

# Adding information on multisite widespread pain to the STarT Back Screening Tool when identifying low back pain patients at increased risk for poor prognosis

Katarina Aili<sup>1,2,3</sup>, Stefan Bergman<sup>3,4,5</sup>, Emma Haglund<sup>3,6</sup>

<sup>1</sup>Halmstad School of Health and Welfare, Halmstad University, Halmstad, Sweden, <sup>2</sup>Institute of Environmental Medicine, Karolinska Institutet, Stockholm, Sweden, <sup>3</sup>Spenshult Research and Development Centre, Halmstad, Sweden, <sup>4</sup>Primary Health Care Unit, Department of Public Health and Community Medicine, Institute of Medicine, The Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden, <sup>5</sup>Lund University, Department of Clinical Sciences, Department of Rheumatology, Lund, Sweden, <sup>6</sup>School of Business, Engineering and Science, Halmstad University, Halmstad, Sweden

## CONCLUSIONS

Adding information on multisite widespread pain to the SBT resulted in classifying more patients in the high risk group as compared to using only SBT.

The three groups identified by combing the screening tools differed significantly on all investigated health variables. This may indicate that the combination could be useful in risk assessment.



## CONTACT

For additional information, please contact Katarina. Aili@fou-spenshult.se

## Background

Early identification of those with the highest risk of developing chronic low back pain (CLBP) is important but difficult. STarT Back Screening Tool (SBT) is reported to capture patients at increased risk for poor prognosis, but does not include concurrent pain from other locations, which is a known risk factor for worse outcome.

## Objectives

To study differences in self-reported health related measures in patients with low, medium and high risk for poor prognosis, identified by SBT only or by the combination of SBT and multisite widespread pain.

## Methods

A clinical cross-sectional study including 95 adults aged 18-67 seeking primary care for LBP in the southwest of Sweden.

The SBT was used to differentiate between three risk levels; low, medium and high risk. When patients were classified as medium risk, information from a pain mannequin were added to further distinguish between high and medium risk. If widespread pain and pain from more than seven locations (multisite pain) were reported, patients were re-classified from the medium risk to the high risk group.

Differences between the three risk groups were analysed with Anova, including:

- *physical function* measured by Roland Morrison Disability Questionnaire (RMDQ), 0-24 best-worst
- *mental health* measured by Hospital Anxiety and Depression scale (HADa and HADd), 0-21 best-worst
- *health related quality of life* measured by EuroQol-5D (EQ5D), 0-1 worst-best
- *fear avoidance* measured by Fear-Avoidance Beliefs Questionnaire for physical activity (FABQpa), 0-24 best-worst and work (FABQw), 0-42 best-worst

## Results

- Of those scoring low risk on SBT (n=19), 3 also reported multisite CWP.
- Of those scoring medium risk on SBT (n=48), 8 reported multisite CWP and were re-classified to the high risk group.
- Of those scoring high risk on SBT (n=17), 4 reported multisite CWP
- When combining SBT and multisite CWP, there were 19 in the low risk group, 40 in the medium risk group, and 25 in the high-risk group.
- The low, medium, high risk groups identified by the combined method, differed statistically significant in all included parameters using SBT only (Table 1) or the combination of SBT and multisite CWP (Table 2).

**Table 1.** The distribution of gender, and mean age and self-reported Depression (HADd), Anxiety (HADa), Health-related quality of life (EQ5D), Fear avoidance beliefs in physical activity (FABQpa) and work (FABQw), and Physical function (RMDQ) in the three risk groups (low, medium and high) according to SBT only.

	Low risk SBT n=19	Medium risk SBT n=48	High risk SBT n=17	p-for difference
Female gender n (%)	11 (58)	32 (65)	7(41)	0.218 <sup>a</sup>
Age mean (sd)	41.7 (12.3)	43.3 (14.6)	39.2 (14.3)	0.590
HADd mean (sd)	3.4 (4.3)	4.9 (4.7)	8.3 (3.8)	0.005
HADa mean (sd)	4.4 (5.2)	7.6 (4.8)	10.2 (3.1)	0.001
EQ5D mean (sd)	0.71 (0.13)	0.49 (0.30)	0.39 (0.38)	0.005
FABQpa mean (sd)	8.78 (4.7)	13.1 (5.8)	15.6 (6.8)	0.003
FABQw mean (sd)	9.9 (7.6)	18.5 (10.3)	23.3 (10.5)	0.001
RMDQ mean (sd)	7.0 (3.4)	12.9 (5.7)	14.3 (4.1)	0.000

