

國立成功大學  
111學年度碩士班招生考試試題

編 號： 310

系 所： 職能治療學系

科 目： 臨床生理職能治療學

日 期： 0220

節 次： 第 3 節

備 註： 不可使用計算機

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※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

### 一、配合題 (25%) 每題 5 分

請從右側的選項中挑選出最合適的配對項目：

_____ 1. receptive aphasia	<b>A</b>	absence of a reflex reaction; could be a positive sign of a nerve damage
_____ 2. cyanosis	<b>B</b>	representing a patient's shortness of his/her breath
_____ 3. dyspnea	<b>C</b>	can hear a voice or see print, but cannot recognize or make sense of what it means
_____ 4. hemiamesthesia	<b>D</b>	loss of sensation of one side of body of a patient
_____ 5. frailty	<b>E</b>	showing bluish color on a patient's lip, finger tips or nails which might be related to decreased cardiac output or cold
	<b>F</b>	inability to perform rapidly alternating movements (e.g. rhythmic finger tapping)
	<b>G</b>	excessive sweating associated with decreased cardiac output
	<b>H</b>	decrease of muscle tone impacting a patient's postural stability
	<b>I</b>	indicating partial or complete wasting away of a body part
	<b>J</b>	a state of reduced ability to recover from stress resulting from an age-related decline in reserves
	<b>K</b>	process of creating new ideas
	<b>L</b>	problems with the muscles that help you talk making it difficult to pronounce words

### 二、問答題 (50%)

- 運用智慧科技技術(如 AIoT、AR/VR/MR、Robotics 等)於中風患者之動作或認知復健訓練等已將逐步成為未來治療策略的趨勢之一，請您列舉一項使用此類科技技術運用於中風患者之介入的可能案例應用(10%)，並清楚闡明運用此訓練策略其背後所支持的一項或數項理論基礎架構(10%)，以及分析探究使用此介入策略的優劣勢與限制(10%)。  
 列舉案例應用：  
 理論基礎架構：  
 優劣勢與限制：
- 隨 OT 逐步進社區場域執業後，針對 chronic obstructive pulmonary disease 的處置介入已漸被 OT 專業所正視，請闡述 1) chronic obstructive pulmonary disease 的疾病特性、可能成因、徵狀與影響等 (5%)；2) OT profession 在此疾病上可介入的面向與策略(10%)；及 3) OT profession 相較於其他專業在照護此類患者上的特點 (5%)。

三、研究文獻閱讀題 (25%)

下列為一篇發表於 2021 年科學性期刊文章之節錄內容，含括 research title、authorship & affiliations、abstract 及 flowchart，請詳讀並回答下列問題：

Restorative Neurology and Neuroscience 39 (2021) 173–180  
DOI 10.3233/RNN-211157  
IOS Press

## Effect of home-based rehabilitation of purposeful activity-based electrical stimulation therapy for chronic stroke survivors

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**Abstract.**

**Background:** In this trial we combined the effect of purposeful activity and electrical stimulation therapy (PA-EST) to promote transition of severely hemiparetic upper limb to auxiliary upper limb in chronic stroke survivors in a single-case study.

**Objective:** The purpose of this study was to examine the effect of PA-EST on the upper limb motor function

**Methods:** The study included eight stroke survivors (age:  $63.1 \pm 10.9$  years) who were receiving home-based visiting occupational therapy. The average time since stroke onset was  $8.8 \pm 5.6$  years. All participants had severely hemiparetic upper limb, with the Fugl-Meyer Assessment upper extremity (FMA-U) score of  $21.3 \pm 8.5$ . Participants were randomly assigned to group A or B. Group A received PA-EST for 3 months (phase 1), followed by standard stretching and exercise for 3 months (phase 2), whereas group B had the inverse order of treatments. To avoid carry-over effect, 1-month washout period was provided between the phase 1 and 2. Two-way analysis of variance (ANOVA) with repeated measures was used for the analysis. The primary outcome was FMA-U, and the secondary outcomes were, Motor Activity Log (MAL: amount of use [AOU] and quality of movement [QOM]), and Goal attainment scale-light (GAS-light).

**Results:** Repeated measures-ANOVA revealed a significant interaction between type of intervention and time for FMA-U ( $F = 16.303$ ,  $P = 0.005$ ), MAL AOU ( $F = 7.966$ ,  $P = 0.026$ ) and QOM ( $F = 6.408$ ,  $P = 0.039$ ), and GAS-light ( $F = 6.905$ ,  $P = 0.034$ ), where PA-EST was associated with significantly improved motor function and goal achievement compared with standard stretching.

