

BAP-MSQS

BEHAVIORAL ASSESSMENT OF PAIN MEDICAL STABILITY QUICK SCREEN

Test Manual

Michael J. Lewandowski, Ph.D.

The Behavioral Assessment of Pain – Medical Stability Quick Screen is intended for use by health care professionals working with patients complaining of subacute and chronic pain.



Copyright 2000 by Pain Assessment Resources

3312 S. McCarran Blvd. Suite 309, Reno, Nevada 89502 1-800-782-1501 www.painassessmentresources.com
V1.0

Introduction

The Behavioral Assessment of Pain- Medical Stability Quick Screen (MSQS) is a 27-item questionnaire that was designed to assess the severity of pain-related disability in adult patients experiencing pain of eight weeks or longer. The BAP-MSQS was originally developed by Michael J. Lewandowski, Ph.D. in 1993 and the screening device was revised and modified in 1999.

The BAP-MSQS can be used in a variety of clinical settings including chiropractic offices, acute industrial injury centers, interdisciplinary pain programs, orthopedic clinics, rehabilitation hospitals, as well as in general medical practice. The BAP-MSQS assesses the perception of sub-acute and chronic pain patients and the medical treatment they believe they need, the amount of improvement they have experienced from past healthcare treatment, their perceived level of maximum medical improvement, depression, anxiety, sleep disturbance related to pain and various beliefs about having pain. Also included are patient perceptions of their ability to return to work or begin vocational rehabilitation, job satisfaction and their employers desire to take them back even if they are not 100%.

Institute of Medicine for the Social Security Administration comments that, “Progress in the field of chronic pain and disability depends on developing and refining uniform approaches to measuring numerous independent and dependent variables including psychosocial variables. Standardized questionnaires should be used to systematize information collection. These instruments should be:

- Comprehensive in nature
- Understandable by the patients
- Yields a wide range of scores with sensitivity to changes resulting from time or interventions
- Demonstrates appropriate reliability and validity

There is a need for a reliable and valid screening device that measures psychosocial factors. “There is a great need for further work to identify the best screening instruments and strategies for detecting psychosocial problems in primary care settings.” (Pincus, T. et. al. A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain. Presentation at the Fourth International Forum for Primary Care Research on Low Back Pain, Eilat, Israel, 2000).

The pain literature supports the notion that measuring psychosocial factors in pain patients is critical for treatment and rehabilitation. Key recommendations from the Faculty of Occupational Medicine of the Royal College of Physicians in London (2000) strongly declared that disability status is related to a broad range of influences--socioeconomic, psychosocial, and workplace factors and cannot be addressed with purely medical approaches.

The BAP-MSQS was developed to provide a quick screen to assess psychosocial factors in the development and maintenance of continuing pain problems.

This manual provides information for the clinician on the history and clinical uses of the BAP-MSQS as a diagnostic screening tool for sub-acute and chronic pain patients. Data about its psychometric characteristics are also presented.

Background

The BAP-MSQS was developed as an accompaniment to the Behavioral Assessment of Pain Questionnaire-BAP (Tearnan and Lewandowski, 1992). The BAP is a comprehensive 390-item instrument used for assessing a variety of factors important in sub-acute and chronic pain. Since administration of the BAP is relatively long and it cannot always be given in certain medical settings, it was determined that a short diagnostic screening test would be useful in determining if more comprehensive assessment was necessary. Some, but not all of the scales assessed by the BAP are summarized in 27 statements. The BAP-MSQS assesses new clinically relevant areas for pain patients such as patient perception of the need for additional medical treatment, additional diagnostic testing and need for narcotic medications. The BAP-MSQS also assesses the concept of pain acceptance and examines the role of job dissatisfaction and return to work issues. The BAP-MSQS was not meant to replace more comprehensive instruments such as the BAP.

The 27 items assessed by the BAPSI include:

- 1) number of pain locations
- 2) most significant pain location
- 3) length of time experiencing pain
- 4) perceived need for additional medical treatment
- 5) perceived need for narcotic medications
- 6) perceived need for additional medical/diagnostic testing
- 7) estimation of improvement from past treatments
- 8) estimation of maximum medical improvement
- 9) sadness and depression for more days than not
- 10) nervousness, tension, anxiety and feeling uptight
- 11) sleep disturbance
- 12) fears of reinjury
- 13) expectation for cure
- 14) anger and entitlement
- 15) pain acceptance
- 16) activity interference
- 17) worst pain rating
- 18) average pain rating
- 19) least pain rating
- 20) expectation for returning to work or beginning vocational/rehab
- 21) willingness of employer to modify a job
- 22) liked tasks of job

- 23) sex
- 24) age
- 25) race
- 26) marital status
- 27) highest education

The BAP-MSQS was designed to be administered by health care professionals working with sub-acute and chronic pain patients including physicians, chiropractors, psychologists and vocational rehabilitation counselors. The BAP-MSQS was developed as a self-report test with an administration time of less than five minutes.

