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Comparison between the STarT Back Screening Tool and the Örebro Musculoskeletal Pain Screening Questionnaire: which tool for what purpose? A semi-systematic review

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Introduction

Non specific spinal pain = the most frequent musculoskeletal pathology

→ 70 % lifetime prevalence !

→ Massive costs for society → Chronic Low Back Pain (LBP) = Most of the costs

Challenge → Detect at-risk patients to avoid chronicization and its consequences

Woolf & Pfleger (2003) Juniper et al. (2009) Foster et al. (2013)
van Tulder et al. (2006) Valat (1998)

Introduction

Örebro Musculoskeletal Pain Screening Questionnaire (OMPSQ)

25 items
Created to predict work absenteeism
« At-risk » or « Non at-risk »

Linton & Hallden (1998)

OMPSQ-short

10 items
Shortened version of the OMPSQ
« At-risk » or « Non at-risk »

Linton et al. (2011)

STarT Back Screening Tool (SBST)

9 items

Created to identify modifiable risk factors
and to assign a specific treatment to each risk group

« Low », « Medium » and « High » risk groups

- « Low » → Primary care management
- « Medium » → Physiotherapy
- « High » → Physiotherapy + Cognitive-behavioral therapy

Hill et al. (2008)
Hay et al. (2008)

Introduction

<u>Purpose of the study</u> :

To compare the OMPSQ and the SBST in terms of predictive power for a wide range of outcomes, as well as general aim to provide useful information for clinicians

Methods

Study design

Semi-systematic review: one reviewer (AL)

Search strategy

PubMed/MEDLINE

Studies between 1997 (OMPSQ creation) and October 2017

Methods

Inclusion criteria

Adults > 18 y
Acute or subacute non specific spinal pain (lumbar/cervical)
Chronic non specific spinal pain (lumbar/cervical): **accepted only for work-related outcome**
Musculoskeletal pain in other body areas **but concomitant with spinal pain** accepted

Patients completed the SBST/OMPSQ/OMPSQ-short/OMSQ/ALBPSQ

Studies included had to study the ability of the questionnaires to predict 4 main outcomes domains:

- Pain outcomes
- Function outcomes
- Work outcomes
- Global recovery

Methods

Inclusion criteria

Follow-up durations had to be provided

Studies provided data on :

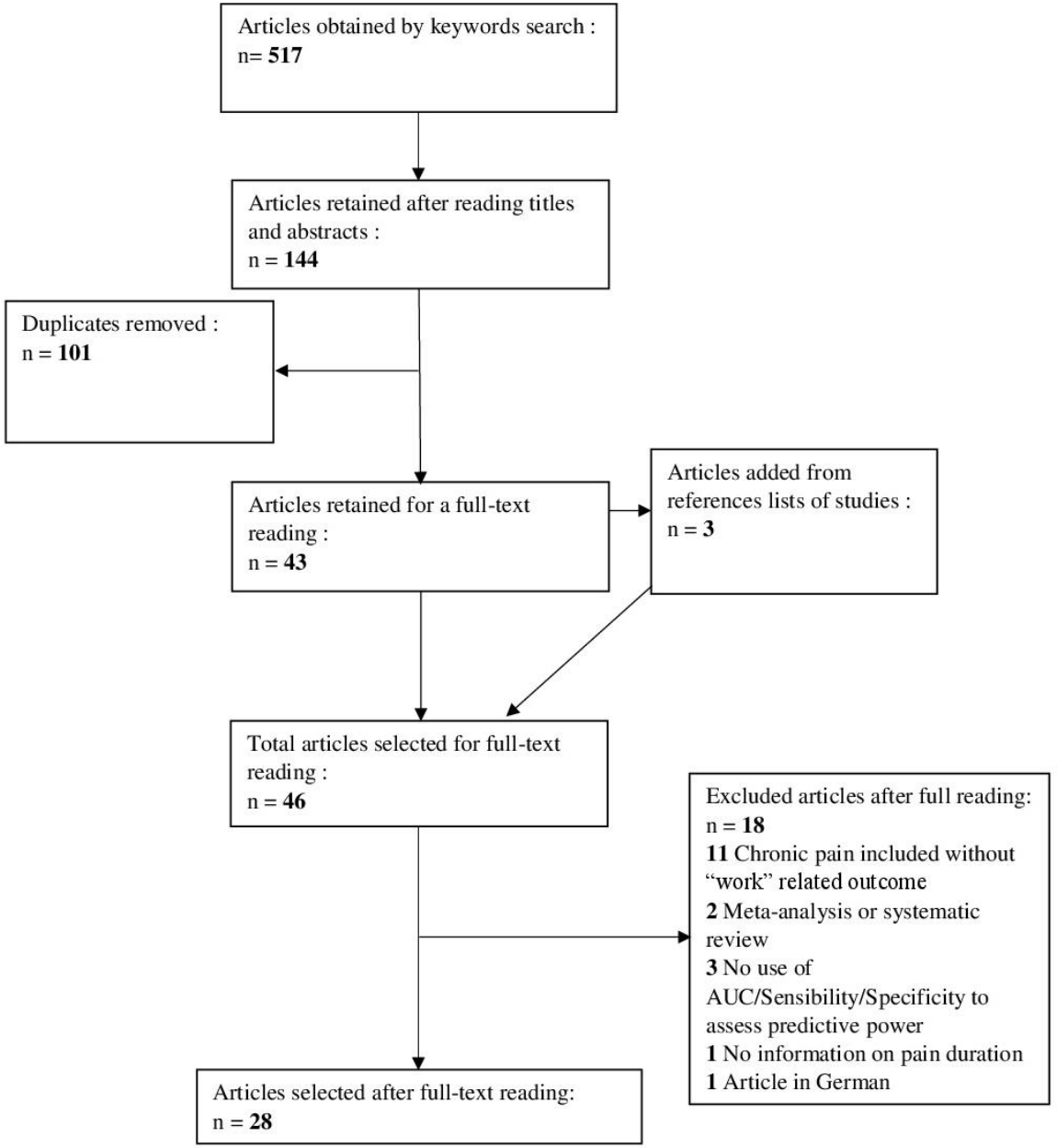
- Sensitivity
- Specificity
- AUC (0.5-0.6 for « non informative », 0.6-0.7 for « low », 0.7-0.8 for « acceptable », 0.8-0.9 for « excellent », 0.9-1.0 for « outstanding » predictive power).

