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Healthy work among store employees

Submission date 11/08/2023	**Recruitment status** No longer recruiting	[X] Prospectively registered [_] Protocol
Registration date 06/09/2023	**Overall study status** Completed	[_] Statistical analysis plan [_] Results
Last Edited 14/01/2025	**Condition category** Other	[_] Individual participant data [X] Record updated in last year

Plain English summary of protocol

Background and study aims
Working as an employee in a store is an occupation that can be physically demanding, in terms of receiving and stocking goods. Additionally, it can be demanding in terms of various standing activities such as restocking shelves, assisting customers, and more, but also quite sedentary at the cash register. Moreover, it can be mentally demanding in terms of customer interaction and time pressure. Consequently, store employees experience injuries and poor health, highlighting the need for interventions that promote their well-being and health in the workplace.
Many traditional health-promoting workplace interventions are based on initiatives that are often an add-on to the actual productive work. In contrast to these conventional health promotion approaches, this study adopts an organizational and holistic approach to workplace health promotion, aiming to integrate health promotion into the existing work tasks and productive work.
Therefore, the aim of this proof of concept study is to examine the potential and possibilities of redesigning and organizing store employees' work and work tasks in a way that can possibly be health-promoting.

Who can participate?
Store employees in Denmark

What does the study involve?:
The researchers will develop, test and evaluate the feasibility of conducting an organizational health-promoting workplace intervention, inspired by the Goldilocks Work Principle.
The study involves four phases:
1. Mapping of the employees’ workday and work task
2. Development of the intervention,
3. Implementation of intervention and
4. Evaluation of the intervention and project
In the first phase, the researchers aim to map and assess the store employees’ work and their work tasks. They plan to do observations, following the workers on their daily work routine. They plan to do semi-structured interviews with the employees about their work tasks and perceived demands and challenges. Then they will measure the participants' physical activity through objective measurements using an accelerometer (sensor) attached to their thigh and measure their physical activity during work (walking, standing, sitting or running). In the second phase (development) the researchers aim to identify potential areas of improvement and

develop the intervention in collaboration with the workplace. The researchers plan to do one or two workshops with the employees, managers and OSH representatives, so that they become involved in the project and through a participatory approach, have them involved in developing the intervention. Third, in the intervention phase the researchers wish to test the feasibility of implementing the initiatives developed. Testing the intervention involves having the store employees perform their work with the implemented changes (intervention) that was designed during the third phase. Lastly, the researchers plan to evaluate the feasibility and acceptance of the intervention from the store employees and their manager(s)´ perspective.

What are the possible benefits and risks of participating?:
Participating store employees can gain better insight into their physical and psychosocial working conditions and beneficial health effects. There are no risks or side effects of participating.

Where is the study run from?:
National Research Center for the Working Environment (Denmark)

When is the study starting and how long is it expected to run for?:
March 2023 to June 2024

Who is funding the study?:
Trygfonden (Denmark)

Who is the main contact?
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Additional identifiers

Clinical Trials Information System (CTIS)
Nil known

ClinicalTrials.gov (NCT)
Nil known

Protocol serial number
Nil known

Study information

Scientific Title
Proof of concept study of reorganizing work among store employees to promote health – a Goldilocks work approach

Study objectives
It is feasible to organize work in a way that ensures a more balanced distribution of physical and psychosocial work demands among the store workers in order to enhance the workers' physical, social and mental health and well-being.

Ethics approval required
Ethics approval not required

Ethics approval(s)
Ethical approval was not required as the planned evaluation of the study did not fall under the definition of the laws defined in Committee Act § 2 and § 1, and could be initiated without approval from The Committees on Health Research Ethics for the Capital Region of Denmark (ref number: F-23031959)

Study design
Eight weeks non-randomized quasi-experimental proof of concept study

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Physical and psychosocial work demands in stores

Interventions
In this non-randomized proof-of-concept study, there will be no control group, and all participants will receive the organizational intervention at their workplace. The intervention consists of measurements of physical activity, a workshop to develop the intervention together with the workplace, and the intervention itself, which will focus on the reorganization of work to improve physical and psychosocial work demands for store employees. The duration of the intervention will be approximately eight weeks and ends with follow-up measurements of acceptability, physical behaviors and psychosocial working conditions as well as self-reported measurements of musculoskeletal pain, stress, well-being, need for recovery and burnout.

