

國立成功大學

114學年度碩士班招生考試試題

編 號：217

系 所：職能治療學系

科 目：職能治療文獻閱讀

日 期：0211

節 次：第 3 節

注 意：1.不可使用計算機  
2.請於答案卷(卡)作答，於  
試題上作答，不予計分。

※請詳讀下列四篇期刊文章之摘要，並依次回答下列之問題。

### Study 1

**Authors, title and journal source:** Loubani, K., Schreuer, N., & Kizony, R. (2022). Participation in Daily Activities Among Women 5 Years After Breast Cancer. *American Journal of Occupational Therapy*, 76, 7604205050.

#### Abstract:

**Objective:** To (1) compare women's participation during the breast cancer (BC) subacute phase (2 yr postdiagnosis) with the chronic (5 yr postdiagnosis) phase, (2) explore factors associated with participation in the chronic phase, and (3) describe strategies women use to overcome participation restrictions.

**Design:** Descriptive longitudinal study.

**Setting:** A community health service in Israel.

**Participants:** A convenience sample of 30 women (M age = 53.9 yr, SD = 8.3) diagnosed with BC (Stages 1–3). **Outcomes and Measures:** Demographic and BC-related symptom questionnaires; an adapted version of the Activity Card Sort, used to assess retained activity levels (RALs) compared with prediagnosis activity levels in sociocultural, physical, and instrumental domains; the Canadian Occupational Performance Measure; and one open-ended qualitative question, "How were you able to retain your participation in daily activities despite the long-term effects of BC?"

**Results:** Significantly higher total RALs were found in most domains for women in the chronic (M = 0.93 RAL, SD = 0.27) compared with the subacute (M = 0.71, SD = 0.22) phase,  $t(29) = 4.72$ ,  $p < .001$ . Almost half the women achieved clinically significant change in their meaningful activities. Lower levels of participation were significantly correlated with higher symptom severity. The qualitative findings indicated that coping strategies, such as positive thinking and changing priorities, helped in managing women's participation.

**Conclusions and Relevance:** Participation restrictions and residual BC-related symptoms 5 yr postdiagnosis demonstrated the need for a comprehensive evaluation and early occupational therapy intervention to prevent long-term restrictions.

### Study 2

**Authors, title and journal source:** Rangon, F., Marinho, I., Cuviena, C., de Moraes, R., de Jesus Guirro, R., & de Oliveira Guirro, E. (2024). Effects of the Anchor System on Postural Balance of Women Undergoing Breast Cancer Treatment: A Clinical, Randomized, Controlled, and Crossover Trial. *Archives of Physical Medicine and Rehabilitation*, 105: 258–267.

#### Abstract:

**Objective:** Investigate the effects of multisensory training with and without the anchor system on breast cancer survivors' postural balance and self-efficacy of falls.

**Design:** Clinical randomized, controlled, and crossover trial.

**Setting:** Teaching, Research, and Assistance Center in Mastectomized Rehabilitation.

**Participants:** Eighty breast cancer survivors homogeneously distributed in the groups of adults and elderly affected, or not, by lymphedema.

**Interventions:** Participants were randomized to multisensory training with and without the anchor system involving 3 sessions per week for 12 weeks. After the 4-week washout period, the remaining therapeutic intervention was applied.

**Main Outcome Measures:** The primary outcome was semi-static and dynamic balance as evaluated by baropodometry and Mini Balance Evaluation Systems Test, and the secondary outcome was self-efficacy of the fall episode as assessed by Falls Efficacy Scale - International in the pre-, post-immediate, and 4-week follow-up period.

**Results:** Both therapeutic interventions caused positive and significant effects on postural balance and self-efficacy of falls in the immediate period. The multisensory training with the anchor system induced significant functional retention in the short term, related to the clinical effect of small to moderate variation.

**Conclusions:** Multisensory training with the anchor system is convenient for postural balance and self-efficacy for falls, regardless of age and upper limb volume, for breast cancer survivors.

### Study 3

**Authors, title and journal source:** Ergen, H. I., Kudin, R., & McGee, C. W. (2024). Interrater reliability and precision of a novel hand strength assessment and treatment device: The GripAble. *American Journal of Occupational Therapy*, 78, 7805205140

#### Abstract:

**Objective:** To establish the (1) interrater reliability and (2) precision of the GripAble among three raters with different expertise in occupational therapy when testing healthy participants, and to (3) evaluate the relative reliabilities of different approaches to estimating grip strength (i.e., one trial, mean of two trials, and the mean of three trials).