Cut-off scores used to calculate sensitivity and specifity had to be specified

Hayden et al. (2013)

Results

Flow chart



Results

Summary of the results for the predictive power of each questionnaire

Results

Summary of the results for the predictive power of each questionnaire

Pain outcomes

Outcome	SBST	OMPSQ	OMPSQ-short
Pain NRS ≥3			
at 3 months	Non informative	Low	/
at 6 months	Low to acceptable	Low to excellent	/
at 12 months	/	Acceptable	/
OMPSQ pain >16 at 6 months	/	Acceptable	/

Results

Summary of the results for the predictive power of each questionnaire

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at 12 months	/	Acceptable	/
OMPSQ pain >16 at 6 months	/	Acceptable	/

OMPSQ > SBST ?

Results

Function outcomes

Outcome	SBST	OMPSQ	OMPSQ-short
Oswestry Disability Index (ODI)			
≥20 % at 6 months	/	Acceptable	/
≥30 % at 6 months	Acceptable	Acceptable	/
Rolland Morris Disability Questionnaire (RMDQ) ≥7			
at 3 months	Low	/	/
at 6 months	Excellent	/	/
RMDQ >4 at 6 months	/	Low	/
RMDQ >4 at 12 months	/	Acceptable	/
OMPSQ function <45 at 6 months	/	Acceptable to excellent	/
Quebec Back Pain Disability Questionnaire (QBPDQ) ≥30 % at 3 months	/	Low	/
SFI			
≥10 % at 6 months	/	Excellent	/
≥30 % at 6 months	/	Excellent	/
Disability ≥ 4/11 (dichotomized mean response to 3 Graded Chronic Pain Scale (GCPS) disability items) at 6 months	/	/	Acceptable

Results

Function outcomes

Outcome	SBST	OMPSQ	OMPSQ-short
Oswestry Disability Index (ODI)			
≥20 % at 6 months	/	Acceptable	/
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OMPSQ < SBST ?

Results

Work outcomes

Outcome	SBST	OMPSQ	OMPSQ-short
Absenteeism			
>1 day at 6 months	/	Acceptable to excellent	/
>15 days at 6 months	/	Low to acceptable	Acceptable
≥30 days at 6 months	Excellent	Excellent	/
≥30 days at 12 months	/	Acceptable	/
≥30 days at 24 months	/	Low	/
>60 days at 12 months	/	Low to acceptable	/
OMPSQ « absenteeism » >6 at 6 months	/	Excellent	/
Absenteeism >30 days at 12 months post-treatment	/	Acceptable	/
Return-to-work : « no » at 12 months post treatment	/	Low	/
Return-to-work at 3 months post-treatment	/	Excellent	Acceptable
Sickness presenteeism due to neck/back pain : « yes » ≥ 2 times at 2 years	/	Low	/
Return to part-time or full-time work ≥4 consecutive weeks at 1 year	/	Non informative to acceptable	/

Results

Work outcomes

Outcome	SBST	OMPSQ	OMPSQ-short
Absenteeism			
>1 day at 6 months	/	Acceptable to excellent	/
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Work outcomes

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Return to part-time or full-time work ≥4 consecutive weeks at 1 year	/	Non informative to acceptable	/

OMPSQ >>> SBST and OMPSQ ≅ OMPSQ-short

Results

Global recovery

Outcome	SBST	OMPSQ	OMPSQ-short
« Global Recovery »	/	Low	/

?

