Appendix A. Search string for expert panel

Fear of movement

(("fear"[MeSH Terms] OR "fear"[All Fields] OR "fear of"[All Fields]) AND ("movement"[MeSH Terms] OR "movement"[All Fields])) OR kinesiophobia[All Fields] OR (("fear"[MeSH Terms] OR "fear"[All Fields]) AND avoidance[All Fields])) AND ("chronic pain"[MeSH Terms] OR "chronic pain"[All Fields] OR "musculoskeletal pain"[MeSH Terms] OR "musculoskeletal pain"[All Fields] OR “persistent pain”[All Fields] OR “low back pain”[All Fields] OR “neck pain”[All Fields]) AND ("surveys and questionnaires"[MeSH Terms] OR ("surveys"[All Fields] AND "questionnaires"[All Fields]) OR "surveys and questionnaires"[All Fields] OR "questionnaires"[All Fields] OR "screening"[All Fields] OR “instrument”[All Fields] OR “tools”[All Fields])

Coping

("coping"[All Fields] OR “pain coping”[All Fields] OR “paincoping”[All Fields] OR “coping skills”[All Fields]) AND ("chronic pain"[MeSH Terms] OR "chronic pain"[All Fields] OR "musculoskeletal pain"[MeSH Terms] OR "musculoskeletal pain"[All Fields] OR “persistent pain”[All Fields] OR “low back pain”[All Fields] OR “neck pain”[All Fields]) AND ("surveys and questionnaires"[MeSH Terms] OR ("surveys"[All Fields] AND "questionnaires"[All Fields]) OR "surveys and questionnaires"[All Fields] OR "questionnaires"[All Fields] OR "screening"[All Fields] OR “instrument”[All Fields] OR “tools”[All Fields])

Self-efficacy

("self efficacy"[MeSH Terms] OR "self efficacy"[All Fields]) AND ("chronic pain"[MeSH Terms] OR "chronic pain"[All Fields] OR "musculoskeletal pain"[MeSH Terms] OR "musculoskeletal pain"[All Fields] OR “persistent pain”[All Fields] OR “low back pain”[All Fields] OR “neck pain”[All Fields]) AND ("surveys and questionnaires"[MeSH Terms] OR ("surveys"[All Fields] AND "questionnaires"[All Fields]) OR "surveys and questionnaires"[All Fields] OR "questionnaires"[All Fields] OR "screening"[All Fields] OR “instrument”[All Fields] OR “tools”[All Fields])

Catastrophizing

("catastrophization"[MeSH Terms] OR "catastrophization"[All Fields] OR "catastrophizing"[All Fields]) AND ("chronic pain"[MeSH Terms] OR "chronic pain"[All Fields] OR "musculoskeletal pain"[MeSH Terms] OR "musculoskeletal pain"[All Fields] OR “persistent pain”[All Fields] OR “low back pain”[All Fields] OR “neck pain”[All Fields]) AND ("surveys and questionnaires"[MeSH Terms] OR ("surveys"[All Fields] AND "questionnaires"[All Fields]) OR "surveys and questionnaires"[All Fields] OR "questionnaires"[All Fields] OR "screening"[All Fields] OR “instrument”[All Fields] OR “tools”[All Fields])

Appendix B: Sensitivity analyses excluding experts that did not complete all rounds

Questionnaire	Is the questionnaire suitable to assess the psychosocial factor in people with musculoskeletal pain?			At least 50% of experts made a judgement (i.e. 'yes' or 'no' answer)	Suitability agreement level	Consensus to recommend
	Yes	Don't know	No	Yes/no		
Fear of Movement: *N=19**						
FABQ	19	0	0	Yes	100	Yes
TSK	19	0	0	Yes	100	Yes
TSK-11	14	2	3	Yes	82.4	Yes
CPAQ	1	9	8	No[#]	N.A.	No
NeckPix	2	17	0	No[#]	N.A.	No
Coping: *N=16**						
CSQ-R	10	5	1	Yes	90.9	Yes
CPCI	7	8	1	Yes	87.5	Yes
CSQ	11	4	1	Yes	82.5	Yes
PSEQ	5	6	5	Yes	50.0	No
BPCI	5	10	1	No[#]	N.A.	No
Self-efficacy: *N=18**						
PSEQ	14	4	0	Yes	100	Yes
PSEQ-2	11	7	0	Yes	100	Yes
CPSS	7	11	0	No[#]	N.A.	No
Catastrophizing: *N=19**						
PCS	18	1	0	Yes	100	Yes
CSQ-R	11	6	2	Yes	84.6	Yes