**Conclusions:** The PA-EST may have greater effects than stretch/exercise in the recovery of hand function as reflected in FMA-U, MAL, and GAS-light. Our results suggest that PA-EST is an important and useful home-based rehabilitation program for promoting the use of the severely hemiparetic upper limb in chronic stroke survivors.

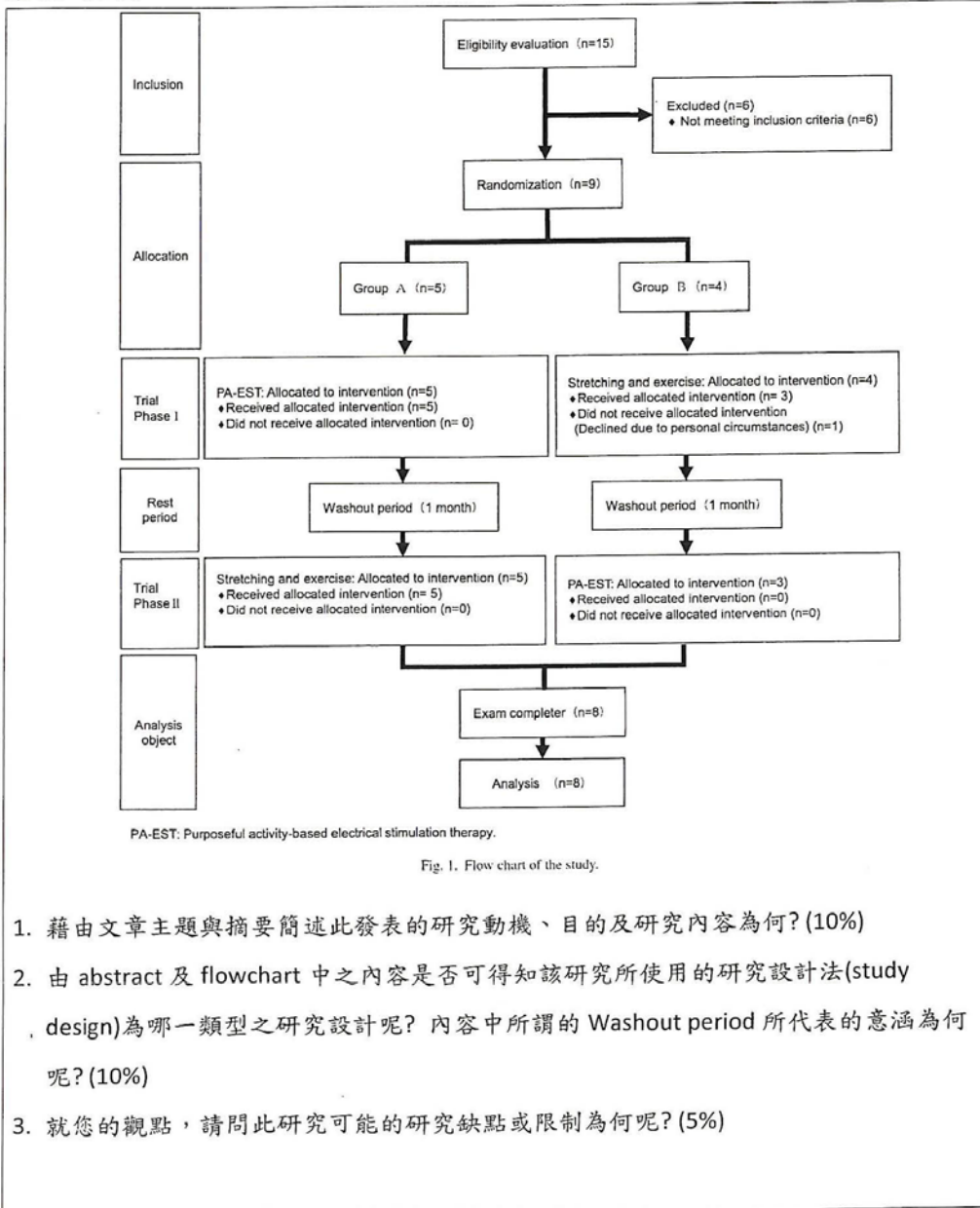


Fig. 1. Flow chart of the study.

1. 藉由文章主題與摘要簡述此發表的研究動機、目的及研究內容為何? (10%)
2. 由 abstract 及 flowchart 中之內容是否可得知該研究所使用的研究設計法(study design)為哪一類型之研究設計呢? 內容中所謂的 Washout period 所代表的意涵為何呢? (10%)
3. 就您的觀點，請問此研究可能的研究缺點或限制為何呢? (5%)