Intervention Type
Other

Primary outcome(s)
1. Feasibility will be measured with questions based on the validated instrument Feasibility of Intervention measures (FIM) through questionnaires and semi-structured interviews with the participant at follow-up.
2. Participants' acceptability of the intervention will be assessed using a validated questionnaire and semi-structured interviews of selected participants during follow-up. The questionnaire and the interview guide will be based on the Theoretical Framework of Acceptability (TFA), which includes a generic TFA-based questionnaire.

Key secondary outcome(s))
1. Work demands: Information about work tasks and organization of work are collected through observations made at the workplace done by a researcher, and from work schedules collected from the workplace, and lastly, through data about employees' physical behavior (see specifics under physical behavior). These measurements will be collected at baseline and at follow-up approximately 8 weeks from baseline.
2. Physical behavior: Information about the participants' physical activity at work will be assessed through observations, and measured by an accelerometer. A triaxle accelerometer

(SENS Motion®, Copenhagen, Denmark) will be attached to the right thigh of the participants for 24 hours over five consecutive days. Participants will be asked to report their work hours, leisure time and sleep using an app (MOTUS, The National Research Center for the Working Environment, Copenhagen, Denmark). Measures of the participants' physical activity include: the number of steps, light, moderate and high physical activity and sitting time. If possible, heavy lifting and arm elevation will be examined through interviews or questionnaire.
3. Psychosocial and physical factors and health: Influence at work will be measured in a questionnaire at baseline and follow-up with questions from the validated questionnaire, the Danish Psychosocial Questionnaire. Physical and emotional fatigue and stress will be measured in a questionnaire at baseline and follow-up with questions from the validated questionnaire, the Second Version of the Copenhagen Psychosocial Questionnaire. Moreover, stress will also be measured through questions from the validated Perceived Stress Scale (PSS). Moreover, participants will also be asked about their experience of influence and involvement in their work tasks and work demands in semi-structured interviews at baseline and follow-up.
4. Information about physical demands at work, pain frequency and pain limitation during work are collected through validated questions from Work Environment and Health in Denmark Study in a questionnaire at baseline and follow-up.
5. Physical exertion during work will be measured using the Borg Rating of Perceived Exertion (RPE) scale in a questionnaire at baseline and follow-up.
6. Participants' well-being will be measured using the 5-item World Health Organization scale in a questionnaire at baseline and follow-up.
7. Need for recovery will be measured through a short-form validated Danish NFR scale in a questionnaire at baseline and follow-up.

Completion date
30/06/2024

Eligibility

Key inclusion criteria
Store employees

Participant type(s)
Employee

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
18 years

Upper age limit
67 years

Sex
All

Total final enrolment
23

Key exclusion criteria
1. Pregnancy
2. Allergic to plasters
3. Fever

Date of first enrolment
07/09/2023

Date of final enrolment
01/12/2023

Locations

Countries of recruitment
Denmark

Study participating centre
Different stores in Eastern Denmark
Denmark
2100

Sponsor information

Organisation
The National Research Center for the Working Environment

Funder(s)

Funder type
Charity

Funder Name
TrygFonden

Alternative Name(s)
Tryg Foundation

Funding Body Type
Private sector organisation

Funding Body Subtype
Trusts, charities, foundations (both public and private)

Location
Denmark

Results and Publications

Individual participant data (IPD) sharing plan
The data that will be generated and analyzed based on the study are not expected to be made available due to protection of participants' identity.

IPD sharing plan summary
Not expected to be made available

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes