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## Randomised controlled trial on the effectiveness of home-based walking exercise on depression in patients with lung cancer

Hui-Mei Chen<sup>1,2</sup>, Chia-Chin Lin<sup>1</sup> and Hsiou-Li Huang<sup>2</sup>

<sup>1</sup>Taipei Medical University, Taiwan

<sup>2</sup>National Taipei University of Nursing and Health Sciences, Taiwan

**Background:** Lung cancer is a highly symptomatic disease; depression symptoms might limit the functional ability and impair the quality of life (QOL) in lung cancer survivors. Although exercise has been addressed as an adjuvant treatment for depression, limited studies have evaluated the effectiveness of exercise in patients with lung cancer. Walking is strongly recommended for patients with pulmonary diseases by American College of Sports Medicine; because it is involved in most activities of daily living (ADL). The purpose of this was to determine the effectiveness of a 12-week home-based walking-exercise programme in managing depression in Taiwanese patients with lung cancer.

**Methods:** We recruited 116 patients from a medical centre in northern Taiwan, and randomly assigned them to either a walking-exercise group (n=58) or a usual-care group (n=58). We conducted a 12-week exercise programme that comprised home-based, moderate-intensity walking for 40 min per day, 3 days per week, and weekly exercise counselling. The outcome measures included the Hospital Anxiety and Depression Scale (HADS-depression subscale).

**Results:** We analysed the effects of the exercise programme on depression by using a generalised estimating equation method. The exercise group patients exhibited significant improvements in their depression levels over time (P=.00006 and .004 in the third and sixth months respectively) than did the usual-care group patients. A cut-off point of 8 was used to investigate the clinical significance of the observed changes; both the walking-exercise and usual-care groups revealed a similar number of definite and suspicious (scores  $\geq 8$ ) depression cases at baseline (18 vs. 14, P=.406). Moreover, although a significant difference was observed from the baseline to the third month (a decrease of 8 patients vs. an increase of 9 patients, P=.001), no significant differences were observed from the baseline to the sixth month (a decrease of 5 patients vs. an increase of 2 patients, P=.257). The significant interaction term (group difference x time) in the GEE model (Wald  $\chi^2=10.74$ , P=.005) indicated that the walking exercise programme effectively reduced the number of patients with depression over time.

**Conclusion:** The home-based walking exercise programme is a feasible and effective intervention method for managing depression in lung cancer survivors and can be considered as an essential component of lung cancer rehabilitation.

### Biography

Hui-Mei Chen obtained her PhD from Taipei Medical University. She is an assistant professor at the National Taipei University of Nursing and Health Sciences. She has practiced clinical nursing for 10 years and been involved in nursing education and research for 18 years. She has published several papers in Cancer Nursing as well as the British Journal of Cancer and serves as a reviewer for a nursing journal in Taiwan.

[alice@ntunhs.edu.tw](mailto:alice@ntunhs.edu.tw)

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