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Appendix I. Review of the literature and the teams' comments.

Concerning the risk factor:	Author, year of publication, country	Study design	Study objective	Study population	Main results	Teams' comments
Bio-mechanical	Anema et al., 2007, the Netherlands	Randomized controlled trial	To assess the effectiveness of workplace intervention and graded activity on return-to-work of LBP ^a patients.	96 non-specific LBP patients sick-listed 2 to 6 weeks	Workplace intervention was effective, graded activity had a negative effect.	workplace assessment, and work modifications are occupational healthcare's solutions, primary health care should be involved in the management.
Psychological	Baadjou et al., 2019, the Netherlands	Secondary analysis of a RCT ^b	To estimate how much a PT ^c -directed exercise and advice intervention on pain and disability is mediated via changes in depressive symptoms.	240 patients with non-specific LBP for 6-12 weeks	Depressive symptoms were associated with pain and disability and did not mediate the effect of the exercise/advice.	Patients with serious depression should have primarily a treatment plan for the depression, and pain interventions should come secondary when their resources are better for receiving the intervention.
Psychological	Baez et al., 2018, USA	A systematic review	To evaluate the effectiveness of CBT ^d and psychoeducation on fear-avoidance beliefs in LBP patients.	Population of 5 RCTs, LBP patients (acute, subacute, and chronic)	There is inconsistent evidence that CBT/psychoeducation is effective on LBP patients with fear-avoidance beliefs/kinesiophobia.	Psychoeducational material alone seems ineffective, functional exercises are essential. Production of new material was discussed.
Social	Beneciuk et al., 2017, USA	Secondary analysis of a randomized controlled trial	To identify the LBP patient characteristics influencing treatment outcomes of a stratified care.	851 LBP patients	Socioeconomic status has effect on the intervention's outcome.	Financial issues, cognitive level affects the commitment to the interventions.
Bio-mechanical	Bültmann et al., 2009, The Netherlands	Randomized controlled trial	To compare the effects of coordinated and tailored work rehabilitation with conventional case management on return-to-work of musculoskeletal disorder patients.	113 workers of different job groups (54% white collar), who had musculoskeletal pain (96% LBP)	Patients who underwent coordinated and tailored work rehabilitation had fewer sickness absence hours.	Danish version of Sherbrooke model by Loisel et al. 1997. Managers may not have know-how to take a stance on the patient's situation. Working

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						cultures and the co-operation with occupational health care differ.
Lifestyle	Christensen et al., 2006, Denmark	Meta-analysis of randomized controlled trials	To assess changes in pain and function when overweight patient with knee osteoarthritis achieve a weight loss.	four RCTs with 454 patients	Disability could be significantly improved when weight was reduced >5%.	In knee osteoarthritis, the structural changes in the body are easier to connect with obesity, the connection in LBP is not as straight forward.
Psychological	van Erp et al., 2019, the Netherlands	A systematic review	To evaluate the effectiveness of primary care BPS ^e interventions in improving functional disability, pain, and work status for patients with CLBP ^f .	Populations of 7 RCTs (n=1426), adults with non-specific CLBP	BPS interventions seem more effective than advice and as effective as physical activity interventions, interventions with a focus on psychological factors seem most promising.	Individualized treatment plan should be made for LBP patients with recognized psychological factors.
Psychological, social	Foster et al., 2014, UK	Prospective sequential comparison	To determine the effects of implementing risk-stratified care for low back pain in family practice on physician's clinical behavior, patient outcomes, and costs.	adults with non-specific LBP (any duration), n=922, recruited from primary care	Stratified care had benefits relative to usual care in terms of disability (RMDQ ^g), time off work and fewer sickness certifications	One team member had experience working in a unit where stratified care according to SBT ^h was used.
Psychological	Hajihassani et al., 2019, Iran	A systematic review	To investigate the effect of adding the CBT component to routine PT on pain and depression reduction, improvement in quality of life, and enhanced function in patients with CLBP.	Populations of 10 RCTs with CLBP patients aged 18 to 65 years	CBT + PT was found to be superior to PT for pain, disability, quality of life, and functional capacity variables in some of the included studies, but it did not have an impact on depression.	Serious depression can act as a barrier for receiving and carrying out rehabilitation. CBT methods were used by several team members (psychologist, mental health PTs).

