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Investigating work-related musculoskeletal disorders in certain jobs

Submission date
09/12/2019

Recruitment status
Suspended

Registration date
30/12/2019

Overall study status
Completed

Last Edited
16/11/2020

Condition category
Musculoskeletal Diseases

[X] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Musculoskeletal disorders (health problems related to bones, muscles, joints etc) that have been caused by work are a common reason for sick leave from work. Musculoskeletal disorders of all causes were responsible for between 2 and 3 of every 10 days absent from work in 2017/2018 in the Netherlands, Germany and the UK. Long-term work-related overloading and stressing of the body can cause problems with posture, pain, imbalance between the two legs and changes to gait (walking pattern). This study aims to investigate whether certain musculoskeletal disorders are more common in certain jobs.

Who can participate?
Women and men in selected professions (orchestra musicians, office workers, fitness instructors, physiotherapists, nurses, midwives, dentists, hairdressers, teachers and IT specialists), who have been working in the profession for at least 5 years.

What does the study involve?
Each person will visit the research team once only. They will have certain physical measurements taken to assess the symmetry of their spine and body and the way they walk (gait). They will also fill in questionnaires about their level of physical activity, pain, the effect of low back pain on their life and their quality of life.

What are the possible benefits and risks of participating?
Participants might benefit from learning about their posture, causes of pain and ways to prevent problems. This is an observational study, which means the study is not assigning a treatment to the participants, so there is no risk associated with the study treatment.

Where is the study run from?
University of Opole (Poland)

When is the study starting and how long is it expected to run for?
November 2018 to December 2021

Who is funding the study?
University of Opole (Poland)

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
KB/130/FI/2018

Study information

Scientific Title
The analysis of work-related musculoskeletal disorders in selected occupations.

Study objectives
1. Long-term work with heavy load causes pain and overloading of the musculoskeletal system.
2. Long-term work in an occupation with asymmetric load causes posture defects and scoliosis and the differences in load of lower limbs.
3. Long-lasting work in an occupation with asymmetrical load causes asymmetry of gait.
4. Properly conducted physical activity improves posture and gait and reduces pain.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Current ethics approval as of 06/02/2020:
1. Approved 04/12/2018, Opole Medical School Research Ethics Committee (68 Katowicka Street; Opole 45-065, Poland; +48 774410882; biurorektora@wsm.opole.pl), ref: KB/130/FI/2018
2. Extended by 06/02/2020 to include other professions as well as musicians, Opole Medical School Research Ethics Committee (68 Katowicka Street; Opole 45-065, Poland; +48 774410882; biurorektora@wsm.opole.pl), ref: KB/240/FI/2020

Previous ethics approval:
Approved 04/12/2018, Opole Medical School Research Ethics Committee (68 Katowicka Street; Opole 45-065, Poland; +48 774410882; biurorektora@wsm.opole.pl), ref: KB/130/FI/2018

Study design
Cross-sectional study

Primary study design
Observational

Study type(s)
Screening

Health condition(s) or problem(s) studied
Musculoskeletal disorders

Interventions
The research is observational and cross-sectional. Each person will be examined only once. There will be no remeasurements or follow up.

There will be no randomization. The representatives of selected jobs - 12 groups of 30 people each - will be examined: musicians (violinists, cellists and musicians playing symmetrical instruments), office workers, fitness instructors, physiotherapists, nurses, midwives, dentists, hairdressers, academic teachers, IT (computer) specialists.

Each person will be measured: torso rotation angle measured using a Bunnell scoliometer, distribution of the body's centre of gravity assessed using a posturography platform , difference between the load of lower limbs assessed using the two weight test, gait parameters using a gait track for gait analysis, physical activity assessed using the International Physical Activity Questionnaire (IPAQ) questionnaire, quality of life assessed using the WHOQOL-BREF scale, disability related to low back pain assessed using the Oswestry Disability Index, effect of low back pain on daily functioning assessed using the Roland–Morris Disability Questionnaire. In addition, the participants will assess their pain using a visual analogue scale and a self-reported questionnaire.

Intervention Type
Other

Primary outcome(s)
1. Pain assessed using a visual analogue scale
2. Duration of pain assessed using a self-reported questionnaire
3. Pain severity assessed using a self-reported questionnaire
4. Pain frequency assessed using a self-reported questionnaire
5. Pain location assessed using a self-reported questionnaire
6. Quality of life assessed using the WHOQOL-BREF scale
7. Disability related to low back pain assessed using the Oswestry Disability Index
8. Effect of low back pain on daily functioning assessed using the Roland–Morris Disability Questionnaire

Key secondary outcome(s))

1. Torso rotation angle measured using a Bunnell scoliometer
2. Distribution of the body's centre of gravity assessed using a posturography platform
3. Difference between the load of lower limbs assessed using the two weight test
4. Gait parameters using a gait track for gait analysis
5. Physical activity assessed using the International Physical Activity Questionnaire (IPAQ) questionnaire

Completion date
31/12/2021

Eligibility

Key inclusion criteria
1. Representatives of selected professions: musicians, office workers, fitness instructors, physiotherapists, nurses, midwifes, dentists, hairdressers, academic teachers, IT (computer) specialists.
2. Minimum 5 years of work experience

Participant type(s)
Mixed

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Infections
2. Acute injuries
3. Balance system and motor control disorders
4. Cancer
5. Pregnancy
6. Chronic wounds

Date of first enrolment
07/01/2020

Date of final enrolment
31/08/2021

Locations

Countries of recruitment
Poland

Study participating centre
University of Opole
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Sponsor information

Organisation
Opole University

ROR
https://ror.org/04gbpnx96

Funder(s)

Funder type
University/education

Funder Name
Opole University

Results and Publications

Individual participant data (IPD) sharing plan
The datasets generated and/or analysed during this study will be included in the subsequent results publication.

IPD sharing plan summary
Data sharing statement to be made available at a later date

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