本測驗共九大題，請依下列題目作答：

第一大題、依據下列研究摘要，回答問題 (10 分)

(1) 請用中文描述研究中之介入內容與方式？(5 分)
(2) 請試提出此篇論文之英文題目。(5 分)

Background: Memory disturbance, deficient concentration, and fatigue are symptoms seen in amnestic mild cognitive impairment (MCI) as well as in mild traumatic brain injury (TBI). The aim of this study was to assess if an established rehabilitation program commonly used in TBI can aid MCI patients to develop compensatory memory strategies that can improve their cognition, occupational performance, and quality of life (QoL).
Methods: Fifteen patients with MCI participated in the program 2 days per week for 8 weeks. Cognitive function, occupational performance, and self-perceived QoL were assessed at baseline, at the end of the intervention, and at follow-up after 6 months.
Results: Significant improvements were seen in cognitive processing speed, occupational performance, and in some of the QoL domains.
Conclusion: As this goal-oriented rehabilitation program in MCI resulted in some improvements in cognition, occupational performance, and QoL, further randomized controlled studies are warranted.

(來源： Londos E, Boschian K, Lindén A, Persson C, Minthon L, and Lexell J. (2008). American Journal of Alzheimer's Disease & Other Dementias. 23: 177-183.)

見背面

第二大題、請閱讀下列摘要並回答問題 (12 分)

(1) Please provide a clear and effective title for this abstract (in English). (5 分)

(2) What are the key findings of this research? (5 分)

(3) What make authors conclude that the underlying mechanisms for SS remained unclear? (2 分)

Background: Somatosensory stimulation (SS) is a potential adjuvant to stroke rehabilitation, but the effect on function needs further investigation.
Objective: To explore the effect of combining SS with task-specific training (TST) on upper limb function and arm use in chronic stroke survivors and determine underlying mechanisms.
Methods: In this double-blinded randomized controlled trial (ISRCTN 05542931), 33 patients (mean 37.7 months poststroke) were block randomized to 2 groups: active or sham SS. They received 12 sessions of 2 hours of SS (active or sham) to all 3 upper limb nerves immediately before 30 minutes of TST. The primary outcome was the Action Research Arm Test (ARAT) score. Secondary outcomes were time to perform the ARAT, Fugl-Meyer Assessment score (FM), Motor Activity Log (MAL), and Goal Attainment Scale (GAS). Underlying mechanisms were explored using transcranial magnetic stimulation stimulus-response curves and intracortical inhibition. Outcomes were assessed at baseline, immediately following the intervention (mean 2 days), and 3 and 6 months (mean 96 and 190 days) after the intervention.
Results: The active group (n = 16) demonstrated greater improvement in ARAT score and time immediately postintervention (between-group difference; $P < .05$), but not at 3- or 6-month follow-ups ($P > .2$). Within-group improvements were seen for both groups for ARAT and GAS, but for the active group only for FM and MAL ($P < .05$). Corticospinal excitability did not change.
Conclusions: Long-lasting improvements in upper limb function were observed following TST. Additional benefit of SS was seen immediately post treatment, but did not persist and the underlying mechanisms remain unclear.

(來源：Fleming MK, Sorinola IO, Roberts-Lewis SF, Wolfe CD, Wellwood , Newham DJ. (2015). Neurorehabil Neural Repair, 29(2), 143-52.)

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第三大題、請依據下列摘要及摘要下方 AOTA 所定義之 Centennial Vision，扼要說明。(10 分)

(1) 何謂 AOTA's Centennial Vision？(5 分)

(2) 職能治療奠基於現有成功經驗，邁向 2017 年之際，如何定位展現專業潛能？(5 分)

CENTENNIAL VISION

Moving Toward 2017: Progress in Rehabilitation Intervention Effectiveness Research

Barbara M. Doucet, Anne Woodson, Monica Watford

MeSH TERMS
- evidence-based practice
- occupational therapy
- outcome and process assessment (health care)
- rehabilitation
- research design

Halfway into the 10-yr American Occupational Therapy Association *Centennial Vision* initiative, occupational therapy has made notable progress in establishing itself as a science-driven profession. Through the diligent work of many talented occupational therapy scholars, 42 research studies exploring interventions used in rehabilitation research were published in the past 5 years. A variety of both novel and established intervention strategies were investigated using diverse research designs and measurement tools. A predominant number of studies were conducted with the poststroke population. Moving forward to 2017 and building on our success, we can recognize our full potential by fostering knowledge translation, expanding participant numbers, exploring less-studied populations, increasing the volume of systematic reviews published, and reporting occupation-centered outcomes, the unique and defining component of our profession.

