# The effectiveness of a nurse-led education programme for caregivers of patients with lung disease due to inhalation of dust (pneumoconiosis)

Submission date	Recruitment status  No longer recruiting	Prospectively registered		
24/05/2020		☐ Protocol		
Registration date	Overall study status	Statistical analysis plan		
05/06/2020	Completed	[X] Results		
Last Edited	Condition category	Individual participant data		
04/03/2022	Mental and Behavioural Disorders			

## Plain English summary of protocol

Background and study aims

The term 'pneumoconiosis' refers to a group of lung diseases caused by the inhalation - and retention in the lungs - of dusts. The most commonly occurring types of pneumoconiosis (apart from asbestos-related disease) are coal worker's pneumoconiosis, arising from the inhalation of coal dust, and silicosis, arising from the inhalation of respirable crystalline silica (RCS) from dust from building materials based on rock, sand or clay. There is a long delay - up to 10 years or more - between exposure and onset of disease, so most new cases or deaths from pneumoconiosis reflect the working conditions of the past and occur in individuals who have retired. Pneumoconiosis is a long-lasting lung disease that cannot be cured. Pneumoconiosis patients require their family members to take care of them as the disease progresses. The needs of pneumoconiosis caregivers have been neglected even though their mental wellbeing has been found to be negatively affected. However, there has been little research on how best to support the needs of pneumoconiosis caregivers. To fill this research gap, the aim of this study was to evaluate the effectiveness of a nurse-led education programme on caregivers' mental health, caregiving burdens, unmet direct support and enabling needs. Caregivers were recruited from the community in Hong Kong. They participated in four nurse-led weekly 90-minute workshops.

## Who can participate?

Adults aged 18 years or above who are taking care of family members with pneumoconiosis at home

## What does the study involve?

The participants attended four weekly 90-minute workshops led by an experienced nurse in a community center. They filled in a questionnaire and had their body mass index (BMI) calculated from their weight and height and blood pressure measured before the first workshop, after the fourth workshop and 1 month after the fourth workshop.

What are the possible benefits and risks of participating?

The possible benefits are that the programme might improve caregivers' mental health, reduce their caregiving burden and address their unmet direct support enabling needs.

The possible risks are that the participants might find the workshop brings up upsetting or overwhelming feelings. The project team monitored the participants' physical and psychological health during the workshops and data collection. A registered nurse, project assistant or social worker was present during the data collection and workshops. Onsite physical or psychological support was provided promptly and further referral to healthcare services was also provided if needed.

Where is the study run from? Pneumoconiosis Mutual Aid Association (Hong Kong)

When is the study starting and how long is it expected to run for? September 2018 to December 2019

Who is funding the study?
Pneumoconiosis Mutual Aid Association (Hong Kong)

Who is the main contact?

Dr Kin Cheung, kin.cheung@polyu.edu.hk

# Contact information

## Type(s)

Scientific

## Contact name

Dr Kin Cheung

#### ORCID ID

https://orcid.org/0000-0002-8419-4847

### Contact details

School of Nursing The Hong Kong Polytechnic University Kowloon Hong Kong

+852-2766-6773 kin.cheung@polyu.edu.hk

# Additional identifiers

Clinical Trials Information System (CTIS)

Nil known

# ClinicalTrials.gov (NCT)

Nil known

## Protocol serial number

Nil known

# Study information

### Scientific Title

The effectiveness of a nurse-led education programme for pneumoconiosis caregivers: a quasi-experimental study

## **Study objectives**

After attending the nurse-led education programme, pneumoconiosis caregivers will improve their mental wellbeing, reduce caregiving burdens, and unmet needs fro direct support and enabling, as compared to that before attending the programme.

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Aprroved 11/9/2018, Hong Kong Polytechnic University School of Nursing Departmental Research Committee (Hung Hom, Kowloon, Hong Kong; +852 27666378; cherrie.mok@polyu.edu. hk), ref: HSEARS20180902002

## Study design

Single-group interventional non-randomised repeated-measures study

## Primary study design

Interventional

## Study type(s)

Quality of life

# Health condition(s) or problem(s) studied

Pneumoconiosis caregivers' mental wellbeing

#### **Interventions**

After enrolment, participants were informed about the venue of the workshops. They were informed that they would attend four weekly 90-min workshops led by an experienced nurse. They were also required to fill in a questionnaire and undergo measurement of their BMI and blood pressure before the first workshop, after the fourth workshop and 1 month after the fourth workshop. The questionnaire and measurement took about 15 min.

The four educational workshops were on the following topics:

- 1. Knowing pneumoconiosis and chest percussion
- 2. Aging process and lifting and transfer techniques
- 3. Home safety and medication, and assisted feeding techniques
- 4. Infection prevention and caring for caregivers

Each workshop involved 40 min of teaching of the knowledge and skills demonstration and then 30 min of hands-on practice and return demonstration. The participants could use the rest of the time for questions, if any.

## Intervention Type

Behavioural

## Primary outcome(s)

Psychological distress measured by the Hospital Anxiety and Depression Scale (HADS) at baseline, after the fourth workshop, and 1 month after the fourth workshop

## Key secondary outcome(s))

- 1. Caregiver burden measured by the Caregiver Burden Inventory
- 2. Caregiving burden measured by the Caregiving Burden Scale
- 3. Unmet needs of caregivers measured by Carer Support Needs Assessment Tool
- 4. BMI calculated from the participant's weight and height measured using a scale
- 5. Blood pressure measured using a portable blood pressure monitor

All secondary outcome measures were assessed at baseline, after the fourth workshop, and 1 month after the fourth workshop.

## Completion date

31/12/2019

# **Eligibility**

## Key inclusion criteria

- 1. Aged ≥18 years
- 2. Taking care of family members with pneumoconiosis at home

## Participant type(s)

Carer

## Healthy volunteers allowed

No

## Age group

Adult

## Lower age limit

18 years

#### Sex

All

## Total final enrolment

49

## Key exclusion criteria

Non-Chinese speaking caregivers

### Date of first enrolment

01/08/2018

## Date of final enrolment

01/09/2019

# Locations

## Countries of recruitment

Hong Kong

# Study participating centre Pneumoconiosis Mutual Aid Association

1 to 4, G / F Chang On Building Nanchang Village Sham Shui Po Kowloon Hong Kong

# Sponsor information

## Organisation

Pneumoconiosis Mutual Aid Association

# Funder(s)

## Funder type

Charity

## **Funder Name**

Pneumoconiosis Mutual Aid Association

# **Results and Publications**

# Individual participant data (IPD) sharing plan

Ethical approval does not permit data sharing. Participants did not consent to data sharing.

# IPD sharing plan summary

Not expected to be made available

# Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		26/01/2021	04/03/2022	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes