i pruža valjan okvir za primjenu instrumenta u hrvatskoj populaciji.

Višegodišnje trajanje boli praćeno je višom razinom bespomoćnosti te nižom razinom pozitivnog raspoloženja unatoč boli, što podupire shvaćanje kronične boli kao kompleksnog sindroma, a ne tek dugotrajnog senzornog signala.

duces the likelihood of participation among digitally less literate groups or those with limited internet access. In addition, the sample consisted mostly of women, who are more likely to participate in such surveys. Since medical diagnosis and measures of clinical severity were not obtained, drawing more detailed conclusions regarding specific clinical subgroups was not feasible (for instance, the difference between tension-type headache and migraine can be substantial). Finally, the resulting two-factor structure of the questionnaire, compared to the original four factors in the behavioral section, may be a limitation requiring further analysis. It is possible that behavioral responses manifest differently in the Croatian population or that certain items were insufficiently clear to the participants. It would certainly be of interest for future research to examine whether the questionnaire functions similarly in clinical samples.

CONCLUSION

The present study confirms that the Croatian version of the Avoidance–Endurance Questionnaire has satisfactory reliability and good criterion validity. Regarding the factor structure, the affective and cognitive subscales mirror the original questionnaire, whereas a two-factor structure (avoidance behavior and endurance behavior) was identified within the behavioral component. Although this result slightly differs from the original model, it is theoretically grounded and provides a valid framework for applying the instrument within the Croatian population.

The results point to a tendency toward certain differences in pain responses based on pain location and duration. Pain lasting several years is accompanied by higher levels of helplessness and lower positive mood despite pain, which supports the understanding of chronic pain as a complex syndrome rather than merely a prolonged sensory signal.

Izraženije izbjegavanje aktivnosti i niža razina pozitivnog raspoloženja unatoč boli kod ispitanika s glavoboljom u odnosu na ispitanike s križoboljom donekle je neočekivan rezultat koji ostavlja otvorena pitanja za buduća istraživanja.

Glavna ograničenja rada proizlaze iz transverzalnog nacrta i prigodnog uzorka temeljenog na samoprocjenama, bez objektivnih medicinskih dijagnoza, što nalaže oprez pri generalizaciji i uzročnom interpretiranju rezultata.

The more pronounced activity avoidance and lower positive mood despite pain in participants with headaches compared to those with low back pain is a somewhat unexpected result that leaves open questions for future research.

The main limitations of this study stem from its cross-sectional design and convenience sample based on self-reports without objective medical diagnoses, which warrants caution regarding the generalization and causal interpretation of the findings.

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