

Perspectives and experiences of physiotherapists and general practitioners in the use of the STarT Back Tool: a review and meta-synthesis

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ABSTRACT

Introduction. The STarT Back Tool (SBT) is used to triage people with acute low back pain (LBP) into treatment groups, matched to their risk of chronicity. It was developed in the UK where it has been shown to improve clinical outcomes, patient satisfaction, and reduce time off work. Successful implementation of the SBT outside the UK is dependent on health practitioner's attitudes and the healthcare system in which they work. Gaining health practitioners' perspectives on the SBT is an important step in implementation. **Methods.** A computerised search of qualitative literature was conducted across seven databases in March 2021 using keywords to identify studies investigating the perspectives of physiotherapists and general practitioners on the use of the SBT in primary health care. Study quality was assessed using the Critical Appraisal Skills Programme (CASP) tool. Data were coded and analysed using reflexive thematic analysis. **Results.** Eight articles met inclusion criteria and included the views of 76 physiotherapists and 65 general practitioners, working in primary health care in four countries. Three themes were created from the data: 'Making it work', identifies factors that influence implementation and continued use of the SBT. The second 'will I do it?', captured potential consequences of adopting the SBT, and the third, 'it's all about the patient' emphasised how the SBT may affect patients. **Discussion.** Physiotherapists and general practitioners found using the SBT frequently enhanced practice. General practitioners expressed concerns about time constraints and the SBT's potential to undermine clinical experience. Findings from this study will inform modifications to contextualise the tool to each healthcare environment.

Keywords: back pain, chronic, general practitioners, perspectives, physiotherapists, qualitative, screening, STarT Back Tool, stratification, thematic analysis.

Introduction

Low back pain (LBP) is a significant problem worldwide; prevention and management strategies have not reduced the escalating prevalence rates.^{1–6} A high proportion of those with LBP experience recurrent episodes over their lifetime.^{7–9} It is estimated that in approximately 10% of people, acute LBP becomes chronic, resulting in disability and work absence.^{3,10,11} The impact is significant, through the personal cost of pain and suffering, and the financial cost of treatment and work absence.⁴

Traditionally a biomedical approach has been used to manage LBP;¹³ however, there is evidence of an association between psychosocial factors and development of chronicity.^{11,12,14–16} This has led to the development of management strategies that consider psychosocial factors.

Several screening tools have been developed for the management of LBP; one is the *STarT Back Tool Screening Tool* (SBT)¹⁷ (<http://www.keele.ac.uk/sbst/startbacktool/>), which was designed, developed and tested in the United Kingdom (UK) to support primary healthcare practitioners such as physiotherapists (PTs) and general practitioners (GPs). In the UK, it is a recommendation that the SBT is used at the first contact for each new LBP

episode (National Institute for Health and Care Excellence [NICE]).¹⁸ The SBT is a nine-item questionnaire prognostic screening tool that identifies modifiable psychosocial risk factors for developing chronic LBP.¹⁹ Patients are stratified to receive targeted treatment, matched to their level of risk:²⁰ low risk, one treatment session including assessment, self-management education; medium risk, self-management education and six sessions of physiotherapy; high risk, the same as medium risk and psychologically informed physiotherapy.^{11,21–23} Stratification of people with LBP using the SBT has been shown to reduce healthcare costs, individual suffering, and productivity loss in the UK.^{3,11,23,24}

The SBT²¹ has been used in a number of countries with inconsistent results. Its introduction into a primary care setting is dependent on the willingness of health practitioners to accept and utilise new concepts to change behaviour, and on the constraints of the healthcare system in which they work.²² The tool needs to have meaning to the intended users to increase the likelihood of successful implementation.²⁵

Understanding practitioners' perspectives will help address barriers to implementation of the SBT.^{22,26} This study is a systematic review of studies investigating the perspectives of physiotherapists and GPs on the use of the SBT in clinical practice.

Methods

The review was conducted using Preferred Reporting Items for Review and Meta-Analysis guidelines (PRISMA²⁷).

