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A cluster randomised controlled trial on effectiveness of carbon monoxide measurement feedback among college smoker: A study protocol (Article)

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Abstract

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Introduction: For the last 30 years, tobacco smoking has continued to be the leading cause of premature deaths in Malaysia. Majority of the smokers in Malaysia are at the pre-contemplation and contemplation stages. Therefore, for the purpose of increasing smoking cessation among this group, the strategies that motivate them to quit smoking have to be reviewed. **Objective:** This study aims to evaluate the effectiveness of carbon monoxide measurement feedback and the standard brief motivation adopted to encourage the smoker to quit. **Methods:** A single-blind, cluster randomised controlled trial was conducted at ten tertiary colleges in Selangor. The study recruited young adult smokers at the pre-contemplation and contemplation stages. The subjects in the control group received a standard brief motivational strategy. On the other hand, the intervention group received additional carbon monoxide measurement and a motivational feedback module. A follow up was conducted at the first, third and sixth month to measure changes in smoking cessation stage. Subsequently, the secondary outcomes of a mean number of cigarette consumption and quit smoking attempt were analysed. A total of 160 subjects were required to detect the expected difference of 17% in primary outcomes between the groups. This study utilised Generalised Estimating Equations (GEE) to handle the clustering effects. **Conclusion:** Biomedical risk assessment feedback mechanism by using carbon monoxide is a promising aid to motivate the smoker to quit. This mechanism is a relatively easy, quick and non-invasive technique. Thus, it can be utilised as a reinforcement relating to the harmful effect of smoking. Besides, it can also increase the smokers' self-efficacy and decisional balance to adopt behavioural changes. © 2019, Malaysian Medical Association. All rights reserved.

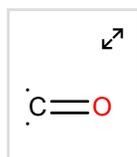
SciVal Topic Prominence ⓘ

Topic: Behavior | Motor Activity | Model TTM

Prominence percentile: 83.130 ⓘ

Chemistry database information ⓘ

Substances



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Cessation Motivation carbon monoxide Smoking Transtheoretical Model

Indexed keywords

EMTREE drug terms: carbon monoxide smokelyzer

EMTREE medical terms: adult Article controlled study Fagerstrom Test for Nicotine Dependence follow up health care facility human intention to treat analysis major clinical study outcome assessment questionnaire randomized controlled trial risk assessment sensitivity analysis single blind procedure smoking smoking cessation tobacco

Chemicals and CAS Registry Numbers:

carbon monoxide, 630-08-0

Drug tradename:

smokelyzer, Bedfont Scientific, United Kingdom

Manufacturers:

Drug manufacturer:

Bedfont Scientific, United Kingdom

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