

【第一題，本題佔 50%】

請閱讀該文獻的內容並回答問題 1-4。

(摘錄自 *BMC Neurol.* 2019 Aug 15;19(1):196.)

Background: Recovery of upper limb function in individuals after a stroke remains challenging. Modified constraint-induced movement therapy (m-CIMT) has strong evidence for increasing the use and recovery of sensorimotor function of the paretic upper limb. Recent studies have shown that priming with aerobic exercise prior to task-specific training potentiates upper limb recovery in individuals with stroke. This protocol describes a randomized clinical trial designed to determine whether priming with moderate-high intensity aerobic exercise prior to m-CIMT will improve the manual dexterity of the paretic upper limb in individuals with chronic hemiparesis.

Methods: Sixty-two individuals with chronic hemiparesis will be randomized into two groups: Aerobic exercise + m-CIMT or Stretching + m-CIMT. m-CIMT includes 1) restraint of the nonparetic upper limb for 90% of waking hours, 2) intensive task-oriented training of the paretic upper limb for 3 h/day for 10 days and 3) behavior interventions for improving treatment adherence. Aerobic exercise will be conducted on a stationary bicycle at intervals of moderate to high intensity. Participants will be evaluated at baseline, 3, 30, and 90 days postintervention by the following instruments: Motor Activity Log, Nottingham Sensory Assessment, Wolf Motor Function Test, Box and Block Test, Nine-Hole Peg Test, Stroke Specific Quality of Life Scale and three-dimensional kinematics. The data will be tested for normality and homogeneity. Parametric data will be analyzed by two-way ANOVA with repeated measures and Bonferroni's adjustment. For nonparametric data, the Friedman test followed by the Wilcoxon test with Bonferroni's adjustment will be used to compare the ratings for each group. To compare the groups in each assessment, the Mann-Whitney test will be used.

Discussion: This study will provide valuable information about the effect of motor priming for fine upper limb skill improvement in people with chronic poststroke hemiparesis, bringing new evidence about the association of two therapies commonly used in clinical practice.

1. 請為此摘要下一個英文與中文標題。(10%)
2. 請簡要描述研究背景及研究問題?(15%)
3. 請問此篇研究的方法是如何進行?(10%)
4. 請重點整理這篇研究的重要結果。(15%)

【第二題，本題佔 30%】

請閱讀該文獻的內容並回答問題 5-7。

(摘錄自 *Nutrients* 2020 12:2422)

Abstract: Aging and osteoarthritis (OA) are associated with a high risk of muscle mass loss, which can lead to physical disability. This study investigated the effectiveness of protein supplementation combined with exercise training (PS + ET) in improving muscle mass and functional outcomes in older adults with lower-limb OA. A comprehensive search of online databases was performed to identify randomized controlled trials (RCTs) on the effectiveness of PS + ET in older adults with hip or knee OA. Meta-analysis and risk of bias assessment of the included RCTs were conducted. Six RCTs were included in this systemic review; they had a median (range/total) Physiotherapy Evidence Database (PEDro) score of 7 (6–9) out of 10, respectively. Five RCTs that enrolled patients who underwent total joint replacement were included in this meta-analysis. The PS + ET group exhibited significant improvements in

見背面

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國立臺灣大學 110 學年度碩士班招生考試試題

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muscle mass (standard mean difference [SMD] = 1.13, $p < 0.00001$), pain (SMD = 1.36, $p < 0.00001$), and muscle strength (SMD = 0.44, $p = 0.04$). Our findings suggest that PS + ET improves muscle mass, muscle strength, and functional outcomes and reduces pain in older adults with lower-limb OA, particularly in those who have undergone total joint replacement.

5. 請簡述研究目的與方法。(10%)
6. 請問此研究結果對臨床有何重要性?(10%)
7. 請為此研究定四個關鍵字(keyword) (10%)

【第三題，本題佔 20%】

請閱讀下面文章，請將英文的部分翻譯為中文，中文的部分翻譯為英文。

Population ageing in Taiwan is proceeding at an accelerating rate. Many people who suffered from chronic illness or injuries need care and assistance with activities of daily living (ADLs) due to disability. Disability is a dynamic process and disability might not be permanent with proper rehabilitation. This paper reviews the effectiveness of home-based physical therapy for the disabled elderly during post-acute care and/or long-term care. For post-acute clients, home-based physical therapy enabled early hospital discharge and improved walking ability and other functions. For long-term care clients, home-based physical therapy improved mobility, prevented functional decline and improved quality of life. The effects of varying therapeutic frequency and intensity were emphasized in this review.

居家物理治療對急性後期病患，如下肢骨折、膝關節與髖關節置換、中風、慢性阻塞性肺疾病與心臟病患等，可協助提早返家並改善病患的功能。對慢性病、長期失能住在家中的長期照護個案，居家物理治療可改善身體功能與活動力，避免功能退化並可改善生活品質。

試題隨卷繳回