Databases searched and inclusion and exclusion criteria

The databases searched were CINAHL, MEDLINE, Sport Discus, EBSCO, Scopus, Web of Science, Cochrane Review Database, and Cochrane Central Register of Controlled Trials from the inception of the SBT (2008) to March 2021. Articles were included if they were published in English in peer-reviewed journals and used a qualitative design or included qualitative data reported separately from quantitative data. Participants in the study were general practitioners or physiotherapists working in primary care. We included studies that had collected data during face-to-face interviews, focus groups, telephone interviews or workshops. The focus was perspectives of previous use or intended use of the SBT. All retrieved articles were imported into bibliographic management software (Endnote X8, Clarivate). Duplicates were identified and removed.

Search strategy

Search terms were developed to identify studies relating to the perspectives on the use of the SBT and were adapted for different databases (see Appendix Table A1). Four key term

clusters were used, which identified the groups of participants of interest: physiotherapists and general practitioners, the intervention; stratified care (SBT), the condition of interest; low back pain, and the phenomenon of interest; and perspectives of those administering the tool.

Appraisal of included papers

Title and abstracts of articles were reviewed independently by two reviewers (FT and JH), against inclusion criteria to identify relevant articles. Full-texts of articles where the title and abstract fit the inclusion criteria were reviewed by FT using the same eligibility criteria. Authors were contacted for full-text if it was not available. JH independently reviewed the identified articles. Where disagreement existed, NS acted as arbitrator. Reference lists of all included articles were searched for additional articles.

Quality assessment

The Critical Appraisals Skills Programme (CASP; 2018)²⁸ was applied independently by two reviewers (FT and GA) to assess the quality of included articles. Any discrepancies were resolved using an additional reviewer (JH) to make the final decision.

Data extraction

Data were extracted independently by FT and GA from the included articles; this included study design, participants, and method of data collection.

Data analysis

Reflexive thematic analysis was used to gather findings and generate themes.²⁹ Two reviewers (FT and GA) familiarised themselves with the data. Each article was coded line-by-line, and the codes were grouped and categorised into candidate themes, reflecting the context of the original article. The coded data were then reviewed by four reviewers (FT, GA, JH and NS) and the candidate themes were grouped under themes that went beyond the content of the original studies. FT and GA presented their initial coding to NS and JH and there was discussion and re-coding to ensure that each code reflected the participant data accurately. The process of writing the results yielded several iterations and refinements to the themes that were agreed upon by all authors. Themes were defined and named, and representative quotes were selected.

Results

Literature search

The process for study selection is shown in Fig. 1.

A total of 603 journal articles were identified; 300 remained after removal of duplicates. Results from eight