Doucet, B. M., Woodson, A., & Watford, M. (2014). *Centennial Vision*—Moving toward 2017: Progress in rehabilitation intervention effectiveness research. *American Journal of Occupational Therapy, 68,* e124–e148. http://dx.doi.org/10.5014/ajot.2014.011874

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AOTA's *Centennial Vision:* "We envision that occupational therapy is a powerful, widely recognized, science-driven, and evidence-based profession with a globally connected and diverse workforce meeting society's occupational needs." (AOTA, 2007, p. 613)

In 2007, the American Occupational Therapy Association (AOTA) articulated the *Centennial Vision,* a 10-yr strategic planning initiative that would lead to the 100th anniversary of the occupational therapy profession in 2017. Last year marked the halfway point to this vision, and as in any systematic assessment, it is incumbent on us to critically review our progress to this point, identify our accomplishments, and realistically recognize the objectives we have not yet achieved. Most important, it is imperative that we see the opportunities that lie ahead and move forward with a defined plan and the determination to fully accomplish the goals that have been articulated.

In identifying barriers to attaining the eight core elements of the vision (expanded collaborations, power to influence, membership, diverse workforce, clear public image, customer demand, evidence-based decision making, and science-fostered innovation), the primary obstacle listed was "rigid adherence to the status quo" (AOTA, 2007, p. 614). The time is now for each of us to individually reflect on how we can change the status quo in our everyday behaviors. What is critically needed are courageous occupational therapy practitioners willing to expand the profession's knowledge base by infusing research into their daily practice and creative occupational therapy scholars exploring clinical practice questions to generate meaningful research.

We are what we do. What we do now and 5 yr from now will inform others of who we are as a profession. Since 1998, scholarly leaders in occupational therapy have made a fervent push to encourage and implement evidence-based practice in occupational therapy (Law & Baum, 1998; Tickle-Degnen, 1999). Since that time, the profession has taken major steps toward developing an evidence base for occupational therapy and has begun to produce research

見背面

第四大題、請根據下面文章，回答下列問題 (10 分)

(1) 請用中文說明此研究的研究設計方法為何？(5 分)
(2) 請用中文說明此研究中哪種方法較有療效，你又是如何判斷的？(5 分)

Context Insomnia is a common condition in older adults and is associated with a number of adverse medical, social, and psychological consequences. Previous research has suggested beneficial outcomes of both psychological and pharmacological treatments, but blinded placebo-controlled trials comparing the effects of these treatments are lacking.

Objective To examine short- and long-term clinical efficacy of cognitive behavioral therapy (CBT) and pharmacological treatment in older adults experiencing chronic primary insomnia.

Design, Setting, and Participants A randomized, double-blinded, placebo-controlled trial of 46 adults (mean age, 60.8 y; 22 women) with chronic primary insomnia conducted between January 2004 and December 2005 in a single Norwegian university-based outpatient clinic for adults and elderly patients.

Intervention CBT (sleep hygiene, sleep restriction, stimulus control, cognitive therapy, and relaxation; n=18), sleep medication (7.5-mg zopiclone each night; n=16), or placebo medication (n=12). All treatment duration was 6 weeks, and the 2 active treatments were followed up at 6 months.

Main Outcome Measures Ambulant clinical polysomnographic data and sleep diaries were used to determine total wake time, total sleep time, sleep efficiency, and slow-wave sleep (only assessed using polysomnography) on all 3 assessment points.

Results CBT resulted in improved short- and long-term outcomes compared with zopiclone on 3 out of 4 outcome measures. For most outcomes, zopiclone did not differ from placebo. Participants receiving CBT improved their sleep efficiency from 81.4% at pretreatment to 90.1% at 6-month follow-up compared with a decrease from 82.3% to 81.9% in the zopiclone group. Participants in the CBT group spent much more time in slow-wave sleep (stages 3 and 4) compared with those in other groups, and spent less time awake during the night. Total sleep time was similar in all 3 groups; at 6 months, patients receiving CBT had better sleep efficiency using polysomnography than those taking zopiclone.

Conclusion These results suggest that interventions based on CBT are superior to zopiclone treatment both in short- and long-term management of insomnia in older adults.