Professional Use

The BAP-MSQS was developed for use by professionals working with adult sub-acute and chronic pain patients experiencing pain of at least 8 weeks in duration. People reporting acute pain should not be administered the BAP-MSQS.

The BAP-MSQS was intended to be used by individuals over the age of 18. The BAP-MSQS should be used cautiously with individuals younger than this age.

The BAP-MSQS contains a validity scale to detect consistency of item endorsement. The patients' logic when responding to pain intensity ratings i.e, worst, average and least ratings are also examined. If the responses are illogical, a warning is given about the accuracy of the clinical profile.

Although the BAP-MSQS is capable of being administered by para-professionals, it should be interpreted and used by professionals with the appropriate training and experience in working with sub-acute and chronic pain patients. Personnel with training in the use of employment tests or surveys can acquire the skills needed to administer and score tests by carefully reviewing the test materials and procedures described in the tests manual.

Professionals using the BAP-MSQS are obligated to adhere to certain testing guidelines established for various groups. For example, it is important that the clinician be able to respond with an appropriate referral if patients are admitting to significant psychological distress.

Test Administration and Scoring

Testing Environment

The patient should be administered the BAP-MSQS in an environment that is well lighted and relatively free of distractions to assure adequate concentration. The patient should be provided with a comfortable chair with back supports if available. The BAP-MSQS can be administered individually or in a group. The patient should not be allowed to take the test home since there is no control over the testing conditions.

Patient Requirements

The BAP-MSQS should be administered to patients experiencing pain of at least 3 weeks. The patient must be able to read and comprehend English at a 7th to 8th grade reading level. The patient should be at least 18 years of age.

Administration Time

The BAP-MSQS requires less than five minutes to complete. Patients complete the screen by themselves. If the patient requires oral administration, the administration time may take somewhat longer.

Patient Preparation

It is important that the patient be given a rationale to explain the reasons for administering the BAP-MSQS and to clarify the BAP-MSQS instructions. The following explanation is an example:

The following questionnaire will help us better understand how your pain has affected your life. Please answer each item using a 0 to 10 scale. If you strongly agree with an item, answer 8, 9, or 10. If you strongly disagree with an item, answer 0, 1, or 2. If you moderately agree or feel neutral about an item, answer 4, 5 or 6. Please be as open and honest with your answers as possible. Your answers should reflect how you feel today. Please answer *all* questions and return the questionnaire to me when you are finished.

The patient should then be left alone to complete the questionnaire unless he or she requires oral administration.

Response Style

Patients will vary in the manner in which they complete the test. Some individuals tend to respond in the extreme ranges. Still others tend to answer in the neutral range with little variability on either end of the continuum. It is not unusual for patients to adopt a certain response style. It is only of concern when the patient's answers vary little (e.g., scoring all 0's or all 10's). If this is the case, the patient should be asked to complete the BAP-MSQS again. The patient should be told that it is unusual for scores to vary so little and he or she might want to retake the questionnaire with this in mind.

Scoring

The BAP-MSQS is computer scored.

Test Interpretation

The BAP-MSQS Score Report shows the patient's responses in terms of % Agreement. The higher the agreement, the more the patient is endorsing that items content. Conversely, the lower the % Agreement the less the patient is endorsing the content of the item.

The cutoff criteria regarding the statements used in the report are based on the clinical experience of the author and the mean and standard deviations of each item. The criteria are not rigid, and the clinician should use his or her own judgment in making a final determination regarding whether or not the patient needs additional assessment, especially when the patient falls slightly above or below the cut-off criteria.

The clinician should examine each item the patient scored on either end of the scale (0, 1 or 2; 8, 9 or 10). In any case, the particular items the patient endorses may help identify areas of clinical interest that need to be examined more closely.

If it is determined the patient may be experiencing significant levels of pain-related disability and further assessment is required, the Behavioral Assessment of Pain Questionnaire (BAP) should be considered since it was designed to examine in detail the variety of areas screened for by the BAP-MSQS. The BAP is a comprehensive pain assessment tool with validity scales to measure patients' response style including tendencies to exaggerate. The BAP measures over 35 areas including maladaptive belief patterns, activity level, narcotic usage, spousal influence, health care utilization, and negative mood. The BAP can also be used as a pre-to-post measure of treatment effectiveness.

Psychometric Properties

The psychometric characteristics of the BAP-MSQS were studied in two phases.

PHASE I. The first phase of the development of the screening instrument involved 40 consecutive pain patient referrals to a functional restoration program in Reno, Nevada.

The initial Medical Stability Questionnaire was comprised of the following six stimulus items using a Likert scale of 0 to 10:

1. Overall, I believe that I am in need of additional medical treatments (e.g., injections, surgeries, etc.) for my pain problem.

2. Overall, I believe that I am in need of narcotic pain medications (e.g., Lortab, Vicodin, etc.) to deal with my pain problem.
3. Overall, I believe that I am in need of additional medical tests (e.g., X-rays, MRIs, EMGs) for my pain problem.
4. Overall, I believe that my physical condition has reached a plateau (I'm not necessarily getting any better, but I'm not getting any worse).
5. Overall, I believe that I am ready to return to work or begin my vocational rehabilitation.
6. Even though my pain problem has not gone away, I believe that I am medically stable.

