規律運動訓練對心血管疾病危險群婦女危險因子及情緒狀態之影響

The Effects of Regular Exercise Training on Cardiovascular Disease Risk Factors and Mood States Among High Risk Women

中文摘要

心血管疾病為造成女性死亡及失能的主要原因，而改變生活型態及增加身體活動，可降低罹患心血管疾病的危險性。本研究目的在探討規律運動訓練對心血管疾病危險群婦女危險因子與情緒狀態之影響。

本研究採準實驗設計以立意取樣方式篩選北部某社區及教學醫院 35-64 歲心血管疾病高危險群之婦女，經由醫師轉介個案，採隨機方式將個案分為運動組及對照組，運動組 18 人，對照組 18 人，兩組婦女於研究計畫前後，以運動測試、運動訓練、血液生化值及情緒狀態評估量表做為收集資料之測量工具，運動組參與為期八週的跑步機運動訓練，對照組則保持其原本生活方式。研究結果以 SPSS 10.0 套裝軟體進行資料分析，採百分比、平均值、標準差、獨立 t 檢定、paired t 檢定、卡方檢定、Mann-Whitney U 及 Wilcoxon Sign-Rink 檢定，以探討跑步機運動訓練對心血管疾病危險群婦女危險因子與情緒狀態之成效。

研究結果發現：(一)參與本研究之婦女其心血管疾病危險因子以已停經、有感受到壓力及總膽固醇、低密度脂蛋白、身體質量指數過高最為普遍。(二)運動組婦女經八週運動訓練後，在身體質量指數、腰臀圍圓周比、靜態收縮壓、靜態舒張壓均有顯著的降低($p<.05$)；血脂肪及空腹血糖則無明顯的改變，但運動訓練對三酸甘油脂高於 150mg/dl 之婦女則有顯著的降低($p<.05$)，且運動強度愈強對改善婦女總膽固醇及三酸甘油脂的成效愈好($p<.05$)。(三)兩組婦女在研究計畫前情緒狀態得分總分平均為 32.33 分，其中以”精神-活力”平均得分最高，而”憂鬱-沮喪”得分最低。(四)運動組婦女在運動訓練後，”精神-活力”平均得分有顯著的增加($p<.05$)，而情緒狀態總分及”疲倦-懶散”亦有顯著的降低($p<.05$)；且運動強度與婦女情緒狀態總分及”壓力-焦慮” 之得分呈顯著負相關($p<.05$)。

本研究結果顯示，八週中等強度之跑步機運動訓練對於改善心血管疾病危險群婦女之血脂肪較不明顯，但對婦女身體組成、血壓及情緒狀態之改善皆有顯著的成效。

英文摘要

Cardiovascular disease is one of the major causes leading to death and disabling in women and life style modification and increase in physical activity can reduce risk in cardiovascular disease. The aim of this study is to evaluate the effect of regular exercise training on cardiovascular disease risk factors and mood states among high risk women.

A quasi-experimental design was used to guide the study. The subjects are high risk in

cardiovascular disease with age from 35-64. They were randomized into exercise and control groups. There were 18 women in the exercise group and another 18 in the control group. The exercise group was assigned to participation in an 8-weeks treadmill exercise program. The control group remained their living pattern. The measurement used for data analysis were exercise test, blood biochemistry, and short form of The Profile of Mood States. Percentage, mean, standard deviation, Pearson correlation, Paired t test, independent t test, Mann-Whitney U test and Wilcoxon Sign-Rink test were used for the data analysis.
The result of this study were：(1)the most common cardiovascular risk factors in women enrolled in this study were menopause status, stress perception, total cholesterol(TC), low-density lipoprotein(LDL), and high body-mass index；(2) The body-mass index, waist-to-hip-circumference-ratio, resting systolic blood pressure, resting diastolic blood pressure in the exercise group decreased significantly($p<.05$) after 8-weeks exercise training. However, blood lipid profile, and fasting blood glucose level didn't reveal significant changes, Also, the magnitude of exercise training had a strong positive correlation($p<.05$) in the improvement of TC and triglyceride level in women；(3) The 2 groups in this study had highest scores in " vigor-activity " and lowest in " fatigue-inertia " and " total scores " mood status. (4) The mean scores in " vigor-activity " revealed significant increase in the women exercise group after training and the total scores in emotional status and significant($p<.05$) reverse correlation with mood status and "tension-anxiety " scores. However, there was no obvious body composition、blood lipid profile、blood pressure and emotional status improvement in the control group before and after study.
This study revealed that 8-weeks moderate intensity regular exercise training didn't improve blood lipid profile, but better improvement in the body composition, blood pressure and emotional status in high cardiovascular risk women had been observed.