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第五大題、請根據以下文章，以中文回答下列問題 (10 分)

(1) 作者探討此研究的理由為何？(5 分)
(2) 此研究的目的為何？(5 分)

INTRODUCTION

Hippotherapy is a form of therapy that uses the movement of a horse as part of an integrated therapy program thereby providing the rider with postural or strength training opportunities. This therapy engenders integrated sensory stimulation, including vestibular, tactile, visual, and postural senses, as well as motor reaction, and even promoting head and trunk stabilization.[1] Hippotherapy encompasses not only those activities based on the movement of the horse but also various forms of postural and movement training for the rider that are conducted during therapy sessions. Thus, riders are guided into different riding positions on the horse, from the normal riding position of sitting forward and straddling the horse's back to those of sitting backward and straddling the horse, or sitting with both legs on one side. Sometimes, they are directed to take crawling, keeling, or standing positions depending on the goal of treatment.[1]

The theoretical background of hippotherapy is motor learning and control; namely, an intensive performance of experience of learning reaction to the rhythmic movement of the horse.[2,3] The horse's walk, in particular, consists of accurate, smooth, rhythmic, and repetitive movements similar to human gait; hence, it repeatedly provides experiences similar to human walking to the riders with declined gait function.[4,5] As the horse takes 55 walking steps per minute on average, which is a moderate gait speed, riders may perform 3,000 to 5,000 times of trunk balance exercise while riding the horse for 30 to 45 minutes.[1] Accordingly, at each step of the horse, its right and left hind legs enable the rider's pelvis to move somewhat vertically and horizontally along with the three axes of rotational movement.

To date, studies on hippotherapy have been focused mainly on children with cerebral palsy. It has been reported that the therapy is effective in improving balance ability, symmetry of the trunk and pelvic muscles, and gross motor.[3,5-9] Some recent studies have focused on adults, reporting that it reduces spasticity and improves balance ability in patients with spinal cord injuries[10,11] and those with multiple sclerosis.[12,13] However, studies on hippotherapy for adult patients with brain disorders have been lacking. Thus, we aim to examine the effectiveness of hippotherapy in improving the motor skills of adult brain disorder patients.

見背面

第六大題、請閱讀以下摘要，並以中文回答下列問題 (13 分)

(1) 此研究論文屬於那一類型的研究論文？(3分)
(2) 此研究論文用交通燈號來呈現什麼內容？(5分)
(3) 請為此研究論文訂一個合適的題目？(5 分)

AIM: The aim of this study was to describe systematically the best available intervention evidence for children with cerebral palsy (CP).
METHOD: This study was a systematic review of systematic reviews. The following databases were searched: CINAHL, Cochrane Library, DARE, EMBASE, Google Scholar MEDLINE, OTSeeker, PEDro, PsycBITE, PsycINFO, and speechBITE. Two independent reviewers determined whether studies met the inclusion criteria. These were that (1) the study was a systematic review or the next best available; (2) it was a medical/allied health intervention; and (3) that more than 25% of participants were children with CP. Interventions were coded using the Oxford Levels of Evidence; GRADE; Evidence Alert Traffic Light; and the International Classification of Function, Disability and Health.
RESULTS: Overall, 166 articles met the inclusion criteria (74% systematic reviews) across 64 discrete interventions seeking 131 outcomes. Of the outcomes assessed, 16% (21 out of 131) were graded 'do it' (green go); 58% (76 out of 131) 'probably do it' (yellow measure); 20% (26 out of 131) 'probably do not do it' (yellow measure); and 6% (8 out of 131) 'do not do it' (red stop). Green interventions included anticonvulsants, bimanual training, botulinum toxin, bisphosphonates, casting, constraint-induced movement therapy, context-focused therapy, diazepam, fitness training, goal-directed training, hip surveillance, home programmes, and occupational therapy after botulinum toxin, pressure care, and selective dorsal rhizotomy. Most (70%) evidence for intervention was lower level (yellow) while 6% was ineffective (red).
INTERPRETATION: Evidence supports 15 green light interventions. All yellow light interventions should be accompanied by a sensitive outcome measure to monitor progress and red light interventions should be discontinued since alternatives exist.

(出處：Novak I, McIntyre S, Morgan C, Campbell L, Dark L, Morton N, Stumbles E, Wilson SA, Goldsmith S. (2013). Developmental medicine & child neurology, 55(10), 885-910.)