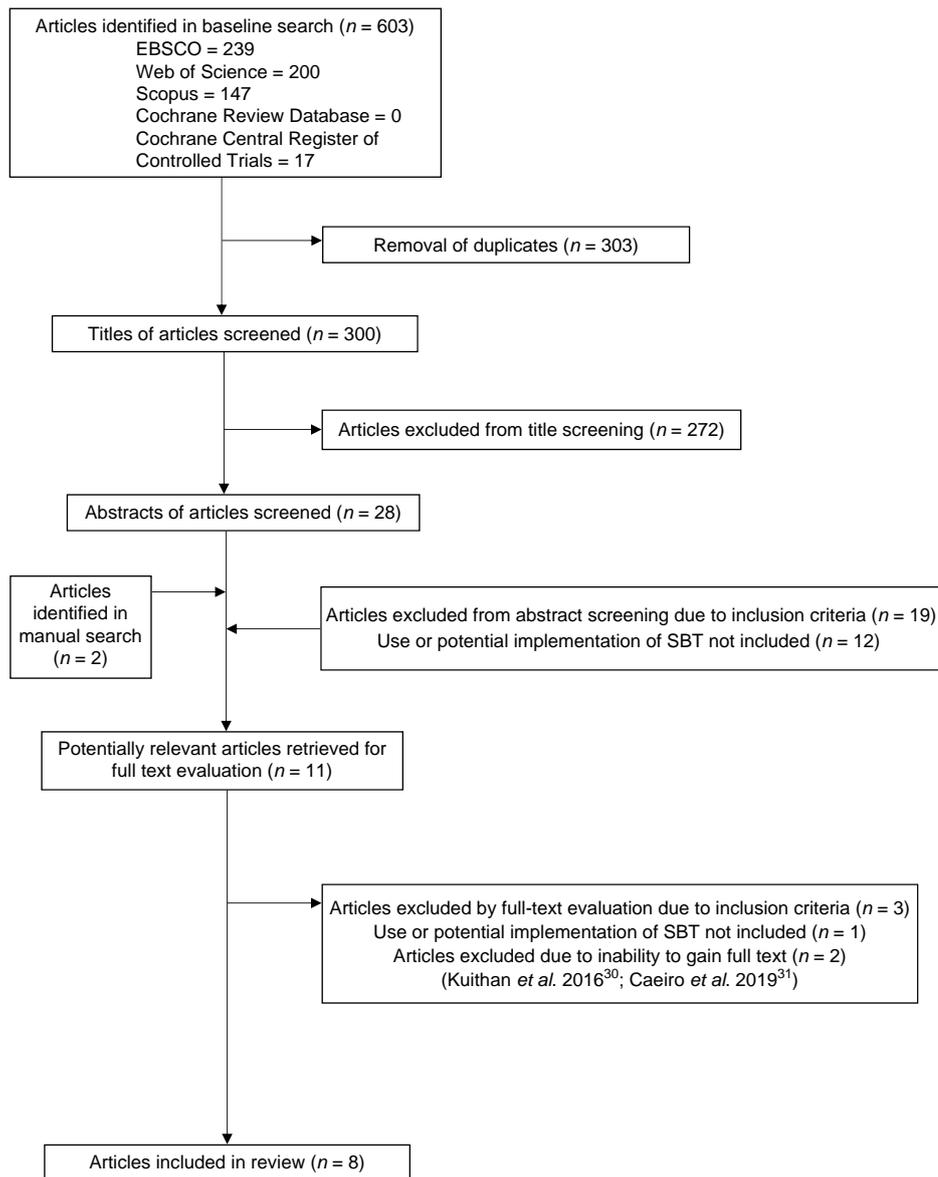


Fig. 1. Study selection process.

studies undertaken between 2011 and 2021 were included in the final review and meta-synthesis. Authors were contacted to request full publications of two abstracts that appeared relevant to this review; one was not published³⁰ and one author who was contacted twice did not reply.³¹ In the eight articles retrieved, 76 physiotherapists and 65 GPs were interviewed or surveyed about their perspectives on the use of the SBT.

Study characteristics

A summary of the articles included in this review can be found in [Table 1](#). Studies were completed in four countries: four in the UK, two in Germany and one each in the USA and Portugal, between 2011 and 2021. Four studies interviewed participants following exposure and use of the SBT for several

months.^{24,25,32,33} The remaining four studies reported on participants who had completed workshops where the potential for the use of the SBT was being investigated.^{3,31,34,35}

Quality of articles

All studies met at least seven of the 10 criteria in the CASP tool, with the relationship between the researcher and included participants most frequently not addressed (see [Table A2](#)).

Principle findings

Three themes were generated from the data:

(1) Making it work; (2) Will I do it?; and (3) It's all about the patient.

Table 1. Summary of characteristics of included articles (n = 8).

Author	Year	Country	Design	Data source	Currently using STarT Back Tool	Profession	Participants (n)
Hsu <i>et al.</i> ³²	2019	USA	Qualitative/observational	Interview	Y	PT	7
Karstens <i>et al.</i> ³⁴	2015	Germany	Qualitative	Think tank workshop	N	GP	19
Karstens <i>et al.</i> ³	2018	Germany	Qualitative	Think tank workshop	N	PT	19
Sanders <i>et al.</i> ³³	2011	UK	Qualitative/observational	Interview	Y	GP	9
Caeiro <i>et al.</i> ³¹	2019	Portugal	Qualitative	Focus group	N	GPs and PTs	GP: 6 PT: 6
Bamford <i>et al.</i> ²⁴	2017	UK	Qualitative/observational	Audit data extraction	Y	PT	18
Sanders <i>et al.</i> ²⁵	2014	UK	Qualitative	Interviews; face-to-face and telephone	Y	PT	26
Saunders <i>et al.</i> ³⁵	2016	UK	Qualitative	Focus groups and telephone interviews	N	GP	23

PT, physiotherapist; SBT, STarT Back Tool; GP, general practitioner; Y, yes; N, no.