*N provided is the number of experts adjusted for the panel members who did not consider themselves as an expert for this factor. #: If less than 50% of experts had an opinion about a questionnaire, the questionnaire was withdrawn from further analysis, and no consensus could be reached. FABQ: Fear Avoidance Beliefs Questionnaire; TSK: Tampa Scale for Kinesiophobia; TSK-11: 11 item version of the Tampa Scale for Kinesiophobia; CPAQ: Chronic Pain Acceptance Questionnaire; CSQ: Coping strategies Questionnaire; CSQ-R: revised version of the Coping strategies Questionnaire; CPCI: Chronic Pain Coping Inventory; PSEQ: Pain self-efficacy Questionnaire; BPCI: Brief Pain Coping Inventory; PSEQ-2: 2-item version of the Pain self-efficacy Questionnaire; CPSS: Chronic Pain self-efficacy Scale; PCS: Pain Catastrophizing Scale. N.A.: Not applicable.

Appendix C: Sensitivity analyses excluding experts involved in development and/or validation

Questionnaire	Number of experts	Is the questionnaire suitable to assess the psychosocial factor in people with musculoskeletal pain?			At least 50% of experts made a judgement (i.e. 'yes' or 'no' answer)	Suitability agreement level	Consensus to recommend
		Yes	Don't know	No	Yes/no		
Fear of Movement:							
TSK	20	18	1	1	Yes	94.7	Yes
TSK-11	25	21	3	1	Yes	95.5	Yes
FABQ	23	17	1	4	Yes	81.0	Yes
CPAQ	20	1	11	8	No[#]	N.A	No
NeckPix	23	1	22	0	No[#]	N.A.	No
Coping:							
CPCI	17	8	8	1	Yes	81.8	Yes
CSQ	16	9	5	2	Yes	81.8	Yes
CSQ-R	17	9	6	2	Yes	88.9	Yes
PSEQ	15	5	6	4	Yes	55.6	No
BPCI	17	6	10	1	No[#]	N.A.	No
Self-efficacy:							
PSEQ	18	14	4	0	Yes	100	Yes
PSEQ-2	21	13	8	0	Yes	100	Yes
CPSS	22	8	14	0	No[#]	N.A	No
Catastrophizing:							
PCS	18	17	1	0	Yes	100	Yes
CSQ-R	23	11	8	4	Yes	73.3	Yes

*N provided is the number of experts adjusted for the panel members that were involved in development and/or validation of that questionnaire. #: If less than 50% of experts had an opinion about a questionnaire, the questionnaire was withdrawn from further analysis, and no consensus could be reached. FABQ: Fear Avoidance Beliefs Questionnaire; TSK: Tampa Scale for Kinesiophobia; TSK-11: 11 item version of the Tampa Scale for Kinesiophobia; CPAQ: Chronic Pain Acceptance Questionnaire; CSQ: Coping strategies Questionnaire; CSQ-R: revised version of the Coping strategies Questionnaire; CPCI: Chronic Pain Coping Inventory; PSEQ: Pain self-efficacy Questionnaire; BPCI: Brief Pain Coping Inventory; PSEQ-2: 2-item version of the Pain self-efficacy Questionnaire; CPSS: Chronic Pain self-efficacy Scale; PCS: Pain Catastrophizing Scale. N.A.: Not applicable.

