

本科共分以下八大題，請閱讀英文文獻並作答：

1. 請閱讀下列摘要後，回覆以下問題：

- (1) 請問本篇文章共回顧 ①幾年？ ②幾篇論文？（5分）
- (2) 請問 PROMs 的全名是什麼？（5分）

Patient-reported outcome measures (PROMs) are vital for evaluating patient needs and therapeutic progress. This review aimed to identify the PROMs used in adult burn care and establish their quality. Computerized bibliographic searches of Psychinfo, Social Sciences Citation Index, Cinahl, Psycharticles, AMED, Medline, and HAPI were used to find English-language articles using English-language PROMs from January 2001 to September 2016. Psychometric quality assessment of the PROMs was conducted. A total of 117 studies achieved the entry criteria and reported using 77 different PROMs (71 generic and 6 burn-specific). Overall, the psychometric quality of the PROMs was low; only 17 (13 generic and 4 burn-specific) had psychometric evidence appropriate to adults with burn injuries completing an English language version of the PROM. Although this review identified a number of generic and burn-specific PROMs that have some psychometric evidence with adult burn patients, research is still needed to further examine these preexisting measures and validate them in different languages. This will enable researchers and clinicians to better understand the potential impact of a burn injury on adults, and evaluate the effectiveness of therapeutic interventions.

文章出處：

Griffiths, C., Guest, E., White, P., Gaskin, E., Rumsey, N., Pleat, J., & Harcourt, D. (2016). A systematic review of patient-reported outcome measures used in adult burn research. *J Burn Care Res.* 37(6): 00-00.
doi:10.1097/BCR.0000000000000474.

見背面

2. 以下是有關自閉症類群障礙症之社會溝通技能介入策略之證據層級，閱讀後請回答下列問題：

- (1) 根據本文職能治療師提供 ASD 早期介入時應該採納的介入策略/方案為何？(5分)
- (2) 根據本文職能治療師最不會考慮使用的介入策略為？(5分)
- (3) 與行為學習理論相關的介入策略有哪些？(5分)

Summary of Key Findings:

Twenty-two Level I, one Level II, and one Level III articles were included in this review. Themes included the Picture Exchange Communication System (PECS), naturalistic behavioral interventions (e.g., milieu therapy, functional communication training, pivotal response training), developmental interventions (e.g., DIR/Floortime® [Developmental Individual differences Relationship-based]), classroom-based interventions (e.g., TEACHH), parent-mediated interventions (e.g., PACT, Autism 123), sensory-motor (e.g., REST), imitation training, and joint attention training.

PECS (strength of evidence = strong)

Two Level I studies showed small to moderate improvements in social communication and socialization, with the best effects in younger children and those with comorbid intellectual disability. Three Level I studies noted improvements in rate of initiation of communication and use of PECS. However, effects were not maintained at 10 months. One Level II study indicated that PECS was more effective than conventional language therapy in improving social behaviors, cooperative play, joint attention, requests, and initiations.

Naturalistic behavioral (strength of evidence = moderate)

Three Level I systematic reviews support improvements in joint attention, communication initiations, requesting, and spontaneous verb use.

Developmental (strength of evidence = moderate)

Two Level I systematic reviews reported small, positive gains in spontaneous communication and parent-child interactions. There were, however, mixed results, with some studies showing no effect. One Level III study resulted in increased spontaneous verbalizations and imitation.

Classroom-Based (strength of evidence = insufficient)

One Level I systematic review indicated that most studies were of low quality and findings were mixed.

Parent-Mediated (strength of evidence = strong)

Three Level I randomized controlled trials noted improvements in initiations, joint attention, reciprocal social interaction, vocalizations, and pointing. The best results were reported for Autism 1-2-3 and PACT. One Level I systematic review indicated improvements in parent-child interactions and communication behavior.

