

Summary and Perspective of Recent Literature

Fiona MacKenzie, PT Dip. MDT

Title:

WERNEKE, M.W. et al., 2018. Directional preference and functional outcomes among subjects classified at high psychosocial risk, using STarT. Physiotherapy Research International, Epub ahead of print March 14. Available at: doi 10.1002/pri.1711

Aim:

This study aimed to investigate whether exercises matched to directional preference (DP) at initial assessment influenced functional outcomes for those classified as high psychological risk using the STarT Back Screening Tool (SBST).

Study Design:

This multicenter case series examined a sample of convenience among private, hospital and military outpatient clinics. Each of the eight physiotherapists participating in data collection was trained in the McKenzie System -an equal split of four credentialed and four diplomate clinicians. None of the physiotherapists were blinded to risk classification using the SBST. Nor were the physiotherapists formally trained in cognitive behavioural interventions recommended for appropriate management following high-risk classification (Hill et al. 2008).

Methods:

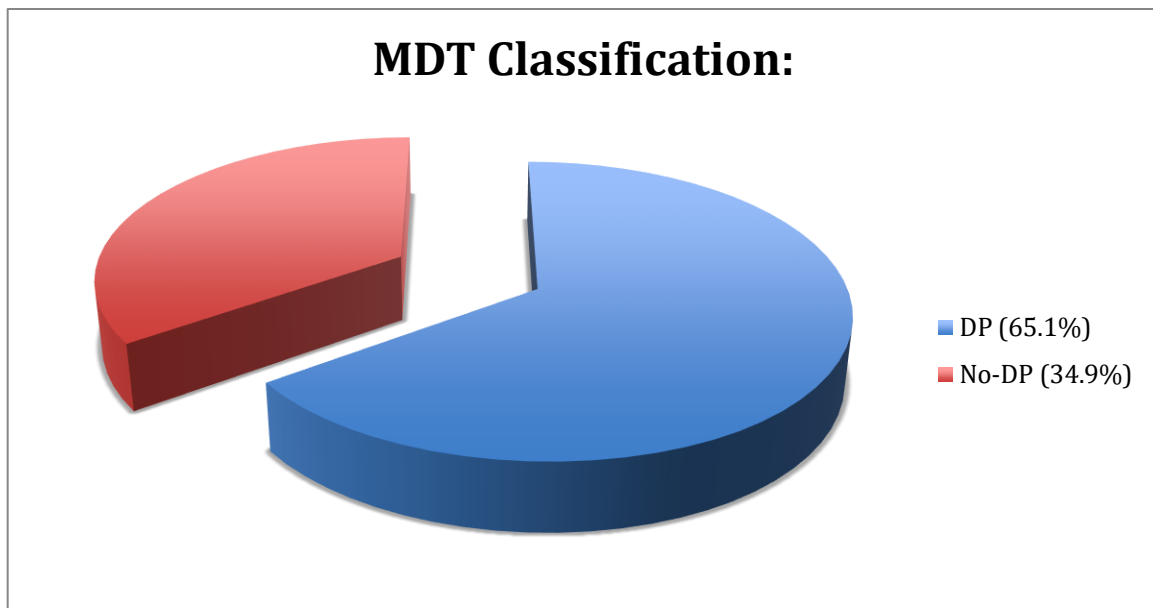
A total of 138 patients experiencing non-specific low back pain were evaluated. Patients were included if identified as high psychological risk using the SBST and age 17 or older. Patients were excluded if pregnant, or if serious pathology was suspected.

Baseline outcome measures included the SBST and FS LCAT (Functional Status Lumbar Computed Adaptive Test). The SBST is a nine-item prognostic questionnaire that stratifies patients into low (total score < 3), medium (psychosocial sub-score = ≤ 3) or high (psychosocial sub-score = ≥ 4) risk classification. The FS LCAT measures functional status using a 100-point linear metric (0 = low / 100 = high). To allow for risk-adjustment, 11 additional variables of age, gender, symptom duration, payer, medication use at intake, exercise history, lumbar surgical history, prior treatment, condition complexity, MDT training level and treatment duration were also evaluated. Data collection for the FS LCAT was then repeated at discharge for comparison.

