

Improving school teacher's psychological wellbeing and work ability by a workplace-based intervention – The BALANCE project

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Registration date 02/07/2014	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
Last Edited 10/03/2015	Condition category Other	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

Plain English summary of protocol

Background and study aims

International research on the interaction between mental health and the work environment has shown the importance of maintaining a balance between work and private life in relation to mental health. National surveys have highlighted that this balance is poor among Danish school teachers, and that this group report more depression when compared to other occupational groups. This project aims to address this through a tailored intervention programme, the purposes of which are:

1. To reduce the risk of developing serious psychological health problems by recognizing and addressing teachers at risk.
2. To maintain or increase the work ability among teachers with reduced psychological wellbeing.
3. To increase the possibility that teachers suffering from reduced psychological wellbeing are still able to work.

To reduce the consequences of mental health problems, scientific research points out that interventions should combine components targeting the individual at risk as well as the workplace and colleagues. The BALANCE project is designed as a complex workplace-based intervention which focuses on both helping the individuals identified with potential reduced psychological wellbeing, and on improving the psychosocial working environment as a whole. The project will be assessed through measuring changes in the psychological wellbeing, work ability and work-related fatigue among the teachers identified as having reduced psychological wellbeing and also the amount of sickness absence and job turnover among all teachers.

Who can participate?

All public schools in the City of Copenhagen had the opportunity to apply for participation. If accepted, all the teachers at the schools were included in the project.

What does the study involve?

Teachers participating in the trial are first asked to fill in an initial questionnaire designed to identify those with reduced wellbeing. Those are identified as having reduced wellbeing are then randomly allocated into one of two groups: control or intervention. All teachers are offered conventional help to improve their psychological state, and those in the intervention group are

also offered extra options available as part of the BALANCE project. These include, for example a course in stress management and help in adjusting their job demands. In addition, representative managers from participating schools will be offered training in how to better support teachers with reduced psychological wellbeing and a seminar is organized that focuses on developing an inclusive and supportive culture and reducing any stigmatization of employees with mental health issues. The seminar is used as a starting point for the development of school-wide activities centered around a particular theme for improving the psychological working environment for all teachers in the school. The success of the intervention is assessed through individual questionnaires at the end of the project measuring changes in the psychological wellbeing, work ability and work-related fatigue among the participating teachers and also the amount of sickness absence and job turnover among all teachers in the school.

What are the possible benefits and risks of participating?

The BALANCE projects intervention will primarily benefit the teachers with reduced psychological wellbeing. All teachers are offered to participate in screening, and those identified with or at risk of mental health problems are offered options and assistance to improve their psychological state. The intervention also aims to benefit the whole workplace by focusing on improving the psychosocial working environment at the schools in benefit of all the teachers. There are no known risks of participating in this study.

Where is the study run from?

The National Researcher Center for the Working Environment (NRCWE) in Copenhagen, Denmark.

When is the study starting and how long is it expected to run for?

March 2013 to November 2015

Who is funding the study?

A research grant from the Danish Government (Grant from the Social Reserve Program). The pension fund of the teachers Lærernes Pension has also contributed financially to the study.

Who is the main contact?

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Contact information

Type(s)

Scientific

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Additional identifiers

Protocol serial number

N/A

Study information

Scientific Title

The BALANCE project - A cluster-randomized trial of a complex workplace based intervention to maintain or improve work ability among school teachers at risk for being at reduced psychological wellbeing.

Study objectives

The following primary, secondary and tertiary hypotheses will be tested hierarchically. The primary, secondary and tertiary hypotheses will be tested with a two-sided test at a significance level of 0.05 distributed equally between parallel hypotheses within each level.

1. The primary hypothesis is that the intervention will have an effect on the change in psychological wellbeing (WHO-5) from baseline to the first follow-up measurement in teachers who at baseline have scored equal to or below the median WHO-5 score of all respondents.
2. The two parallel secondary hypotheses are that the intervention will have an effect on the change in work ability (WRFQ) or work-related fatigue (Need for Recovery) from baseline to the first follow-up measurement in teachers who at baseline have scored equal to or below the median WHO-5 score of all respondents.
3. The two parallel tertiary hypotheses are that the intervention will have an effect on sickness absence (the length of the sickness absence period) among all teachers experiencing sickness absence in first follow-up period, and that the intervention will have an effect on the employment status (time to termination) among all teachers employed at the participating schools at baseline.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Danish Data Protection Agency (Datatilsynet).

Study design

A cluster randomized controlled trial comparing an intervention group with an assessment only control group.

Primary study design

Interventional

Study type(s)

Quality of life

Health condition(s) or problem(s) studied

School teachers with or without mental health problems working at the participating schools.

