S2. Overview of the study in relation to the World Health Organization (WHO) trial registration data set.

WHO item	**Item description**	**Study description**	**Page number where item can be found.**
1.	Primary registry and trial identifying number	Primary registry at ClinicalTrials.gov registration number NCT05058547	Page 4, manuscript
2.	Date of registration in primary registry	27 September 2021	Page 4, manuscript
3.	Secondary identifying numbers	The Swedish Research Council for Health, Working Life and Welfare: Dnr 2019-01264 The Swedish Ethics Review Board: Dnr 2020-01593, Dnr 2021-01854	Page 18-19, manuscript
4.	Sources of monetary or material support	The Swedish Research Council for Health, Working Life and Welfare: Dnr 2019-01264	Page 19, manuscript
5.	Primary sponsor	Linköping University	Page 1, manuscript
6.	Secondary sponsor(s)	N/A	
7.	Contact for public queries	Mathilda.bjork@liu.se +4611363531 Linköping University 581 83 Linköping Sweden Recruitment status: not yet recruiting	Page 1, manuscript
8.	Contact for scientific queries	Mathilda Björk Mathilda.bjork@liu.se +4611363531 Department of Health, Medicine and Caring Sciences Linköping University 581 83 Linköping Sweden	Page 1, manuscript
9.	Public title	An evidence-based digital support during one year after an Interdisciplinary Pain Rehabilitation Program for persons with chronic musculoskeletal pain to facilitate a	Page 1, manuscript

		sustainable return to work: a study protocol for a registry-based multicentre randomized controlled trial.	
10.	Scientific title	An evidence-based digital support during one year after an Interdisciplinary Pain Rehabilitation Program for persons with chronic musculoskeletal pain to facilitate a sustainable return to work: a study protocol for a registry-based multicentre randomized controlled trial.	Page 1, manuscript
11.	Countries of recruitment	Sweden	Page 7, manuscript
12.	Health condition	Chronic pain	Page 7, manuscript
13.	Intervention	Participants randomized to the intervention group will receive the smartphone application SWEPPE to use as a digital support during the RTW process. SWEPPE is a smartphone application where the individual can create an action plan, perform daily registrations of health aspects, self-monitoring of health aspects and goals, have access to a library with evidence-based facts and a coach, and possibility to share information with the employer. The intervention starts at the end of the IPRP with self-rating of work conditions and goal setting in SWEPPE. The participants will use SWEPPE for 12 months. Data registered in SWEPPE by the participant about their goal, work condition and self-rating will be stored in the application and used for self-monitoring and visualizing progress for the participant. The participant invites his/her employer/employers to access the web application SWEPPE depending on what information the participant wants to share with the employer. The employer will receive e-mail reminders to use SWEPPE. Participants randomized to the control group will not receive any active intervention for RTW after IPRP.	Page 9-10, manuscript
14.	Key inclusion and exclusion criteria	Inclusion Criteria: Patients entering the trial must have completed IPRP[a]. The principal inclusion criteria for IPRP in Sweden are: • persistent or intermittent pain lasting ≥3 months • pain affecting daily activities to a large extent, • completed systematic assessment and non-pharmacological optimization is completed, • screening for psychosocial risk factors and differential diagnosis completed In addition, the following criteria will be applied: • Age 18-65 years	Page 8, manuscript