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Psychological, social	Hill et al., 2008, UK	Development and validation study	To develop and validate a tool that screens for back pain prognostic indicators relevant to initial decision making in primary care.	Secondary analysis of a RCT (n=402) of subacute LBP patients in primary care and a prospective cohort study (n=739) of LBP patients	STarT Back Tool development.	Questionnaires such as SBT can be used in the recognition and follow-up of the patient. In addition, professionals used PSEQ ⁱ , TSK ^j , PSWQ ^k , GAD-7 ^l , Örebro short, WHOQOL ^m , and BDI-21 ⁿ in their work.
Social	Karjalainen et al., 2003, Finland	Randomized controlled trial	To investigate the effectiveness and costs of a mini-intervention and work site visit compared to usual care with subacute LBP patients.	164 patients with subacute LBP	Mini-intervention reduced daily back pain and sickness absence. Work site visit did not increase effectiveness.	In this study, a physiatrist was used in the initial assessment, and physiotherapist had 1.5 hour session with the patients.
Lifestyle	Lancaster et al., 2017, UK	Systematic review	To assess the effect of individual counselling for smoking cessation.	49 randomized or quasi-randomized trials with 19 000 participants	Individually delivered smoking cessation counseling can assist smokers to quit.	Co-operation between PTs and nurses should be increased to address lifestyle factors.
Bio-mechanical, social	Loisel et al., 1997, Canada	Population-based randomized clinical trial	To develop and test a model of management of subacute back pain, to prevent prolonged disability.	130 workers who had >4 weeks of sickness leave due to back pain	Occupational intervention combined with clinical care was the most efficient in return-to-work time.	The co-operation of primary health care with occupational health care should be promoted, patient involvement in the decision-making is important.
Psychological	Nicholas et al., 2011, Australia	A review of reviews	To identify if yellow flags influence outcomes in people with acute or subacute low back pain, and if yellow flags can be targeted in interventions to produce better outcomes.	Populations of 13 reviews where yellow flags were identified as prognostic factors for pain or pain-related disability	Targeting yellow flags in interventions leads to better results than ignoring them or giving similar intervention regardless of the psychological factors.	Psychological interventions should be allocated patient-centered and specifically targeted, by using health care professionals with adequate know-how.
Bio-mechanical	Rantonen et al., 2018, Finland	Randomized controlled trial	To assess the effectiveness of three intervention-arms on non-acute, moderate LBP	193 employees who reported moderate LBP and had sciatica,	In the rehabilitation and exercise groups health related quality of life,	In this intervention, the self-care advice (oral and written) had no

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			(multidisciplinary rehabilitation, progressive exercises, self-care advice) compared to control group.	recurrence of LBP, LBP>2 weeks, or sickness absence during the past 12 months	LBP intensity and physical impairment were improved.	effect compared to the control group.
Bio-mechanical	Rasmussen et al., 2016	Stepped wedge cluster randomized controlled trial	To test whether a multi-faceted intervention of LBP was effective for physical capacity, work demands, maladaptive pain behavior, work ability and sickness absence.	594 nurses' aides working in elderly care with LBP	Occupational lifting and fear avoidance were lower in the intervention group. After the intervention, physical capacity was increased and kinesiophobia reduced.	In the intervention, CBT was integrated with physical training, which would be optimal considering the available resources.
Bio-mechanical	Rosenberg et al., 2021, Denmark	Randomized controlled trial	To assess whether LBP patients with self-reported physically demanding jobs benefit from occupational intervention, hospital consultation and MRI ^o .	305 patients with 2 to 4 weeks of LBP and self-reported physically demanding job	Occupational intervention showed no added effect.	A thorough patient education can be effective.
Psychological	Schiltewolf et al., 2006, Germany	A randomized controlled trial	To compare the effectiveness of a BPS treatment with biomedical therapy on pain, functional status, work status and depression with subacute LBP patients in an inpatient clinic.	Subacute (3 to 12 weeks) LBP patients (n=64) with a first-time sick leave	Psychotherapeutic elements seems to have stronger and longer influence on pain, functional status, and work performance than conventional biomedical therapy.	In this study, the treatment was not allocated according to the psychological status. Group interventions can be used, when appropriate patients are recognized. Peer support, initial information days, and experts by experience could be used.
Social	Shaw et al., 2011, USA	A review article	How to identify and address occupational factors in physiotherapist' appointments that are challenging for the return-to-work of LBP patients.	-	General orientation to work, physical job demands, work-related challenges, organizational support should be assessed. Job modifications and return-to-work planning should be made.	These are the activities of an occupational therapist, occupational specialist should be involved in the planning of job modifications and return-to-work.

