

Specific Question:

In adults with sub acromial shoulder pain do psychosocial factors influence the outcome?

Clinical bottom line

There is weak evidence to suggest that psychosocial factors, such as baseline fear avoidance, baseline functional disability, expectation of complete recovery, resting pain, and pain self-efficacy do have an impact on the outcome of adults with shoulder pain. These factors have been associated with greater disability and functional limitations and should be considered in management strategies

Why is this important?

Sub acromial pain is a prevalent diagnosis within our local population. Anecdotally clinical inconsistencies and variation in current physiotherapy practice has been noted. Feedback from local health professionals suggests inconsistencies in the rehabilitation received by service users.

Recent research has demonstrated that conservative management (6-8 physiotherapy sessions of individualised, progressed and supervised intervention over 12-16 weeks) benefits the patient and is complemented by efficiency savings in reducing unnecessary surgery as a first line treatment (Lahdeoja et al., 2019). Therefore we need to understand what quality physiotherapy looks like taking in to account psychosocial factors.

The areas of interest to physiotherapy management would be those which are “modifiable risk factors” including fear avoidance beliefs, duration of disease, patient expectation of prognosis, resting pain and pain self-efficacy, and pain catastrophisation for example.

Search timeframe

2008 – 2018

Strategy

Inclusion Criteria

	Description	Search terms
Population and Setting	Adults diagnosed with sub acromial shoulder pain	((exp "SHOULDER IMPINGEMENT SYNDROME"/ OR ("subacromial shoulder pain").ti,ab OR ("subacromial impingement").ti,ab OR ("shoulder impingement syndrome").ti,ab OR ("shoulder joint impingement").ti,ab OR ("subacromial pain" OR "shoulder pain").ti,ab)
Intervention or Exposure	Nil specified	
Comparison, if any	Nil	
Outcomes of interest	Psychosocial measures of anxiety, depression, catastrophic thinking.	(exp PSYCHOLOGY/ OR (psychosocial OR biopsychosocial).ti,ab OR (depression OR anxiety OR hopelessness OR stress OR fear OR catastrophising OR "catastrophic thinking").ti,ab)) AND (outcome*).ti,ab)
Types of studies		Observational / longitudinal cohort studies

Routine Databases Searched

Cochrane, MEDLINE, Pubmed, Embase, Cinahl, Psycinfo, Pedro, Tripdatabase, NICE, Google Scholar (English only)

Date of search-

Librarian Louisa Fulbrook (Robert Jones Agnus Hunt Librarian) undertook the search on 6th March 2018