		• Completed participation in an Interdisciplinary Pain Rehabilitation Program (IPRP) at any of the participating units. • Having an employment to return to after IPRP or having returned to work but need continued support for creating a sustainable work situation after IPRP. Exclusion criteria: • Completed IPRP but are unemployed or unable to return to work.	
15.	Study type	Registry-based randomized controlled trial. Stratification of sick leave history during the year before IPRP and block-randomization, using opaque sealed and numbered envelopes, to intervention (SWEPPE) or control group. Due to the nature of the intervention the participants will not be blinded to group allocation.	Page 7, manuscript
16.	Date of first enrollment	Anticipated to spring 2022.	Page 16, manuscript
17.	Target sample size	Total number of participants: 360	Page 11, manuscript
18.	Recruitment status	Pending	Page 4, manuscript
19.	Primary outcome(s)	Sick leave. Time Frame: 12 months follow up after IPRP. Number of gross and net days with sickness cash benefit	Page 12, manuscript
20.	Key secondary outcome(s)	1. Return to work. Time Frame: 12 months follow up after IPRP. Return to work (partially or full time) every month 2. Sick-leave spells per months. Time Frame: 12 months follow up after IPRP. Number of sick-leave spells (per month) 3. Return to work group level. Time Frame: 12 months follow up after IPRP. Proportions of a group who returns to full- or part-time work (per month) 4. Working days before new sick leave. Time Frame: 12 months follow up after IPRP. Number of days in work before new sick leave during study period 5. Proportion back to work. Time Frame: 12 months follow up after IPRP. Proportion of a group back to work >28 days (full- or part time) before a new sick-leave spell occurs 6. Total sick-leave spells. Time Frame: 12 months follow up after IPRP. Number of sick-leave spells during study period	Page 13-16, manuscript

		7. Length of total sick leave. Time Frame: 12 months follow up after IPRP. Length of total sick leave during study period 8. Pain intensity last 7 days. Time Frame: Baseline and 12 months. Numeric pain rating scale. 9. Consequences of pain on daily life. Time Frame: Baseline and 12 months. Multidimensional Pain Inventory Swedish version. 10. Overall emotional distress. Time Frame: Baseline and 12 months. Hospital Anxiety and Depression Scale Swedish version. 11. Physical and mental health. Time Frame: Baseline and 12 months. RAND-36 Swedish version. 12. Goal fulfilment and satisfaction during the study period. Time Frame: Baseline and 12 months. Explanatory Outcome Measures: 1. Self-reported fatigue the last 7 days. Time Frame: Baseline and 12 months. Numeric fatigue rating scale. 2. Self-reported insomnia. Time Frame: Baseline and 12 months. Insomnia Severity Index Swedish version. 3. Self-reported fear of movement. Time Frame: Baseline and 12 months. Tampa Scale for Kinesiophobia Swedish version. 4. Self-reported physical activity. Time Frame: Baseline and 12 months. The National Board of Health and Welfare's three questions on physical activity, exercise, and sedentary behavior. 5. Pain catastrophizing. Time Frame: Baseline and 12 months. Pain Catastrophizing scale Swedish version. 6. Perceived work ability. Time Frame: Baseline and 12 months. Work Ability Index Swedish version. 7. Self-reported demands, control, and support at the workplace. Time Frame: Baseline and 12 months. Demand Control Support Questionnaire Swedish version. 8. Self-reported physical work environment using a questionnaire inspired by the Swedish Work Environment Authority ergonomics checklist	

		9. Perceived life Satisfaction. Time Frame: Baseline and 12 months. Life satisfaction Scale Swedish version. 10. Self-reported work situation during the study period. Time Frame: Baseline and 12 months. Barriers for return to work, strategies to handle barriers and need of support from the employer reported as text answer. 11. Self-reported workload an average day. Time Frame: Baseline and 12 months. Number of hours per day for paid work and unpaid household work. **Data collected from SWEPPE** Mobile app usage, for example number of participants using the app, performing daily self-rating, sharing information with the employer, or asking questions to the coach will be retrieved from SWEPPE.	
21.	Ethics review	Approved	Page 18, manuscript
22.	Completion date	After the last subject's last visit.	Page 16, manuscript
23.	Summary results	Summary results will be provided when the trial is completed.	Page 18, manuscript
24.	IPD sharing statement (individual clinical trial participant- level data)	Not planned to share individual clinical trial participant- level data (IPD)	Page 19, manuscript