Theme 1: making it work

This theme identifies factors that may influence implementation and continued use of the SBT in clinical practice. Physiotherapists and GPs felt the psychosocial education during the SBT training added to their skills and ability to treat more complex patients. They valued the structure the SBT provided. Both professions agreed it facilitated difficult conversations regarding psychosocial factors.^{24,25,32,35}

Overall, the most helpful thing is it's really kind of given a framework to approach patients with... low back pain. Whereas in the past it's... not an easy clinic visit to lead [...] (GP; Hsu *et al.* 2019³²)

Additionally, physiotherapists identified specific areas of education where they needed to manage psychosocial factors. They felt under prepared by their tertiary education to provide cognitive behavioural therapy, exercise prescription and the level of skilled communication required.^{3,31}

I need to learn more about patient education, mainly how to use strategies from the cognitive-behavioural model in order to carry out education about the neuro-physiology of pain. (Physiotherapist; Caeiro *et al.* 2019³¹)

Once they had had the opportunity to use the SBT, many would have valued additional on-going support.

But it's definitely true that it's something that not everybody can do [skilled communication] and it's hard to learn it on a theoretical basis. I think you'll need supervision on top. (Physiotherapist; Karstens *et al.* 2018³⁴)

Using the SBT gave physiotherapists and GPs a better understanding of each other's management of LBP, resulting in an improved interprofessional relationship. This appeared to have a positive effect on interprofessional management, and improved the consistency of approach to LBP between professions.^{3,25,31,32}

[...] our everyday reality is that there is little confidence in our capabilities [...] this approach enhances our own confidence as well as the physicians' trust in us, that the patients receive appropriate physiotherapy treatment. (Physiotherapist; Karstens *et al.* 2018³⁴)

Theme 2: will I do it?

This captured participants' conflicting perceptions of whether SBT was worth undertaking, and potential consequences of adopting it. Both professions felt it improved quality of care and reinforced or, in some instances, introduced evidence-based practice.^{3,31}

[...] so, this may help moving physiotherapists from practices that are not evidence-based towards new and more effective treatments. (Physiotherapist; Caeiro *et al.* 2019³¹)

Many participants agreed that the SBT would help provide guidance for clinical reasoning and stratification of patients.^{3,25,32,34,35}

I'd be happy with it saying, 'This is the most appropriate treatment,' because that's where you want to go. And more often than not you'll think, 'Yeah, that's more or less what I had in mind anyway.'... Or you'll go, 'Oh, that's a good idea. That wasn't quite what I was going to do but it might make sense' [...] (GP; Saunders *et al.* 2016³⁵)

However, some questioned whether the SBT could stratify patients correctly or whether stratification could be adjusted if necessary.^{24,33} Specifically, physiotherapists found that a patient's category might change during treatment. In addition, some GPs and physiotherapists identified the SBT as redundant as it did not provide additional information.^{24,32,35}

I'm not using the tool at all... The tool wasn't really showing me something I didn't already know from my interview and exam. (GP; Hsu *et al.* 2019³²)

Many GPs indicated that they lacked time to administer the SBT assessment and treatment recommendations,^{31,33–35} with some GPs having as few as 9 min per consultation.³⁴ There were some suggested ways to reduce the time taken; for example, education being delivered remotely via media instead of face-to-face.^{3,25,32,34}

[...] the problem is the time. It's definitely playing a major [part] on the issues you know. You're doing something a bit extra on top of what you normally do on a daily basis [...] (GP; Sanders *et al.* 2011³⁵)

Another influencing factor was the reported stress associated with a change to routine care practices. Some participants forgot to use the SBT in consultations.^{31–33}