p-values, 2-tailed, by ANOVA, except <sup>a</sup> by chi-square

**Table 2.** The distribution of gender, and mean age and self-reported Depression (HADd), Anxiety (HADa), Health-related quality of life (EQ5D), Fear avoidance beliefs in physical activity (FABQpa) and work (FABQw), and Physical function (RMDQ) in the three risk groups (low, medium and high) according to the combination of SBT and multisite CWP.

	Low risk combined n=19	Medium risk combined n=40	High risk combined n=25	P for difference
Female gender n (%)	11 (58)	25 (63)	14 (56)	0.862 <sup>a</sup>
Age mean (sd)	41.7 (12.3)	43.1 (15.2)	41.4 (13.7)	0.875
HAD-D mean (sd)	2.9 (4.2)	4.0 (3.8)	8.4 (4.9)	<0.001
HAD-A mean (sd)	3.7 (4.7)	6.4 (4.0)	10.1 (3.3)	<0.001
EQ-5D mean (sd)	0.72 (0.13)	0.53 (0.30)	0.38 (0.34)	0.001
FABQ-PA mean (sd)	9.1 (4.2)	12.7 (6.2)	14.4 (6.2)	0.005
FABQ-W mean (sd)	9.9 (7.9)	16.7 (8.9)	23.1 (9.9)	0.001
RMDQ mean (sd)	7.0 (3.4)	12.2 (6.1)	13.4 (3.9)	<0.001

p-values, 2-tailed, by ANOVA, except <sup>a</sup> by chi-square

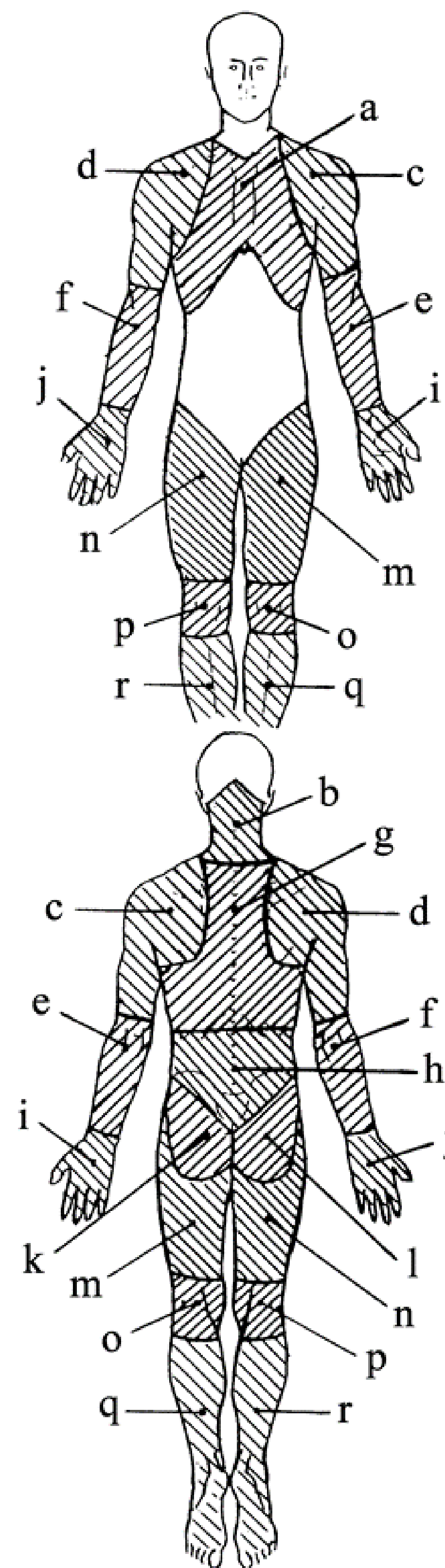


Figure 1. Pain manikin