Battery for Health Improvement 2
A psychological test for use with medical patients

By Daniel Bruns, PsyD, and John Mark Disorbio, EdD
A multidimensional tool to help psychologists and medical professionals understand the underlying contributors to pain and lead their patients to fuller lives.
“Behind patient behavior is suffering, behind suffering is pain, behind pain is a medical condition.”

For medical practitioners, a pain scale or diagram is a familiar tool. But in evaluating medical patients, the point of pain is only a point of departure. Research into the mind/body connection shows that physical, psychological, and social factors all are facets of the patient’s condition – and that these elements can greatly influence one another. For example, physical pain can lead to emotional distress, which can increase a patient’s overall level of suffering. This in turn can put stress on a patient’s personal relationships. In other cases, such as tension headaches, emotional distress can actually be the cause of pain.

The interplay of bio/psycho/social factors calls for a transformation in the way practitioners perceive their patients. Discovering the true source of the problem depends on looking at the patient not from a single vantage point but from various angles. To help reveal the patient’s multifaceted experience, the BHI 2 assessment provides a psychological test that offers a multidimensional solution.

The BHI 2 instrument can be useful in the assessment of outcomes – because psychological and social factors that go undetected can significantly interfere with a patient’s response to treatment. Based on the well-researched BHI instrument introduced in 1996, the BHI 2 test helps caregivers shape an appropriate treatment plan, reduce treatment time, and improve the patient’s quality of life.

**ALL-IN-ONE TOOL GIVES A PANORAMIC VIEW**

Many practitioners, recognizing the need to consider a variety of factors in assessing their patients, use three or four tests to gather patient information. Unfortunately, these tests often overlap, proving cumbersome and time-consuming for both patients and staff – and, what’s worse, they still may not paint a complete picture.

The BHI 2 test is specifically designed to present a concise, coordinated assessment of the bio/psycho/social issues that are most relevant in evaluating medical patients. Taking only 30 to 45 minutes to complete, the BHI 2 test helps streamline the process. And it is well-suited for evaluating treatment effectiveness and monitoring clinical outcomes by clearly documenting changes in symptom levels.

**SUPPORTING A SHARED PERSPECTIVE**

Before designing a treatment plan, mental health and medical professionals can use the BHI 2 test results as a basis for sharing and discussing a patient’s psychological findings in conjunction with physical findings. The test also facilitates communication with the patient, providing a Patient Summary written in layperson’s language.

**PROFILING OUTCOMES**

The BHI 2 test can be used to help monitor and track outcomes in a variety of settings. It can be administered to track the effectiveness of clinical procedures and treatment for an individual patient as well as to track outcomes data collected over a broad patient base.

A large body of research shows a strong relationship between a variety of psychological factors and the onset of medical conditions, physical symptom magnification, delayed recovery, excessive disability, and failed surgery or procedures. Many of these psychological factors are assessed by the BHI 2.

In addition, multidisciplinary pain clinics can use the BHI 2 instrument in conjunction with the shorter BBHI™ 2 test (see sidebar) to gain “before and after” portraits of candidates for invasive procedures. Prior to the procedure, the BHI 2 test can be administered to determine the patient’s readiness. After the procedure, the BBHI 2 test can be administered to monitor the patient’s improvement. Using two tests within the same family of instruments enables the clinician to compare “apples to apples” — a benefit not offered by the majority of psychological tests.

**USEFUL FOR MULTIPLE SETTINGS**

The versatile BHI 2 test has proven valuable for a number of applications, including:

- Multidisciplinary pain programs
- Interventional pain medicine
- Physical rehabilitation programs
- Pre-surgical evaluations
- Workers’ compensation evaluations
- Disability evaluations
- Independent medical evaluations
IN-DEPTH RESEARCH PROVIDES EXTENSIVE VALIDATION

Building on the research conducted for the original BHI test, the BHI 2 test was double-normed, using a U.S. Census-matched sample of 725 community individuals and a national sample of 527 physical rehabilitation and chronic pain patients. The reports compare the patient to both norm groups and use the average physical rehabilitation patient as a benchmark for interpretations and recommendations, reducing the risk of overpathologizing.

40 CONTENT AREAS ADD GREATER DEFINITION

Within each scale, content areas help distinguish the specific reasons for a patient’s psychological or psychosocial problems. For example, content areas within the Doctor Dissatisfaction scale measure the patient’s perceptions of his/her doctor’s level of competence and empathy. Presented in graphic format, this additional delineation helps further support suitable treatment plans.

CRITICAL ITEMS HIGHLIGHT RED-FLAG ISSUES

The revised BHI 2 test includes 31 critical items that draw attention to a wide variety of risk factors, such as suicidal ideation, addiction concerns, entitlement, and home-life problems. When a critical item is endorsed, further investigation is warranted because these areas may require treatment and may complicate the course of a patient’s recovery.

BI-DIRECTIONAL SCALES SHOW BOTH SIDES OF THE PICTURE

While most other psychological assessments focus only on the areas in which a patient scores above the norm, the BHI 2 test reports scores below the norm. For example, the test reports the patient’s perception of whether his/her family is too helpful or not helpful enough.

REPORTS OFFER DIFFERENT LEVELS OF DETAIL

Three reports are available — the Profile Report, the Basic Interpretive Report, and the Enhanced Interpretive Report — allowing clinicians to choose the option that best fits their needs.