Sensory-Motor (strength of evidence = insufficient)

Two Level I studies, both systematic reviews, noted that a variety of interventions report mixed results on social outcomes. In general, studies included in these reviews were of low quality.

Imitation Training (strength of evidence = moderate)

Two Level I randomized controlled trials showed improvements in elicited and spontaneous imitation, joint attention and social-emotional skills. Children with higher pretreatment play skills benefited most.

Joint attention training (strength of evidence = strong)

Joint attention: Three Level I randomized controlled trials noted improvements in joint attention, initiation, and responding in

intervention groups. Effect sizes for these studies were moderate to large. Social curriculum focused on joint attention: One Level I randomized controlled trial showed improvements in socially engaged imitation, but not in joint attention or shared positive affect. Gains were maintained at 6 months.

Bottom Line for Occupational Therapy Practice:

The strongest evidence exists for PECS, joint attention, and parent-mediated strategies to improve social communication in children with ASD. Occupational therapy practitioners should consider using PECS as part of a comprehensive intervention to improve social participation. Parent-mediated interventions are particularly effective in early intervention and have shown positive effects for both child behavior and parent-child interactions. In particular, joint attention behavior has been observed to increase following parent- or caregiver-mediated interventions. Joint attention is a prerequisite for engaging in more complex activities related to the occupation of social participation. Occupational therapy practitioners should consider facilitating caregiver-mediated joint attention interventions as part of a comprehensive early intervention for clients with ASD.

Naturalistic behavioral, developmental, and imitation training also appear to be effective but require further investigation. This includes strategies such as milieu therapy, functional communication training, DIR/ Floortime® and pivotal response training. Occupational therapy practitioners should proceed with caution when implementing these strategies to improve social communication in clients with ASD because further research is needed to systematically explore outcomes in these areas.

There is insufficient evidence at this time to support the use of classroom-based and sensorymotor strategies. Occupational therapy practitioners should consider the use of other techniques to improve social communication in clients with ASD.

文章出處：

This work is based on the evidence-based literature review completed by Kelly J. Tanner, PhD, OTR/L; Brittany Hand, MOT, OTR/L; Gjyn O'Toole, MEdStud, GradDip TEFL, BA, Dip Occ Therapy; and Alison E. Lane, PhD, OTR/L.

見背面

3. 請根據下文回答下列問題：

- (1) 過去文獻中，對於中風後的認知障礙，較少討論到的機制是甚麼？(2分)
- (2) 本篇回顧型文獻的主要目的為何？(4分)
- (3) 請舉出三種關於認知儲存 (cognitive reserve) 這個概念的可能測量項目？(3分)
- (4) 若個案的發病前的認知儲存的成度較低，則在治療中風後的忽略症時，應該注意甚麼？(3分)

Abstract

Advanced lesion mapping and connectivity analyses are currently the main tools used to understand the mechanisms underlying post-stroke cognitive deficits. However, the factors contributing to pre-stroke architecture of cognitive networks are often ignored, even though they reportedly play a decisive role in the manifestation of cognitive impairment in neurodegeneration. The present review on post-stroke cognitive deficits therefore adopts the concept of brain and cognitive reserve, which was originally developed to account for the individual differences in the course of aging and neurodegenerative diseases. By focusing on spatial neglect, a typical network disorder, it is discussed how individual susceptibility to stroke lesion might explain the reported discrepancies in lesion anatomy, non-spatial deficits and recovery courses. A detailed analysis of the literature reveals that premorbid brain (age, brain atrophy, previous strokes, leukoaraiosis, genetic factors, etc.) and cognitive reserve (IQ, life experience, education, occupation, premorbid cognitive impairment, etc.) greatly impact the brain's capacity for compensation. Furthermore, the interaction between pre-stroke brain/cognitive reserve and the degree of stroke-induced system impairment (e.g., hypoperfusion, lesion load) determines both the extent of neglect symptoms variability and the course of recovery. Premorbid brain/cognitive reserves should thus be considered to: (i) understand the mechanisms of post-stroke cognitive disorders and sufficiently explain their inter-individual variability; (ii) provide a prognosis for cognitive recovery and hence post-stroke dependency; (iii) identify individual targets for cognitive rehabilitation: in the case of reduced brain/cognitive reserve, neglect might occur even with a confined lesion, and non-spatial training of general attentional capacity should represent the main therapeutic target also for treatment of neglect; this might be true also for non-cognitive domains, e.g., motor deficit. This alternative view of how neglect and other cognitive deficits occur and recover promotes discussion about plasticity and recovery to a general rather than a single stroke-based domain, providing more efficiency in recovery research.