Appendix D. *Qualitative data analyses*

Questionnaire	Positive points	Negative points
Fear of Movement		
TSK	**Psychometrics:** Reliable and valid measure. Good predictive utility. Good for low back pain population. Good subscales. Widely used and tested **Usability:** Easy to calculate and understand. Brief.	**Psychometrics:** Too cognitive. The more fearful thoughts there are, the higher the score but not necessarily the experienced disability. Absence of MCIC. 4 reversed items are unreliable. Unclear factor structure. No cut-off points. **Usability:** Some items are experienced as unclear. Lengthy. Suggestive wording.
TSK-11	**Psychometrics:** As with the TSK good properties and predictive but briefer. **Usability:** Briefer, without reversed items. Easier to interpret and understand.	The same as the TSK without the unclear items.
FABQ	**Psychometrics:** Reliable and valid. The distinction between subscales is useful. Widely used and tested, sensitive to change. **Usability:** Comprehensive assessment. Easy to administer and understand. Brief.	**Psychometrics:** Not conceptually clear enough. Items contaminated with outcome-type content. More focused on anxiety for pain, not movement. Absence of MCIC. Work component not relevant for everyone. No cut-off scores. **Usability:** Some items overlap/similar wording.
CPAQ	**Psychometrics:** Only one that focuses on avoidance patterns. Good psychometric properties. More in the context of pain coping and most used for pain acceptance. **Usability:** Short and easy to use.	**Psychometrics:** Not suitable for this specific construct: it is not a measure of pain related fear. Pain willingness is quite abstract for respondents.
NeckPix	Good questionnaire for chronic neck pain patients.	
Coping		
CSQ	**Psychometrics:** Widely used and studied across multiple populations. Comprehensive. **Usability:** Many good items. Well received by patients.	**Psychometrics:** Outdated **Usability:** Very long
CSQ-R	**Psychometrics:** Validated in larger sample than the original, better psychometrics. **Usability:** Reduced length.	**Psychometrics:** Not up to date with current theories and does not perform well enough. **Usability:** Shorter than the CSQ but still very long.
CPCI	**Psychometrics:** Good selection of strategies, including behavioural strategies. Good for chronic pain. Widely used. **Usability:** Useful to evaluate treatment aimed at coping.	**Usability:** Too long. Not assessing active vs. passive coping.
PSEQ	**Very useful for self-efficacy.** Very useful for bad coping (N=1).	Not suitable for coping.
BPCI	**Psychometrics:** Commonly used and validated. **Usability:** Important for ACT treatments. Short and simple.	There are better measures.
Self-efficacy		
PSEQ	**Psychometrics:** Strong predictor for outcomes. Widely used. Responsive to change, sound theoretical foundation. **Usability:** Easy understood, explicitly asks about pain. Identifies patients open to active treatments. Positively framed which inspires resilience.	**Psychometrics:** Unclear responsiveness. **Usability:** Somewhat long. Measure to close in wording with functioning. The concept has not brought us further in treatment. Hard to distinguish from disability.

PSEQ-2	**Psychometrics:** Correlates well with full version. **Usability:** Burden is less.	**Usability:** Too concentrated.
CPSS	**Psychometrics:** Reliable and predictive. Widely used and validated.	
Catastrophizing		
PCS	**Psychometrics:** Well validated, norm scores available. Good for chronic pain patients. Good construct validity. Helpful subscales. More specific and responsive. **Usability:** Relatively short, also useful for healthy patients. Easy to understand and score.	**Psychometrics:** Contamination with outcome-type content. Responsiveness unclear. **Usability:** Patients can still catastrophize a lot but are not affected by it. A bit long. Negative sounding, patients worry how their responses will be perceived by care providers.
CSQ-R	**Psychometrics:** See earlier comments **Usability:** Short. Only subscale is useful. Rest provide only additional information.	**Psychometrics:** Not as well validated for the subscale as for the total measure. Catastrophizing is not coping. **Usability:** Outdated. Too much irrelevant content.