Results of the search

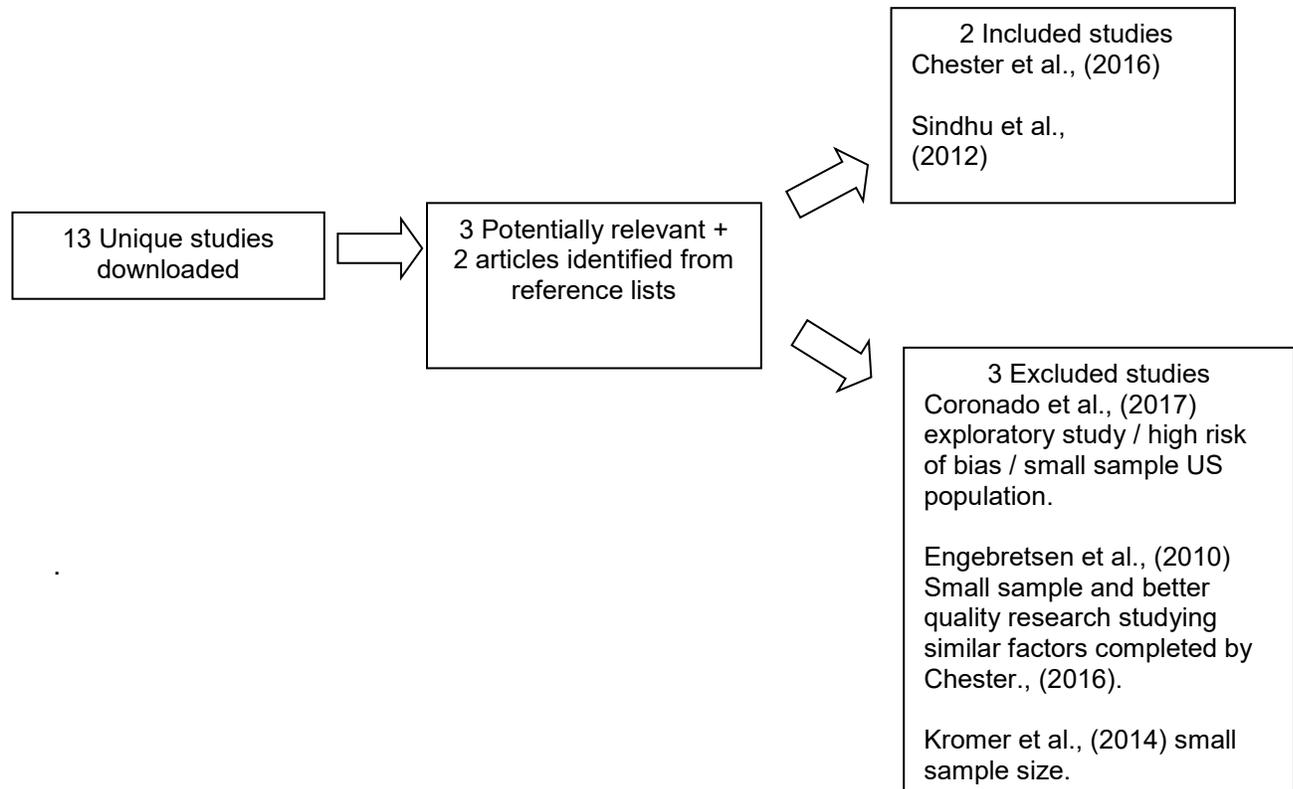


Table 1- Detail of included studies

First Author, year and type of study	Population and setting	Intervention or exposure tested	Study results	Assessment of quality and comments
Chester et al., (2016) Multicentre longitudinal Cohort study.	Patients referred to physiotherapy for the management of musculoskeletal shoulder pain at 11 NHS trusts and social enterprises in the East of England.	Multivariable Linear regression was used to analyse prognostic factors associated with outcome. A postal invitation was sent to the patients whose	1030 patients analysed 4 factors were associated with better outcomes for both measures: lower baseline disability	Population not specifically diagnosed with sub acromial pain: likely to include cuff pathology and tears, instability, OA, Representative sample of our NHS population. 2 validated patient-reported

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	<p>Physiotherapy departments located within primary and secondary care. Sample aged 18 years or older with shoulder or arm pain aggravated by shoulder movements.</p> <p>Patients with the following aetiology for shoulder pain were excluded: radiculopathy, post-surgery, post fracture, posttraumatic Dislocation or systemic source.</p>	<p>Referral to physiotherapy indicated that they may be eligible for the study.</p> <p>Data for 71 putative prognostic factors, determined and defined a priori, were collected from each participant and their physiotherapist at baseline.</p> <p>Participants were sent a postal follow-up questionnaire, 6 weeks and 6 months after starting their course of physiotherapy.</p> <p>As part of their treatment, 99% of participants were required to carry out a home exercise programme prescribed by their physiotherapist. However all patients were included in data analysis even if had not completed the home regime.</p>	<p>patient expectation of 'complete recovery' compared to 'slight improvement' as 'a result of physiotherapy</p> <p>higher pain self-efficacy</p> <p>lower pain severity at rest</p> <p>Clinical examination did not correlate with prognostic outcome</p>	<p>outcome measures: SPADI & DASH</p> <p>Clinically valuable time frames measured</p> <p>There was a greater likelihood of missing outcome data for younger participants and those not partaking in leisure time physical activity.</p> <p>Low numbers of patients with extreme anxiety and depression participated in the Study, which would decrease the power of the study to detect an association between anxiety and depression and outcome.</p>
<p>Sindhu et al., (2012)</p> <p>Multicentre longitudinal Cohort study.</p> <p>A general linear model (GLM) was used to describe how</p>	<p>USA – patients sampled who attended outpatient rehabilitation clinics.</p> <p>3362 patients received outpatient physiotherapy for shoulder</p>	<p>Objective: To determine the influence of fear avoidance beliefs on recovery of functional status during rehabilitation for people with shoulder impairments.</p> <p>A single-item screen was used to classify patients into groups</p>	<p>Completion rate at discharge was 57% for function.</p> <p>Elevated fear-avoidance beliefs were found to be associated with poorer functional status in category 1: muscle, tendon, and soft tissue disorders;</p>	<p>Large multicentre trial</p> <p>Due to the high drop out rate the study adjusted data in order to maintain the baseline demographics and other health related confounding factor characteristics at the follow up.</p> <p>Diagnosis- accuracy of</p>