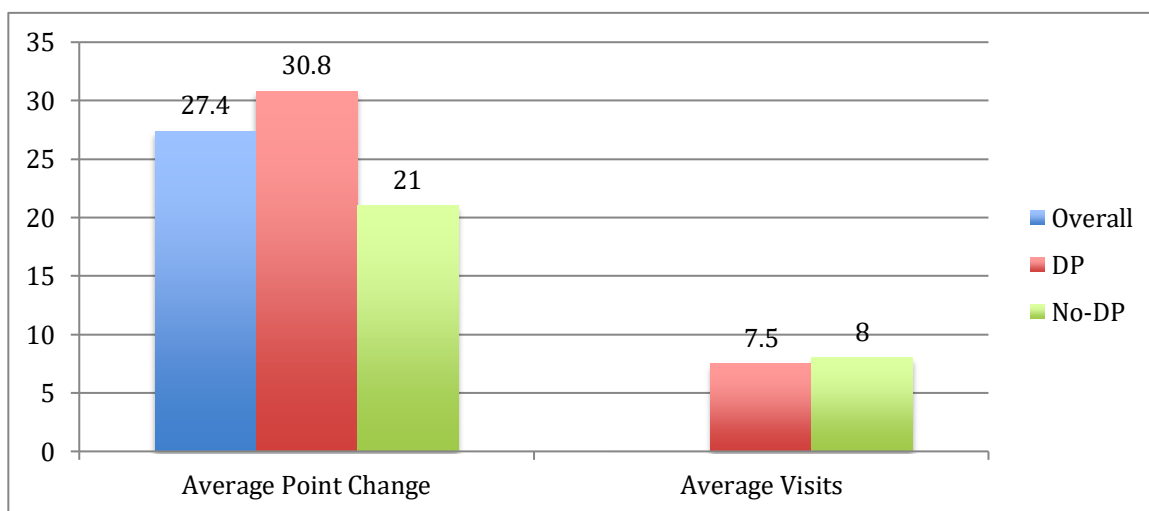
Following the principles and practices of the McKenzie® Mechanical Diagnosis & Therapy (MDT) system, patients were classified into a DP or No-DP category at initial assessment. If present, treatment was guided by DP. Alternatively, an individualized rehabilitation program was created at the discretion of the treating physiotherapist. Regardless of classification however, all patients received the same educational component in which self-efficacy and locus of control was promoted within the rehabilitation process. No additional attempts to standardize treatment beyond these measures were applied.

Results:

A total of 29 patients withdrew from the study, resulting in a 79% completion rate. A comparison of risk-adjustment variables for those who withdrew from the study revealed that this cohort was more likely to have No-DP, chronic symptoms, require pain medication(s) and longer treatment duration. Otherwise, no additional differences existed among study participants. Among the remaining 109 patients in this case series, a large portion demonstrated DP (65.1%) compared to No-DP (34.9%).



When patients classified as SBST high risk demonstrated DP, a significant and clinically important increase in functional status score was identified. Functional status outcomes changed by an average of 30.8 points over an average of 7.5 visits. MDT clinicians, despite a lack of formal cognitive behavioural training, demonstrated successful intervention. This implies that the latter might not be required to achieve favourable results as previously described within the literature.



Limitations:

The authors noted several limitations. Incomplete data collection required that the study results be interpreted with caution, although the completion rate noted was comparable with previous studies of similar design. The use of a convenience sample limited the generalizability of findings. Likewise, it does not imply cause and effect. The authors suggested stronger research design for validation. An additional constraint of observational research included the potential impact of unmeasured variables towards study results.

Conclusion:

Few studies have examined the prognostic value of lumbar DP at initial assessment in relation to FS outcomes. This study adds to the growing knowledge base by demonstrating a positive association between the presence of DP and FS outcomes at discharge. While the results are contrary to the previous work of Werneke et al (2011), the authors suggest varied sample sizes, patient characteristics and risk-adjustment variables as partial explanations towards the differing findings.

Interestingly, this study suggests that the presence of DP might actually enhance the cognitive behavioural education strategies inherent within the MDT approach (McKenzie & May 2003). These findings should encourage clinicians to continue to develop their understanding and application of MDT as a means to increase their confidence towards the use of DP as a prognostic indicator.

References:

HILL, J.C. et. al., 2008. A primary care back screening tool: identifying patient subgroups for initial treatment. Arthritis & Rheumatology, 59(5), pp. 632-641.

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