The Reliability Of A Standardized Method For Assessing Block's Criteria For Psychosocial Risk In Patients Being Treated for Pain and Injury

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Abstract

INTRODUCTION: The outcome of both surgery and invasive treatments for pain is known to be influenced by a variety of psychosocial variables. Block and colleagues[1] developed one well-known method of presurgical psychological evaluation, which categorizes patients into risk levels ranging from 1 (low risk) to 5 (high risk). However, this method has never been formally standardized, and there has been no prior research on the reliability of this measure.

METHODS: The Battery For Health Improvement-2 (BHI-2)[2] was selected for use in the development of these norms because 1) it is a standardized test, 2), it is normed on both patients in physical rehabilitation and community members, and 3) it is a single instrument that can assess almost all of Block's individual criteria.

Using these data, a standardized method was developed to calculate Block's criteria. Block's five-level risk score was calculated by employing BHI-2 scale cutoffs of one standard deviation above the mean using the patient norms, and using similar cutoffs for content areas and critical items. The scoring algorithms for psychological risks are found in Table 1, medical risks in Table 2, and adverse clinical features in Table 3.

When calculating Block's overall risk category, two of the medical risks could not be assessed using the data available in this study. As these risk factors would have been expected to be present in a significant percentage of the patient subjects, Block's medical risk cutoff scores[1] were all reduced by one so as to avoid a spurious reduction of the overall risk score.

Using this scoring method, the BHI 2 was administered twice with a one-week interval to 86 patients in treatment for pain/injury, and reliability coefficients were then calculated. This method was IRB approved.

RESULTS: The test-retest reliability of the Block scores are listed in Table 4.

CONCLUSIONS: Reliable assessment methods are a prerequisite for clinical assessment. The method employed by this study to assess Block's criteria produced scores that were highly reliable over a one-week interval.

Limitations of this study include that 1) the reliabilities observed using this method might differ from that which was obtained from other methods of assessing Block's criteria, and 2) the log-term reliability of this method remains unknown. Further research is needed to develop standardized methods for the psychological assessment of patients undergoing treatment for chronic pain.

REFERENCES:
1. Block AR, Gatchel RJ, Deardorff WW, Guyer RD. The psychology of spine surgery. Washington DC: American Psychological Association; 2003.
2. Bruns D, Disorbio JM. Battery for Health Improvement 2 Manual. Minneapolis: Pearson; 2003.

TABLE 1

Psychosocial Risk Factors

Risk factor	BHI-2 criteria	Weighted score
Pain sensitivity	Somatic Complaints T > 59 or Pain Fixation < -4	2
Depression, chronic	Severe Depression T > 59*	2
Depression, reactive	Grief Depression T > 59*	1
Depression, pathological	Depression T > 59 and (Borderline, Dependency or Maladjustment) T > 59	4
Anger	Hostility T > 59	2
Anxiety	Anxiety T > 59	2
Catastrophizing	Pain Fixation T > 59*	2
Job dissatisfaction	Job Dissatisfaction T > 59	2
Workers' compensation	BHI 2 Demographic	2
Litigation	BHI 2 Demographic	2
Spousal solicitousness	Lack of Support T < 41**	1
No spousal support	Family Conflicts T > 59	1
Abuse and abandonment	Survivor of Violence T > 59	1
Substance abuse	Substance Abuse T > 59	2
Psych history	If critical item 45, 72, 107, 114, 118, 131, 151, or 172 > 1	2

* Equal to high or very high category
** Equal a low or very low category

TABLE 2

Medical Risk Factors

Risk factor	BHI-2 variable	Weighted score
Pain 6-12 months	BHI 2 Demographic	1
Pain > 12 months	BHI 2 Demographic	2
Highly destructive surgery	-	2
Nonorganic signs	Somatic Complaints T > 59	4
Abnormal pain drawing	Pain Complaints T > 59	2
2 or more prior spinal surgeries	BHI-R Demographic	2
1 prior spinal surgery	BHI-R Demographic	1
Prior medical problems	BHI 2 Critical Item Bhi2 40 R558	2
Smoking	BHI-R Demographic	2
Obesity	-	1

TABLE 3

Adverse Clinical Features

Risk factor	BHI-2 variable	Weighted score
Inconsistent pain behaviors	Pain Complaints T > 59	1
Medication seeking	If critical item 46 > 1 R204	1
Staff splitting	Splitting T > 59*	1
Noncompliance	If critical item 52 > 1 R24	1
Threatening behavior	Aggressiveness** or Violent Ideation** T > 67	1
Defeatist resignation	Perseverance < 28***	1
Deception	Defensiveness < 28***	1
Personality disorders	Borderline, Dependency or Maladjustment T > 59	1

* Equal to high or very high category
** Equal to very high category
***Equal to a very low category

TABLE 4

Block Score Reliability

	Reliability
Psychosocial Subscore	.924
Medical Subscore	.881
Clinical Subscore	.812
Overall Score (Categorical)	.905
Overall Score (Sum of Subscores)	.939