My major difficulty was remembering to ask the questions because my practice is to enter my notes after the patient has left [...] and you think oh I've forgot to ask them. (GP; Sanders *et al.* 2011³⁵)

The reduction in the number of treatment sessions required for low-risk patients, with the consequent reduction in income, was of concern to physiotherapists.⁴ This concern, combined with an increase in complexity of treatment required for high-risk patients, meant physiotherapists expressed a desire for remuneration to reflect the change.⁴

I think reimbursement is rather cause of frustration for all of us therapists [laughter], we are convinced that we don't get paid to an extent we think we are qualified [...]. With these tasks [SBT-Approach], with these additional qualifications, physiotherapy is gaining more, dramatically more importance and thus deserves a higher reimbursement. (Physiotherapist; Karstens *et al.* 2018³⁴)

Theme 3: it's all about the patient

This theme emphasised how the SBT may affect patients, and their potential reactions to risk stratification and matched treatments. Health practitioners felt they were pigeonholing patients by stratifying them into one of only three groups, not considering patient individuality.^{3,33}

[...] the social side of it, of people's lives and their problems and things like that and seeing if you can problem solve with that... I find that more interesting than dishing out a sheet of exercises. (Physiotherapist; Sanders *et al.* 2014³⁵)

Both professions agreed that patient demand could significantly influence decision-making surrounding referrals.^{24,25,33} They recognised that patients have rights to request specific treatment and felt the need to consider the requests to maintain a trusting relationship. However, in some cases, patient demand directed decision-making.

[SBT] did not guide treatment as my patient was very specific about what she wanted (Physiotherapist; Bamford *et al.* 2017²⁴)

In contrast, some physiotherapists anticipated that this method of treatment may be embraced by patients if previous treatments had been unsuccessful. Karstens *et al.*³ reported that patients who received a preliminary education session prior to physiotherapy presented with an improved attitude towards treatment. Additionally, physiotherapists found the SBT encouraged patient engagement in treatment²⁵ and increased patients' motivation to improve.

What was really useful to me was the discussions with the [trainer]... That really changed my focus when talking with patients about back pain, really letting them know that no harm will come to them from being active and how to prepare them appropriately for what physical therapy could offer. (GP; Hsu *et al.* 2019³²)

Discussion

Most participants felt that the SBT served its purpose as a stratification tool and enhanced their practice, though some felt the SBT prevented them from exercising autonomy.

The ability to diagnose often involves pattern recognition, which many GPs view as a component of ‘the art of practice’.³⁶ However, previous research has shown that reliance on pattern recognition can result in a longer pathway to effective treatment, and using the SBT has been demonstrated to enhance rather than detract from effective practice.¹¹ The training focuses on the key messages, that the SBT is designed to: aid, not take over clinical decision-making; improve the efficiency of LBP management; and help manage high and challenging caseloads.^{37,38}

Many GPs also express a lack of confidence and understanding of chronic LBP, with authors reporting that the more complex a patient is, the less willing GPs are to address the problem in its entirety.³⁹ Arming GPs with the SBT may help to improve confidence and guide assessment of underlying psychosocial factors. A promising finding from the current review was that physiotherapists and GPs expressed increased confidence in addressing psychosocial factors, following SBT training.^{40–42} This facilitated a shift from a biomedical to a biopsychosocial approach,⁴³ adding a new dimension to routine care. Synnott *et al.*⁴² reported on physiotherapy perspectives of managing psychosocial dimensions of LBP after intensive training. Participants described increased confidence and an improved level of skill in the management of patients with chronic LBP.

Some participants in this review believed that allowing patients a choice of treatment options made them the centre of decision-making; however, GPs expressed concern that stratified care could limit patient’s options. Loss of patient autonomy has been shown to negatively affect patient wellbeing.^{44–46} Health practitioners often deal with the internal conflict between a paternalistic approach of doing what is best for the patient and cultivating patient autonomy.^{44,46} The SBT offers an evidence-based framework that encourages patient autonomy with health practitioner input only when required.

