

Clinical Correlation of Standard
Outcome Measures and the Physical
Abilities Evaluation- A Research Study
of an “Active Model” Paradigm

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Introduction

The utilization of standard outcome measures has become a staple in the Active Model practice. It has been a well-modeled practice that utilizes outcome measures to appropriately document a patient's perceived pain, physical limitation and level of Activities of Daily Living (ADL) Disability. Pain perception can easily be documented through the use of repeated outcome assessment measures such as a Visual Analogue Scale and Pain Drawings / Questionnaires. It is the utilization of such forms as the Oswestry and Vernon-Mior Disability Questionnaires that enables the clinician to qualitatively assess - with some degree of reliability - the patient's perceived Activities of Daily Living. However, since these results are subjective in nature, they do not easily nor completely address the true active model and physical ability. Documenting a functional correlation between the qualitative and quantitative means of evaluation has been an obstacle for some time and often a cause for concern in the clinical medico-legal arena. As a health care practitioner, it is important to understand that by setting new standards in the aspects of documentation and reliability, we are allowing ourselves the opportunity to both properly manage and assist in the substantiation of extended acute and therapeutic treatment plans.

Purpose

The obstacle before us as a profession is substantiating and documenting a relationship between standard and accomplished Outcome Measures (qualitative findings) to quantitative findings, namely “Physical Performance Test” (whether in the form of the Physical Ability Test or Functional Capacity Test.

It is a combination of the qualitative and the quantitative levels of disability that have become a model of interest for all health care professionals, health care facilities and providers; a model which helps to substantiate the need for continued care. Compiling information that may acknowledge and/or substantiate a reliable relationship between qualitative and quantitative measures may further enable the clinician and health care provider an opportunity to more accurately document reliable levels of physical ability, whether perceived or actual.

For this purpose a population of sixty patients were evaluated using standard outcome measures. Their levels of activities of daily living disabilities were documented and then assessed by way of a standard “Low Tech” Physical Performance

Test – in this case, the Physical Abilities Evaluation (PAE) developed in 1992.

Methods

Each of the sixty patients, 30 female and 30 male, were given standardized outcome measures to complete. Fifteen patients in each group reportedly suffered from cervical pain while the remaining fifteen suffered from lower back pain. Candidates for this study were chosen using the following criteria: 1) an age range between 25-35, 2) no history of prior surgeries or repetitive injuries, and 3) no medication usage within 72 hours of the collection of findings. The Vernon Mior Neck Pain Disability Index Questionnaire and the Revised Oswestry Low Back Pain Disability Questionnaire were both utilized and completed by the appropriate population of those with neck and low back pain, respectively. A randomized file search was utilized to gather the appropriate population and calculations made.

Of the selected patient population, 36 were of post motor vehicle accident etiology, 18 of work injury etiology and 6 of strenuous activity onset. This Physical Abilities Test (PAE) includes seven accepted and standardized testing procedures.

These tests included 7 major measurements and calculations to include, Body Composition measurement, Jaymar Dynamometer Grip Strength Test, Sit and Reach Test, Static Abdominal Hold Test, Shoulder Elevation Test, Trunk Extension Test and Cardiac Recovery Test.

This grouping of tests was performed within 24 hours of completing the assessment measures.

Results

Seventy percent of the cervical pain population tested (7 female and 14 male) indicated a less than five percent difference between the percentage of ADL disability and the resultant disability level obtained from the physical abilities test. Twenty percent (3 females and 3 males) indicated a range difference between 6.5 percent and 10 percent. The remaining 10 percent of the population (5 females and 3 males) were within a range of 12 and 22 percent.

Of the lumbar pain population tested, eighty percent (11 females and 13 males) indicated a less than 4.8 percent difference between the percentage of ADL disability and the resultant disability level obtained from the physical abilities test. The

remaining 20 percent of the population tested (4 females and 2 males) indicated a range between 6-9 percent.

Conclusion

The results of this study suggest a strong correlation concerning levels of disability, between qualitative outcome measures- namely the Vernon Mior Neck Pain Disability Index Questionnaire, and the Revised Oswestry Low Back Pain Disability Questionnaire- and the quantitative measure of disability, the Physical Abilities Evaluation, in determining levels of disability.

Eighty percent of the cervical injury patients' perceived levels of ADL disability were within 5-10 percent of the calculated disability level gathered from the Physical Abilities Evaluation. One hundred percent of the Low Back Pain patients' levels of perceived ADL disability were within 9 percent of the calculated disability level gathered from the Physical Abilities Evaluation.

These findings indicate a stronger relationship between the Low Back Pain questionnaire and the Physical Abilities Test, then with the Neck Pain questionnaire. These findings also indicate that gender of the patient does not appear to have any substantial effect on the results of this study.

Discussion

It can safely be stated that there appears to be a substantial correlation between qualitative and quantitative measures of physical disability concerning cervical injuries and an even greater one with lumbar injuries when performed in the appropriate time frames as designated by current testing standards. It should also be noted that the Physical Abilities Test itself might, in its own design cater to low back injuries more so than to cervical injuries. Subsequently, further development of the Physical Abilities Test must be initiated so as to ensure the continuity of findings for both the cervical and lumbar spinal injuries.

References Upon Request

Thank You for Your Interest

Remember that it is Perfect Practice Makes Perfect

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