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第七大題、根據下列文章，請以中文回答下面之問題 (10分)

(1) 何謂CRPS？ (3分)
(2) 請問此篇研究所得到的結果為何？(4分)
(3) 研究者是否有針對得到這樣的結果做一些解釋？若有，請說明。(3分)

Complex regional pain syndrome (CRPS) is a disabling pain condition with sensory, motor and autonomic manifestations. Uncertainty remains about how CRPS can be effectively managed. We conducted a systematic review of randomized controlled trials (RCTs) for treatment and prophylactic interventions for CRPS published during the period 2000–2012, building on previous work by another group reviewing the period 1966–2000. Bibliographic database searches identified 173 papers which were filtered by three reviewers. This process generated 29 trials suitable for further analysis, each of which was reviewed and scored by two independent reviewers for methodological quality using a 15-item checklist. A number of novel and potentially effective treatments were investigated. Analyzing the results from both review periods in combination, there was a steep rise in the number of published RCTs per review decade. There is evidence for the efficacy of 10 treatments (3× strong – bisphosphonates, repetitive transcranial magnetic stimulation and graded motor imagery, 1× moderate and 6× limited evidence), and against the efficacy of 15 treatments (1× strong, 1× moderate and 13× limited). The heterogeneity of trialled interventions and the pilot nature of many trials militate against drawing clear conclusions about the clinical usefulness of most interventions. This and the observed phenomenon of excellent responses in CRPS subgroups would support the case for a network- and multi-center approach in the conduct of future clinical trials. Most published trials in CRPS are small with a short follow-up period, although several novel interventions investigated from 2000 to 2012 appear promising.

(出處：Cossins L, Okell RW, Cameron H, Simpson B, Poole HM, Goebel A. (2013). Treatment of complex regional pain syndrome in adults: A systematic review of randomized controlled trials published from June 2000 to February 2012. European Journal of Pain,17, 158–173.)

見背面

第八大題、請閱讀下列摘要後，回答以下問題 (10 分)

(1) 請問本篇文章共回顧幾篇論文？(5分)
(2) 請問作者認為有效的介入方法有哪些共通點？(5分)

This evidence-based review was conducted to determine which interventions are effective in improving occupational performance after stroke. Forty-six articles met the inclusion criteria and were examined. Interventions for the following impairments were reviewed: general cognitive deficits, executive dysfunction, apraxia, memory loss, attention deficits, visual field deficits (included because of their close relationship with neglect), and unilateral neglect. Evidence is available from a variety of clinical trials to guide interventions regarding general cognition, apraxia, and neglect. The evidence regarding interventions for executive dysfunction and memory loss is limited. There is insufficient evidence regarding impairments of attention and mixed evidence regarding interventions for visual field deficits. The effective interventions have some commonalities, including being performance focused, involving strategy training, and using a compensatory as opposed to a remediation approach. The implications of the findings for practice, research, and education are discussed.

(出處：Gillen, G., Nilsen, D. M., Attridge, J., Banakos, E., Morgan, M., Winterbottom, L., & York, W. (2015). Effectiveness of interventions to improve occupational performance of people with cognitive impairments after stroke: An evidence-based review. American Journal of Occupational Therapy, 69, 6901180040. http://dx.doi.org/10.5014/ajot.2015.012138)

接次頁

第九大題、請用中文簡述本段大意 (15 分)

Abstract

This article describes challenges encountered and lessons learned in an effort to explore the black box of rehabilitation. A multidisciplinary team created detailed, mutually exclusive operational definitions for the contents of learning-based treatments administered in a brain injury unit. The function and activity levels of the *International Classification of Functioning, Disability and Health* were used to organize content definitions, which included examples of therapy activities and therapist behaviors, such as cues. Pairs of trained coders independently identified defined learning episodes within each minute of 128 videotaped physical, occupational, or speech therapy sessions. Interrater agreement was generally acceptable and did not vary by discipline of session, discipline of coder, or whether coders were clinically trained. Disagreements typically involved the threshold for determining that a learning episode had occurred, or deciding between function and activity codes where the surface content of the sessions were similar. The focus on individual therapy sessions allowed for rich qualitative detail, but a less granular analysis will be necessary for comprehensive efforts to characterize the contents of therapy.

Archives of Physical Medicine and Rehabilitation 2014;95(1 Suppl 1):S66-73

試題隨卷繳回