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Health promotional program to manage the local cleaners' musculoskeletal symptoms: feasibility study

Submission date
20/10/2023

Recruitment status
No longer recruiting

Registration date
01/11/2023

Overall study status
Completed

Last Edited
11/08/2025

Condition category
Musculoskeletal Diseases

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

Plain English summary of protocol

Background and study aims
Many local cleaners suffer from work-related musculoskeletal symptoms (WRMS), like pain, numbness or spasms. However, the public pays little attention to their needs. At the same time, they work with pain instead of requesting sick leave because they do not want to be fired due to absence from work. Their awareness or understanding of their musculoskeletal health was also inadequate.
Moreover, the evidence on the effective intervention to manage the cleaners' WRMS is scanty. A multi-dimensional musculoskeletal health promotion program was suggested for other working populations. However, this strategy has not yet been tested on cleaners and requires further exploration. Therefore, this study aims to explore if the proposed program is accepted and welcomed by the local cleaners, to examine if it is feasible to be applied in workplace settings, and also to look for the preliminary effects of the program.

Who can participate?
Local cleaners aged 30 years or above, working on the street, in public facilities, public or private housing or industrial buildings, with WRMS in at least one body region and physically fit for the exercise training.

What does the study involve?
Cleaners from three districts are grouped by their workplace. They are then randomly allocated to the intervention or control group. The intervention group will receive 8-week health education plus exercise training sessions, while the control group will only receive usual practice. The training sessions will be delivered in the assigned community centres after the cleaners' working hours. The selected centres are located near their working area so the participants can reach the centres immediately after work for the intervention or data collection.
The participants' demographic data and working conditions will be collected at the first data collection time point before the intervention. It provides information about the local cleaners' working situation and allows further correlation analysis. On the other hand, the recruitment and response rates, participants' attrition rate, attendance rate, and satisfaction levels with the intervention will be evaluated. The participants' and stakeholders' acceptance of the

intervention and the feasibility of the study in the workplace context will also be explored through focus group interviews scheduled immediately after the intervention.
The preliminary outcomes of the program will also be evaluated. The participants' WRMS prevalence and severity and the impacts on their activities of daily living will be measured before, after and 4 weeks after the promotion program.

What are the possible benefits and risks of participating?
The proposed program is believed to have a positive effect on managing the local cleaners' musculoskeletal symptoms and eventually promote their health and working ability.
Also, this small-scale feasibility study allows researchers to examine the feasibility of the research design participant recruitment and explore the challenges during implementing the proposed program in the workplace context.
Moreover, the preliminary results may support future large-scale trials. Finally, it can facilitate strategic planning from the community level to support the cleaners in their occupational health and safety.
The study is believed to cause no harm to the participants. However, accidents or injuries may happen when they practice the exercise without following the instructions or guidelines.

Where is the study run from?
Hong Kong Polytechnic University (Hong Kong)

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

Who is funding the study?
The research team will provide HK$100 supermarket coupons to each participant when they complete the questionnaires in T0-T2 or join the focus group interview. The Kerry Group sponsored these coupons to the "Labour-friendly community project", which is the community partner of the study. Otherwise, there is no extra funding received.

Who is the main contact?
Elaine Cheung, elaine-sp.cheung@polyu.edu.hk

Contact information

Type(s)
Public, Scientific, Principal investigator

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Additional identifiers

Study information

Scientific Title
Implementing a multi-dimensional musculoskeletal health promotion program (MMHPP) in managing the musculoskeletal symptoms among Chinese cleaners in Hong Kong: a feasibility cluster randomised controlled trial

Acronym
WRMS

Study objectives
Using a multi-dimensional health promotion program can assist local cleaners in managing their work-related musculoskeletal symptoms.

Ethics approval required
Ethics approval required

Ethics approval(s)
Approved 01/06/2023, The Hong Kong Polytechnic University Institutional Review Board (Room GH252, GH Podium Annexe, The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong, -, Hong Kong; +852 (0)3400 2806; rio.general@polyu.edu.hk), ref: HSEARS20230517008-01

Primary study design
Interventional

Study design
Two-armed feasibility cluster randomized control trial

Study type(s)
Quality of life

Health condition(s) or problem(s) studied
Work-related musculoskeletal symptoms (WRMS)

Interventions
Cleaners from three districts form the clusters by their workplace. The clusters will be randomly assigned to intervention or control groups by drawing concealed envelopes. Each cluster will be assigned a number. An exact amount of envelopes containing a piece of paper with either "intervention" or "group" will be prepared. A researcher will draw an envelope with a number and an envelope for a group assignment simultaneously until all clusters are assigned.

Cleaners in the intervention group attend the consecutive 8-week multi-dimensional musculoskeletal health promotional program (MMHPP), which includes health education and physical exercise training. The control group will receive the usual care.

Intervention Type
Mixed

Primary outcome(s)
The cleaners' satisfaction and acceptability of the intervention measured with a questionnaire and focus group interviews of the participants and collaborative partners after the intervention.

Key secondary outcome(s)
1. Prevalence and severity level of musculoskeletal symptoms measured with the Standardised Nordic musculoskeletal questionnaire (NMQ) at baseline, after the intervention (8 weeks) and 4 weeks after the intervention
2. Health impacts of the WRMS measured with a Musculoskeletal Health Questionnaire (MSK-HQ) at baseline, after intervention (8 weeks) and 4 weeks after the intervention

Completion date
31/07/2024

Eligibility

Key inclusion criteria
1. Chinese cleaners aged 30 years old or above
2. Involved in cleaning duties on the street, waste collection stations or public or private housing
3. With a full-time or part-time contract from the cleaning contractors or under government employment
4. Experience with WRMS in at least one body part for at least 1 month

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Mixed

Lower age limit
30 Years

Sex
All

Key exclusion criteria
1. Any co-morbidities or diseases that are contraindicated for physical activities, e.g. stroke, polio, musculoskeletal deformity
2. Pregnant
3. Have severe WRMS, which is not recommended for exercise by medical professionals
4. Participated in structured exercise training (with trainer) in the previous 6 months

Date of first enrolment
01/06/2023

Date of final enrolment
01/09/2023

Locations

Countries of recruitment
Hong Kong

Study participating centre
Caritas Aberdeen Community Center
20-22, Tin WAN Street
Aberdeen
Hong Kong
Hong Kong
N/A

Study participating centre
Residents Mutual Help Centre
Room 1C, 1/F, TLP 132
132 Tai Lin Pai Road
Kwai Chung
New Territories
Hong Kong
Hong Kong
N/A

Study participating centre
Residents Mutual Help Centre
G/F, 6 Wilmer Street, Sai Ying Pun
Hong Kong
Hong Kong
N/A

Sponsor information

Organisation
Hong Kong Polytechnic University

ROR
https://ror.org/0030zas98

Funder(s)

Funder type
Industry

Funder Name
Investigator initiated and funded

Funder Name
Kerry Group, Hong Kong

Results and Publications

Individual participant data (IPD) sharing plan
The data-sharing plans for the current study are unknown and will be made available at a later date

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?
Results article			11/08/2025	Yes	No