Distinctive Elements Compose a Unique Test

A unique feature of the BHI 2 test is its use of a nationally standardized 0–10 pain rating scale that helps measure multiple dimensions of the pain experience, including level of pain in 10 body areas, pain tolerance, pain range, and peak pain.

This unique scale was developed for the BHI 2 test to help identify survivors of violence, whose needs may be significantly different from those of the average patient. Research shows that survivors of violence are at increased risk for the onset of a variety of psychological and medical conditions. Patients who have been physically traumatized may feel uncomfortable with physical examination or disrobing. Treatment strategies that might prove effective with other individuals, such as massage therapy, may be perceived as threatening and may lead to an aversive reaction. In addition, survivors may be more reactive to stress, exhibit higher levels of physical symptomatology, and be at increased risk for delayed recovery. The BHI 2 test helps bring this critical factor to the forefront early in the evaluation process.
SCALES

Validity Scales
- Defensiveness
- Self-Disclosure

Physical Symptom Scales
- Somatic Complaints
- Pain Complaints
- Functional Complaints
- Muscular Bracing

Affective Scales
- Depression
- Anxiety
- Hostility

Character Scales
- Borderline
- Symptom Dependency
- Chronic Maladjustment
- Substance Abuse
- Perseverance

Psychosocial Scales
- Family Dysfunction
- Survivor of Violence
- Doctor Dissatisfaction
- Job Dissatisfaction

Enabling Finer Discriminations:
Additional Reference Groups

As well as comparing the patient to the community sample and the patient sample, the BHI 2 instrument adds depth of field to the clinician’s analysis of results by comparing the patient to individuals with a similar condition for the five reference groups listed below. These groups are based on common diagnostic categories of injuries often seen in rehabilitation settings and are used by the Pain Complaints scale.

- Head injury/headache
- Neck injury
- Upper extremity injury
- Lower extremity injury
- Back injury

In addition, the Pain Complaints scale also uses a chronic pain reference group, while the Defensiveness and Self-Disclosure scales use reference groups for symptom magnification (Faking Bad) and symptom minimization (Faking Good) as additional benchmarks (or comparisons) for clinical interpretation.

Focusing on psychomedical issues relevant to medical practitioners

Because the BBHI 2 and BHI 2 share a common framework, they can be used to:
- conduct a coordinated two-step evaluation process. The BBHI 2 test can be given as a screener followed by the BHI 2 test to gather more comprehensive information.
- track outcomes. The BHI 2 test can be administered as a pre-procedural assessment and the BBHI 2 test can be used for follow-up evaluations.

Reimbursement

Although reimbursement policies vary, many third-party payors recognize the efficacy of behavioral assessment of patients with a physical health diagnosis. Many users of assessments have found that costs can be reimbursable under CPT codes 96150 for initial assessment and 96151 for reassessment or CPT code 96100 for psychological assessment.

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About Pearson Assessments

Pearson Assessments (formerly NCS Assessments) has been a premier provider of psychological assessments and scoring solutions for 40 years. Pearson Assessments provides assessment tools for use by professionals in the clinical, public safety, corrections, medical, career, and education settings. For more information, please call 1.888.627.7271 or visit the Pearson Assessments website at www.pearsonassessments.com.

About the Authors

Daniel Bruns, PsyD, and John Mark Disorbio, EdD, have collaborated on psychological test development since 1985. In addition to co-authoring the BHI™ 2 test, they are also the authors of the BBHI™ 2 (Brief Battery for Health Improvement 2) test and BHI™ (Battery for Health Improvement) test. Both live and practice in Colorado.

Daniel Bruns, PsyD

Dr. Bruns’s practice, Health Psychology Associates, is affiliated with the Ramazzini Center, a multidisciplinary facility providing a range of rehabilitation services for injured patients. In his 20 years of clinical practice, Dr. Bruns has come to specialize in the psychological assessment and treatment of medical patients. As a result, he has taught graduate classes and workshops and has made numerous presentations to international, national, and regional professional societies on psychological testing, psychopathology, somatoform disorders, and the assessment and treatment of pain. As a member of three task forces for the Colorado Division of Workers’ Compensation (Psychiatric Disability, Chronic Pain, and Complex Regional Pain Syndrome), he helped to develop evidence-based guidelines to regulate the treatment of injured workers in Colorado. In the past, he has worked on the Chronic Illness Team at the Wellness Center of North Colorado Medical Center. He is also the webmaster of www.healthpsych.com. Dr. Bruns received his MA and PsyD degrees in counseling psychology from the University of Northern Colorado in Greeley.

John Mark Disorbio, EdD

Currently Dr. Disorbio works as a psychologist at Integrated Therapies, an interdisciplinary outpatient clinic for evaluating and treating patients with delayed recovery from chronic pain that he co-founded with Julia Copeland, PT, in 1985. In addition, he is a consultant to major companies throughout the U.S. and serves on the board of the National Pain Foundation. Having spent the majority of his educational and clinical career in the diagnosis and treatment of patients with psychological factors related to medical conditions, he is a frequent presenter at national and international conferences and has published research articles in numerous journals. An active member of the Biofeedback Society for 20 years, he also has extensive training in biofeedback and self-regulation techniques. Dr. Disorbio received his MA degree in counseling psychology from California State University and his EdD degree in counseling psychology from the University of Northern Colorado. He has been licensed as a psychologist in the state of Colorado since 1987.
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