Strengths and limitations of the study

The data analysis was subjected to a rigorous peer-review process; studies were included from four countries, and participants had a range of experience in their professions. There was a dearth of studies undertaken outside the UK, despite undertaking a sensitive search and contacting key authors in the area. This may be due to the relatively recent implementation of the SBT in countries other than the UK. One limitation was that only four studies had participants who had used the SBT,^{24,25,32,33} the remainder had been educated and were contemplating its use.^{3,31,34,35} Although these pre-implementation data are of interest, it is not experiential.

Clinical and research implications

The STarT Back tool was designed to identify patients with LBP at risk of a poor outcome. The physiotherapists and GPs found the screening and subsequent stratification enhanced their practice by providing a framework for management. Frequently, the recommendations agreed with their clinical decisions and added a psychosocial element to their assessment with increased confidence in how to manage this component. The funding model for the management of LBP varies between countries. This presents a challenge to using it in the way it was designed to be used in the UK, in a primarily publicly funded National Health Service (NHS).⁴⁷ Health practitioner concerns about SBT, such as impact on income and time constraints, may be alleviated by implementation of modifications to suit the specific funding model of health care in that country. This review provides a first step to facilitate consultation and collaboration with health practitioners to allow effective translation of the SBT.

Conclusion

Health practitioners are receptive to using the SBT and can see some positives for practice. The use of the SBT may improve interprofessional understanding and help provide more cohesive management of LBP patients. Widespread implementation of the SBT presents challenges for some health practitioners, such as loss of revenue and a perceived loss of autonomy. The translation of a clinical tool designed for a specific health system, to a different context, requires continued consultation with stakeholders; this will facilitate adaptation of the SBT approach for each country’s health-care system.

¹Please note, a Preprint of this manuscript is available via the Research Square.

Supplementary material

Supplementary material is available [online](#).

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Data availability. Not applicable. This was a qualitative systematic review of studies investigating perspectives of health practitioners. As such, the data used and themes generated were from existing studies and hence the data sets are not supplied.

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Appendix

Table A1. Search terms used.

Criteria	Search terms used
Healthcare practitioners: Physiotherapist, General practitioners (GP)	"health* practitioner*" OR "health care pract*" OR "health* professional*" OR "health person*" OR physiotherap* OR "physical therap*" OR "primary care*" OR "general pract*" OR gp OR doctor* OR physician* OR nurse* OR pt
AND	
Stratified care	Stratified OR stratification OR stratifying OR (target* treatment*) start-back" OR "STarT Back Tool
AND	
Low back pain (LBP)	"low* back" OR "lumbar spine" OR "lumbar pain" OR lbp OR "non specific back pain" OR "non-specific back pain"
AND	
Perspectives (beliefs and experiences)	opinion* OR thought* OR perspective* OR experience* OR impression* OR view* OR training OR support* OR administer* OR implement* OR attitude*

Table A2. Quality assessment (CASP tool) results.

Study	Bamford <i>et al.</i> ²⁴	Caeiro <i>et al.</i> ³¹	Hsu <i>et al.</i> ³²	Karstens <i>et al.</i> ³⁴	Karstens <i>et al.</i> ³	Sanders <i>et al.</i> ³³	Sanders <i>et al.</i> ²⁵	Saunders <i>et al.</i> ³⁵
Clear statement of aims	Y	Y	Y	Y	Y	Y	Y	Y
Appropriate methodology	Y	Y	Y	Y	Y	Y	Y	Y
Appropriate research design	Y	Y	Y	Y	Y	Y	Y	Y
Appropriate recruitment strategy	Y	Y	N	N	Y	Y	Y	Y
Data collected appropriately to address research issue	Y	Y	Y	Y	Y	Y	Y	Y
Relationship between research and participants considered	N	N	N	N	N	Y	N	Y
Ethical consideration	Y	Y	Y	Y	Y	Y	Y	Y
Rigorous data analysis	Y	Y	Y	N	Y	Y	Y	Y
Clear statement findings	Y	Y	Y	Y	Y	Y	Y	Y
Value of research	Y	Y	Y	Y	Y	Y	Y	Y
Total (yes/10)	9	9	8	7	9	10	9	10

Y, Yes; N, No.