Mean scores and standard deviations for items in phase one of test construction are provided below:

Item	Mean	Standard Deviation
1	5.8	3.4
2	6.9	3.2
3	6.4	3.4
4	5.3	3.3
5	4.7	3.7
6	5.0	3.2

PHASE II

In the second phase of test development, additional items were added to expand the evaluation of psychosocial factors, which may contribute to disability. Added were questions on work issues, mood disturbance and sleep problems.

An additional 57 pain patients were examined in phase two. Table 1 presents the demographic characteristics of the sample in terms of age, sex, ethnicity, months in pain, marital status, education level, and primary pain location.

As can be seen, the sample consisted of 28% females and 72% males. The average age of the subjects was 40. The average number of months in pain was 21 months, with a range from 4 to 72 months. The most frequent pain location was leg pain, followed by low back pain. Approximately 21% of the sample had a partial high school education or less. Twenty-one percent of the patients were high school graduates and 21% had a GED or trade technical education. Only 26% were college graduates. Nearly 45% reported being married and 25% indicated they were divorced or separated. Ten percent were never married.

The first phase began in 1993 with the development of the MSQS. (see data).

Table 1. Patient Characteristics

Characteristic	Value
Age	Mean = 40
Sex	
Male	72%
Female	28%
Months in Pain	Mean = 21
Race	
Black	0%
White	85%
Hispanic	15%
Asian	0%
American Indian	0%
Other	0%
Highest Educational Level	
Elementary School	5%
Partial High School	21%
GED or Trade School	21%
High School	21%
Partial College	5%
College Graduate	26%
Primary Pain Location	
Leg	47%
Low Back	21%
Mid-Back	5%
Upper Shoulders	11%
Head	0%
Neck	0%
Foot	5%
Hand/Arm	11%
Marital Status	
Never Married	10%
Married	45%
Living with Significant Other	15%
Divorced/Separated	25%
Widowed	5%

Table 2 presents the BAP-MSQS data.

Validity

The validity of the BAP-MSQS was measured by using content validation.

Content Validation - Items from the BAP-MSQS were rationally derived to reflect a number of different areas considered important in subacute and chronic pain assessment. These content areas are widely recognized in the pain management literature and there is a fairly strong consensus among clinicians regarding their relative importance. In addition, items were chosen based on hundreds of interviews with sub-acute and chronic pain patients. Moreover, items were selected to reflect areas measured by the Behavioral Assessment of Pain Questionnaire (BAP). Finally, item content was determined by other well-accepted measures of disability including criteria identified by different diagnostic nomenclatures such as the Diagnostic and Statistical Manual of Mental Disorders, 3rd. edition (DSM-IV). The content sampling was intended to cover as broad an area as possible while keeping the instrument short and concise.

Reliability

Item means and standard deviations of the BAP-MSQS are presented in Table 2.

Table 2. Item Means and Standard Deviations

Item	Mean (0-10)	SD
1) number of pain locations	3.5	2.9
2) most significant pain location	leg	
3) length of time experiencing pain	21 mo.	
4) need for additional medical treatment	7.8	2.9
5) need for narcotic medications	5.3	3.4
6) need for additional medical/diagnostic testing	4.6	3.7
7) estimation of improvement from past treatments	3.8	2.7
8) estimation of maximum medical improvement	2.2	2.4
9) sadness and depression for more days than not	5.3	3.5
10) nervousness, tension, anxiety and feeling uptight	6.5	3.2
11) sleep disturbance	7.5	2.6
12) fears of reinjury	7.6	2.6
13) expectation for cure	7.3	2.8
14) anger and entitlement	7.3	3.1
15) pain acceptance	3.7	3.2
16) activity interference	8.6	2.3
17) worst pain rating	7.9	1.8
18) average pain rating	6.2	1.8
19) least pain rating	4.6	2.0
20) expectation for returning to work or vocational rehab	4.5	4.0
21) willingness of employer to modify a job	3.3	3.6
22) liked tasks of job	8.7	2.1

References

Author. American Psychiatric Assoc. (APA). *Diagnostic and Statistical Manual of Mental Disorders*. 3rd ed., rev. Washington, D.C., 1987.

Tearnan BH, Lewandowski MJ. The Behavioral Assessment of Pain Questionnaire: The Development and Validation of a Comprehensive Self-Report Instrument. *American Journal of Pain Management* 1992;Vol. 2 No. 4:181-191.

Pincus, T. et. al. A systematic review of psychological factors as predictors of chronicity/disability in prospective cohorts of low back pain. Presentation at the Fourth International Forum for Primary Care Research on Low Back Pain, Eilat, Israel, 2000.

Occupational Health Guidelines for the Management of Low Back Pain at Work: The Faculty of Occupational Medicine of the Royal College of Physician in London: 2000