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<p>change in function is affected by fear avoidance in 8 disease categories.</p>	<p>conditions between 2008 -10</p> <p>Muscle tendon and soft tissue disorder sub category included 1897 patients analysed at baseline.</p> <p>Various shoulder conditions observed and divided in Soft tissue, surgical, bony etc., which were then examined in separate groups.</p>	<p>with low versus elevated fear-avoidance beliefs at intake.</p> <p>Baseline data included demographics, Duration of symptoms, disease category, NRS, Functional outcome measure (Shoulder computerised adaptive test). FABQ-PA (single question analysed).</p> <p>Patients were divided into 2 groups; high and low fear avoidance and then the change score was calculated (functional score) was calculated for each.</p>		<p>diagnosis questionable – based on a clinical code inputted by an unknown therapist based on unspecified diagnostic criteria.</p> <p>The rehabilitation protocols for the sample are known and possibly fear avoidance may have been targeted with the management.</p>
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Summary

It appears lower baseline fear avoidance, higher baseline functional disability (SPADI & DASH), expectation of complete recovery, lower resting pain, and higher pain self-efficacy may all have positive effects in the outcome of sub acromial shoulder pain function in the short and long term period (1year).

Quality of research is limited due to the following:

- Missing data common for; younger patients, people not participating in regular leisure exercise and unemployed people. (pattern noted through the wider articles reviewed)
- Multiple confounding factors present and single trials potentially leading to high levels of bias and over statement or “sensationalisation” of results.
- We do not know the rehabilitation protocols followed in treatment of patients which make up the sample. Findings could be greatly influenced if biopsychosocial treatments were included to reduce for example fear avoidance behaviours.
- Research is included from multiple countries with marked differences in health care structures and cultures makes for difficulty applying conclusions to the UK primary care setting.

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Additional training needs

Good practice should include a basic level of psychosocial assessment taking in to account the potential negative and positive effects these may have on willingness to move and overall outcome of treatment. Hence all physiotherapists should routinely apply biopsychosocial training to manage patients suffering with sub acromial pain, similar to that practice imbedded within the management of low back pain.

Implications for Practice/research

Further research is required to investigate whether modifying risk factors improves prognosis for patients diagnosed with sub acromial shoulder pain.

What would you tweet? (140 characters)

Psychosocial factors may influence the outcome of physiotherapy treatment for those with shoulder pain, however further high quality research is required to help improve care.

References:

Chester, R. Jerosch-Herold¹, C. Lewis, J. Shepstone, L. (2016) Psychological factors are associated with the outcome of physiotherapy for people with shoulder pain: a multicentre longitudinal cohort study. BJSM. 0 Pages 1 - 8

Lahdeoja, T. Karjalainen, T. Jokihara, J. Salamh, P. Kavaja, L. Agarwal, A. Winters, M. (2019) Subacromial decompression surgery for adults with shoulder pain: a systematic with meta analysis. BJSM. 0 Pages 1 – 10

Sindhu, BS. Lehman, LA. Tariman, S. Hart, DL. Klein, MR (2012) Influence of Fear-Avoidance Beliefs on Functional Status Outcomes for People With Musculoskeletal Conditions of the Shoulder. Physical Therapy, Volume 92, Issue 8, Pages 992–1005