Discussion

Pain	Function	Work	Global Recovery
OMPSQ > SBST ?	OMPSQ < SBST ?	OMPSQ >>> SBST and OMPSQ ≅ OMPSQ-short	?
Not clear	Not clear	Clear	Need studies

Discussion

Clinical usefulness of the questionnaires and advices

Not better than clinician's intuition

But

Allow to be systematic
Allow to save time
SBST allows to advise treatment

Bishop & Foster (2005)
Jellema et al. (2007)
Kongsted et al. (2016)

Time frame :

Not during the hyperacute phase

- Nearly a third would change group

Wait for a few days after onset

Morsø et al. (2016)
Mehling et al. (2015)
Newell et al. (2015)

Must be intergrated with patient's :

- History
- Expectations
- Preferences
- Context

Hill et al. (2010)
Linton et al. (2011)
Heneweer et al. (2007)

Discussion

The purpose makes the difference

Prognosis ?

OMPSQ
or OMPSQ-short

- Items taken from prognostic questionnaires
- Studied +++ for this purpose

Allocating a treatment ?

SBST

- Homogenous risk groups
- Stratified treatment = effective

Foster et al. (2014)

Discussion

Limitations

- +++ Heterogeneity between studies
- Not many studies about SBST according to our inclusion criteria

Discussion

Strengths

- Broadest review on the subject
- We looked at the aims and clinical usefulness of the questionnaires
- We proposed recommandations for clinicians

Conclusion

<u>The choice of a questionnaire depends on</u> :

- **The purpose** :

  Prognosis ? → OMPSQ or OMPSQ short

  Choosing a treatment ? → SBST

- **The brevity and practicality** : SBST > OMPSQ-short >>> OMPSQ

Always use questionnaires thoughtfully
and integrate results in a broader patient context !

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Thank you for your attention !

Any question ?

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Review

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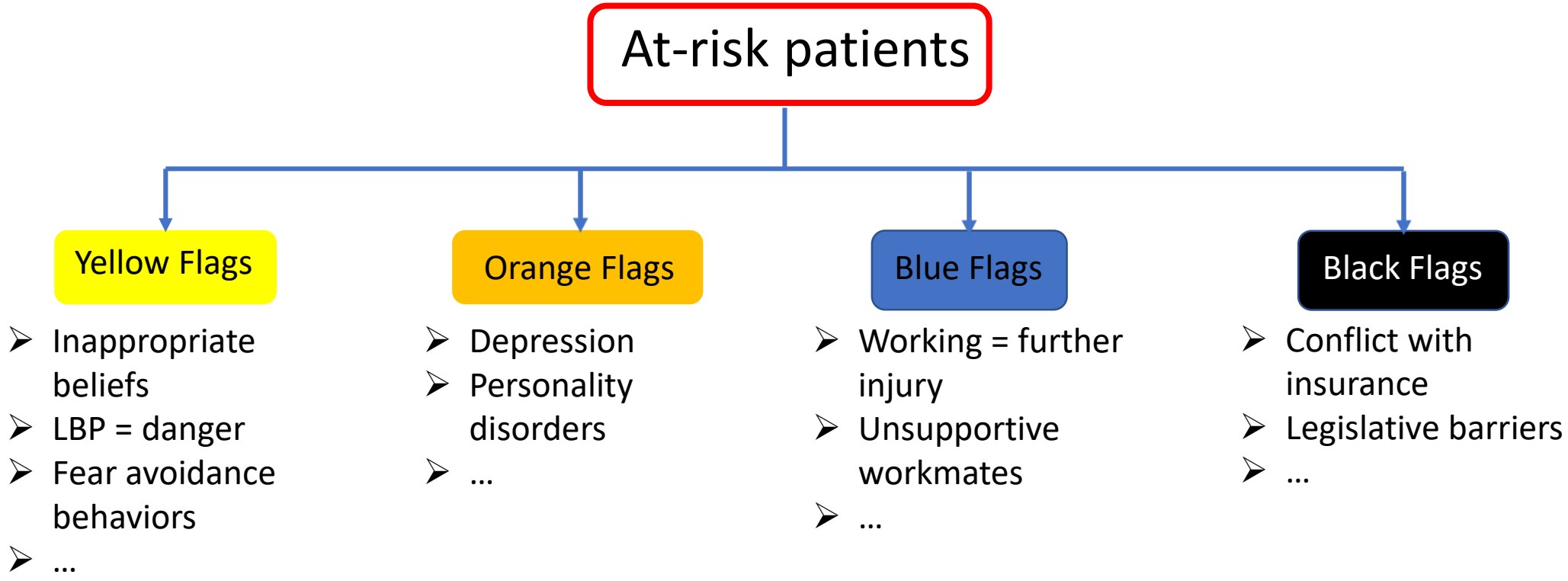
Disclosure of interest

The authors declare that they have no competing interest

Introduction



How to detect them ?

Nicholas et al. (2011)

Results

Methodologic quality

Low risk of bias: 19 studies

High risk of bias: 9 → 8 with high risk of bias in the « Study Attrition » domain