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Bio-mechanical	Stapelfeldt et al., 2011, Denmark	Secondary analysis of a randomized trial	To identify subgroups defined by work-related baseline factors that would benefit more from the multidisciplinary intervention than from the brief intervention.	351 employees sick-listed for 3-16 weeks due to LBP	Multidisciplinary intervention seemed more effective than brief intervention in subgroups of patients with low job satisfaction.	Low job satisfaction is one of recognized risk factors for pain chronicity in the clinical setting.
Bio-mechanical	Suni et al., 2018, Finland	Randomized controlled trial	To investigate the effectiveness and cost-effectiveness of three intervention-arms (combined neuromuscular exercise and back care counselling or either alone) compared with non-treatment to recurrent non-specific LBP.	219 female health care workers with LBP from settings where the work was awkward for the lower back	Neuromuscular exercise with back care counselling reduced the intensity of LBP, work interference and fear of pain, but was not cost-effective.	The intervention was 6 months, could a shorter intervention be cost-effective.
Bio-mechanical and social	van Vilsteren et al., 2015, the Netherlands	Systematic review, 8/14 studies focused on MSK ^P disorders, 6/14 on back pain	To determine the effectiveness of workplace interventions in preventing work disability among sick-listed workers with musculoskeletal disorder, mental health problems or cancer. Interventions in 5/14 studies concentrated on biomechanical factors, 2/14 on social factors, and 2/14 on both.	14 RCTs with 1897 workers	Workplace interventions reduce time to return-to-work and improve pain and functional status in workers with musculoskeletal disorders.	Workplace assessment and modifications are essential when the problem is clearly work-related. Manager and peer support are important.
Bio-mechanical	Vogel et al., 2017, Switzerland	Systematic review, 11/14 studies focused on MSK disorders, 5/14 on LBP	To assess the effects of return-to-work coordination programs versus usual practice for workers on sick leave or disability >4 weeks for musculoskeletal, mental health problems or both.	14 RCT studies with 12 568 workers from nine countries	Offering return-to-work coordination programs for workers on sick leave for at least four weeks results in no benefits when compared to usual practice.	The patient's sick leave was at least 1 month, but the most was quite longer. Maybe the chronicity is affecting the impact of the interventions?
Lifestyle	Wai et al., 2018, Canada	Cross-sectional study	To evaluate the modifiable lifestyle factors which may be associated with back pain.	52 consecutive patients presenting to the tertiary spine surgery clinic	The number of morbidly obese patients presenting to the clinic is significantly higher than in the general population.	Modifiable lifestyle factors should be addressed in the primary care. Interventions on weight are usually very slow.

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Lifestyle	Wai et al., 2008, Canada	A review article	To understand and evaluate the various commonly used nonsurgical approaches to chronic LBP.	-	Physical activity, smoking cessation, weight loss programs and the scientific background are introduced. Physical activity seems effective for long-term reduction of disability, pain medication use, work status, and mood.	How to activate inactive patients: the exercises should be adjusted individually so that the patients has feelings of success. The involvement of third sector services is encouraged.
Lifestyle	Williams et al., 2018, Australia	Randomized controlled trial	To assess the effectiveness of a 6-month healthy lifestyle intervention, on pain intensity in patients with chronic LBP and overweight.	160 patients with chronic LBP and BMI ^q 27-40	Education and advice and telephone-based healthy lifestyle coaching did not benefit patients.	Patients were already chronic; is telephone-based coaching personal enough?

Abbreviations: ^a LBP =Low back pain, ^b RCT= Randomized Controlled Trial, ^c PT= Physiotherapist, ^d CBT= Cognitive Behavioral Therapy, ^e BPS= biopsychosocial, ^f CLBP= Chronic low back pain, ^g RMDQ= Roland-Morris Disability Questionnaire, ^h SBT= STarT Back Tool, ⁱ PSEQ= Pain self-efficacy Questionnaire, ^j TSK= Tampa scale for Kinesiophobia, ^k PSWQ= Penn State Worry Questionnaire, ^l GAD-7= Generalized Anxiety Disorder Questionnaire, ^m WHOQOL= The World Health Organization Quality of Life, ⁿ BDI-21= Beck Depression Inventory, ^o MRI= Magnetic Resonance Imaging, ^p MSK= Musculoskeletal, ^q BMI= Body Mass Index.