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Effectiveness of a ‘lung age’ intervention on smoking cessation rate in a Singaporean community

Submission date
31/01/2015

Recruitment status
No longer recruiting

Registration date
26/02/2015

Overall study status
Completed

Last Edited
18/02/2022

Condition category
Mental and Behavioural Disorders

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

Plain English summary of protocol

Background and study aims
There is a link between tobacco use and several preventable chronic diseases such as cardiovascular diseases, stroke, cancers (lung cancer) and respiratory diseases (chronic obstructive pulmonary disease and asthma). There have been many attempts to help people stop smoking but smoking rates are increasing worldwide, including in Singapore. The aim of this initial study is to assess whether a ‘lung age’ intervention (using a device called a MICROLAB MK8 ML3500 spirometer) can have an impact on smoking cessation rates, smoking abstinence and nicotine dependence among the smoking community in Singapore.

Who can participate?
Adults aged 35 and above and who are smokers.

What does the study involve?
Participants will be randomly allocated to one of two groups: participants in the experimental group will receive a ‘lung age’ intervention, consisting of lung age determination and education as well as smoking cessation advice, while the researchers will provide those in the control group with the usual smoking education.

What are the possible benefits and risks of participating?
Not provided at time of registration

Where is the study run from?
Khoo Teck Puat Hospital, Singapore

When is the study starting and how long is it expected to run for?
From September 2014 to September 2015

Who is funding the study?
Alexandra Health National Medical Research Centre (Singapore)

Who is the main contact?
Mr Imran Muhammad

Contact information

Type(s)
Scientific

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Additional identifiers

Protocol serial number
N/A

Study information

Scientific Title
A pilot randomised controlled trial on the effectiveness of a ‘lung age’ intervention on smoking cessation rate in a Singaporean community

Study objectives
Tobacco use has been linked to several preventable chronic diseases, such as cardiovascular diseases, stroke, cancers including lung cancer and respiratory diseases such as Chronic Obstructive Pulmonary Disease (COPD) and Asthma. Despite numerous health education attempts to promote smoking cessation, there has been a sustained increase in smoking rates worldwide, including in Singapore. More studies are required to validate the effectiveness of

using a lung age intervention as a smoking cessation tool, especially in an Asian society such as Singapore.
When compared with the control group, participants in the experimental group will report significantly higher smoking cessation rates, stronger abstinence towards smoking, lower nicotine dependence and advancement in the stage of behavioural change.

Ethics approval required
Old ethics approval format

Ethics approval(s)
Singapore National Health Group Domain Specific Review Board (DSRB) - Domain F NHG DSRB, 04/09/2014, ref: 2014/00711

Study design
Pilot randomised controlled trial

Primary study design
Interventional

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Smoking cessation

Interventions
A convenience sample of 108 participants will be recruited from population health screenings conducted by a tertiary public hospital in Singapore with 54 participants in the experimental group and 54 in the control group. Participants in the experimental group will receive a Lung age intervention, consisting of lung age determination and education as well as smoking cessation advice, while the researchers will provide those in the control group with the usual smoking education.

Intervention Type
Device

Primary outcome(s)
1. To explore the feasibility of applying the “lung age” intervention among the smoking community in Singapore.
2. To evaluate the effectiveness of the “lung age’ intervention on smoking cessation rates, smoking abstinence self-efficacy and nicotine dependence and among this group of population.
Data will be collected at the baseline and again at the third and sixth month follow-ups. Data will be analysed using IBM SPSS 22.

Key secondary outcome(s))
No secondary outcome measures

Completion date
03/09/2015

Eligibility

Key inclusion criteria
1. Currently smoking
2. Aged 35 years old and above
3. Able to read and/or speak in English and/or Mandarin

Participant type(s)
Patient

Healthy volunteers allowed
No

Age group
Adult

Sex
All

Key exclusion criteria
1. Have a known history of major psychiatric illness
2. History of Respiratory related diseases: COPD, asthma, bronchioectasis
3. Ejection fraction <40 %, or diagnosed with congestive cardiac failure
4. Diagnosed with acute myocardial infarction within 1 month
5. Diagnosed with fluid overload / acute pulmonary oedema
6. Receiving oxygen therapy
7, Recent eye/thoracic/abdominal surgery
8. Chest/abdominal/oral and facial pain
9. Hyperventilation syndrome

Date of first enrolment
01/11/2014

Date of final enrolment
30/03/2015

Locations

Countries of recruitment
Singapore

Study participating centre
Khoo Teck Puat Hospital
90 Yishun Central
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Singapore
Singapore 768828

Sponsor information

Organisation
Alexandra Health National Medical Research Centre - Centre Grant Pitch For Fund 2014

Funder(s)

Funder type
Research council

Funder Name
Alexandra Health NMRC Centre Grant Pitch For Fund 2014

Results and Publications

Individual participant data (IPD) sharing plan
Not provided at time of registration

IPD sharing plan summary
Available on request

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		21/05/2015	18/02/2022	Yes	No
Participant information sheet	Participant information sheet	11/11/2025	11/11/2025	No	Yes