Interventions

The individual focused interventions include four components:

1. A screening to identify individuals with reduced psychological wellbeing
2. A case manager is appointed to contact the individuals with reduced psychological wellbeing identified in the screening. The case manager will through personal conversations clarify the needs and give support and motivation to participate in other parts of the individual intervention.
3. A course in stress management is one of the options offered
4. Job task modification, a time-limited adjustment of job demands and the current level of resources, is another option offered to the teachers with reduced psychological wellbeing.

The organization focused intervention includes three components:

1. Education of the "Triad" (that is, representatives from the school management, the local shop steward and the local health and safety representative). The Triad receives training to improve their ability to support teachers with reduced psychological well-being, especially regarding those participating in the individual focused intervention. Furthermore the triad is trained to cooperate about improving the psychosocial working environment for all teachers of the school.
2. A seminar is organized at each school for all teachers. The purpose of the seminar is to increase focus at the school on an inclusive and supporting culture and reduce stigmatization of employees with mental health problems.
3. The seminar is the starting point for the final organizational intervention component which is activities centered around a theme selected by each school - a theme that has been found relevant for improving the psychosocial working environment of the specific workplace, for example improvement of support from colleagues.

The duration of the intervention is 12 months.

Intervention Type

Other

Phase

Not Applicable

Primary outcome(s)

The primary outcomes are:

1. The change from baseline (before the intervention) to the first follow-up (post-intervention) in psychological wellbeing assessed by WHO-5
2. The change from baseline to the first follow-up in work ability measured by the Work-Role Functioning Questionnaire (WRFQ)
3. The change from baseline to the first follow-up in work-related fatigue measured by Need for Recovery Questionnaire (NFR)

The change from baseline will be analyzed in a mixed effects model including the intervention as a categorical variable defined according to the intention-to-treat principle, and with the baseline value of the specific outcome as a covariate. The correlation between persons from the same school will be modelled using a compound symmetry covariance structure.

Additional primary outcomes are:

1. Sickness absence
2. Employment status

These are assessed from the employer's records for the 12 months periods starting January 2014 (follow-up period). The influence of the intervention on sickness absence will be analyzed in a Cox proportional hazard regression model for interval-censored data using duration of the

absence period as the time scale. The correlation between measurements within the individual and within the school will be modelled by including a random effect of individual and a random effect of school. The observation will be censored in case of termination of employment, death, or end of follow-up. The target event when analyzing employment status will be termination of employment at the school, while censoring at termination due to death, at age 65 years (standard age for old-age pension in Denmark), or at end of follow-up, whichever comes first. In these analyses, age will be used as the time scale.

Key secondary outcome(s)

The first group of secondary outcomes consists of changes from baseline to follow-up in psychological wellbeing measures complementary to the primary outcomes:

1. Mental health assessed with the Mental Health Inventory-5 (MHI-5)
2. Work ability (WAI)
3. Symptoms of depression and anxiety (SCL-90)
4. Sleep problems (KSS)

The second group of secondary outcomes consists of changes from baseline to follow-up of measures assessing the perceived psychosocial working environment:

1. Social support from colleagues (COPSOQ)
2. Social support from the manager (COPSOQ)
3. Social community at work (COPSOQ)
4. Quality of the management (COPSOQ)
5. Social capital among colleagues and between the teachers and the management
6. Expectations with regard to continue to work at the current school

Finally, a third group of secondary outcomes will be the change from baseline to 1 year after completion of the interventions (second follow-up) in all the variables mentioned above for:

1. Psychological wellbeing
2. Work ability
3. Work-related fatigue
4. Perceived working environment etc.

Completion date

01/11/2015

Eligibility

Key inclusion criteria

All public schools in the municipal of Copenhagen got the possibility to seek for participation in the project - both school teachers (childrens age: circa 7-15 years) and preschool teachers (children age: 6 years) from the participating schools will be part of the study population.

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Sex

All

Key exclusion criteria

Exclusion criteria for participating in the project:

Special schools (as for example schools for deaf students) are not invited to participate in the project

Exclusion criteria for participation in the scientific evaluation of the study:

The school management and school employees who have other functions than teaching are not part of the study population

Exclusion criteria for participation in the scientific evaluation of the study:

The school management and school employees who have other functions than teaching are not part of the study population

Date of first enrolment

01/04/2013

Date of final enrolment

01/11/2015

Locations**Countries of recruitment**

Denmark

Study participating centre

Lerso Parkallé 105

Copenhagen

Denmark

2100

Sponsor information**Organisation**

The National Research Center For The Working Environment (NRCWE)

ROR

<https://ror.org/03f61zm76>

Funder(s)

Funder type
Government

Funder Name
Danish Government (Grant from the Social Reserve Program 2012) Grant number 17.21.02.60 (Denmark)

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not provided at time of registration

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
Study website	Study website	11/11/2025	11/11/2025	No	Yes