**Design:** Measurement study.

**Setting:** Minnesota Translational Musculoskeletal and Occupational Performance Research Lab, University of Minnesota, Minneapolis.

**Participants:** Thirty volunteers, age  $\geq 18$  yr, without any hand problems.

**Outcomes and Measures:** Using GripAble, three occupational therapy raters with varied experience measured the maximal grip strength of the dominant and nondominant hands of all participants. Using the mean of three trials when testing grip strength with GripAble adds precision.

**Results:** GripAble has excellent interrater reliability (i.e., intraclass correlation coefficient  $> .75$ ) and acceptable precision (minimal detectable change  $< 15\%$ ) among healthy adults.

**Conclusions and Relevance:** GripAble allows occupational therapy practitioners with different experiences to assess grip strength in healthy hands quickly, precisely, and with excellent reliability. Additional research is needed on its psychometrics in clinical populations and capacities in remote monitoring and exergaming.

**Study 4**

**Authors, title and journal source:** Chang Rhim, H., Ward, R., Trivison, T., Latham, N., & Bean, J. (2024). Defining Clinically Meaningful Cut Points for Leg Power Impairment Using Physical Performance in Older Adults: A Secondary Analysis from Boston RISE. *Archives of Physical Medicine and Rehabilitation*; 105:690–695

**Abstract:**

**Objective:** To identify clinically meaningful thresholds of leg power impairment identified by the stair climb power test (SCPT).

**Design:** Cross-sectional analysis using the baseline data from an observational cohort study.

**Setting:** The Boston Rehabilitative Impairment Study of the Elderly.

**Participants:** Community-dwelling older adults (N=413).

**Outcomes and Measures:** SCPT and the Short Physical Performance Battery (SPPB).

**Results:** Using the receiver operating characteristic curves and Youden's J statistics, the optimal threshold for the SCPT associated with mobility limitation as defined by an SPPB score  $\leq 9$  was 3.07 Watts/kg for men with a sensitivity of 74%, a specificity of 73% and, an area under the curve (AUC) value of 0.78. For women, the optimal threshold was 2.59 Watts/kg with a sensitivity of 83%, a specificity of 69%, and an AUC value of 0.81. The classification and regression tree sensitivity analysis demonstrated similar thresholds, 2.88 Watts/kg and 2.53 Watts/kg for men and women, respectively.

**Conclusions:** The study identified clinically meaningful thresholds of impairment for the SCPT for mobility limited older primary care patients. These thresholds may be used to inform rehabilitation care to improve functional mobility of older adults and should be validated in larger more representative clinical trials.

**【問題一】**

- (1) (10%)請試述 Study 1 該研究由職能治療專業領域之觀點，針對此研究之目標族群所擬達成之臨床應用的標的為何？
- (2) (5%)該摘要中研究結果處所列之「 $t(29) = 4.72, p < .001$ 」呈現該研究所使用的統計方式為何？
- (3) (5%)該統計結果代表之意義為何？

**【問題二】**

- (1)(15%)試問 Study 2 該文章之研究設計上所述之“randomized”、“controlled”、及“crossover”各代表的定義為何？
- (2)(10%)並試推敲論述作者如何實施此三個研究設計概念於該實驗中？
- (3)(5%)又何謂「4-week washout period」？其用意為何？

**【問題三】**

- (1)(10%)試問 Study 3 此篇文章之作者當初欲執行此研究背後之研究動機(study motivation)及其後續之臨床顯著性(clinical significance)為何呢？
- (2)(5%)又此研究實施上所可能面臨的研究限制(study limitation)可能有哪些呢？

**【問題四】**

- (1)(5%)試問 Study 4 之題目中所提及之“A Secondary Analysis”之代表意義為何?
- (2)(5%)其實施該研究策略之具體優勢為何?

**【問題五】**

- (5%)綜合以上四個研究，請依據各研究設計與實施方式，由低(Level V)至高(Level I)排序出此四篇的研究證據層級(Levels of Evidence)。

**【問題六】**

- (1)(5%)試問上述四個研究中有哪幾個研究是屬於橫斷型(cross-sectional)研究設計?
- (2)(5%)又哪幾個研究是屬於縱向型(longitudinal)研究設計?

**【問題七】**

- (10%)某生進入某校之職能治療研究所就讀，所擬執行之碩士論文研究方向為開發一套新式的兒童本體覺評估工具，試問該生之研究最直接相關可參考上述哪一個研究呢? 此類新評估工具或新方法開發之研究初期將著重於何種研究類型之實施? 以及欲建構該新工具之何種特性?