文章出處：

Cortex. 2016 Dec 16. doi: 10.1016/j.cortex.2016.12.006. Adapting the concepts of brain and cognitive reserve to post-stroke cognitive deficits: Implications for understanding neglect. [Umarova RM](#)¹.

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4. 閱讀下列論文簡介 (Introduction)，請以中文回答下列問題：

- (1) 請說明本研究論文的目的 (purpose)？(5分)
- (2) 為執行本回顧研究，作者對情緒失調 (emotional dysregulation) 採取什麼定義？(5分)
- (3) 請簡述作者最後所做的結語 (conclusion)？(5分)

Introduction

ADHD is a neurodevelopmental disorder characterized by impulsivity, hyperactivity, and/or inattention according to the *Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5)* (American Psychiatric Association 2013). It has been recognized for many years, however, that many children with ADHD exhibit low frustration tolerance and explosive behavior (Laufer et al. 1957) and, increasingly, there are calls to re-assess the characteristics of emotional impulsiveness and deficient emotional self-regulation as core features, rather than simply associated aspects of the disorder (Barkley 1997a, 2010). Indeed, the childhood manifestations of emotional dysregulation are important criteria of the Wender Utah Rating Scale used in the diagnosis of adult ADHD (Ward et al. 1993). Initial efforts to develop a unified model of ADHD proposed that impaired behavioral inhibition leads to deficits in executive neuropsychological functions that depend on such inhibition, including working memory, self-regulation of affect-motivation-arousal, internalization of speech, and reconstitution (behavioral analysis and synthesis) (Barkley 1997b), although others have argued that impaired behavioral inhibition and executive function are independent of each other (Rhodes et al. 2005). Based on a discovery-based community algorithm, Karalunas et al. (2014) proposed three subtypes of ADHD: mild (normative emotional regulation); surgent (extreme levels of positive-approach motivation); and irritable (extreme levels of negative emotionality, anger, and poor soothability) (Karalunas et al. 2014). The three subtypes were independent of existing clinical groupings, showed stability over time, and were distinguished by unique patterns of cardiac physiological response, resting-state functional brain connectivity, and clinical outcomes.

According to Barkley's model (Barkley 1997a, b), the deficits in inhibition when individuals with ADHD are faced with emotionally charged situations lead to greater emotional reactivity or emotional dysregulation, compared with those without ADHD. Dysregulated emotion is characterized by excessive and rapidly shifting emotions, often associated with irritable and aggressive behavior (Stringaris 2011), and high rates of comorbid oppositional defiant disorder (Stringaris and Goodman 2009). For the purposes of the present review, we define emotional dysregulation as *an inability to modulate emotional responses, resulting in extreme responses of an internalizing or externalizing nature that would be considered inappropriate for the developmental age of the person*. In a recent review, the authors concluded that emotional dysregulation is highly prevalent in ADHD and is a major contributor to impairment, is associated with deficits in the recognition and/or allocation of attention to emotional stimuli, implicating deficits in the striato-amygdalo-medial prefrontal cortical network, and may be ameliorated by ADHD treatments (Shaw et al. 2014).

The purpose of the present article is to undertake a systematic literature review of clinical data relating to emotional dysregulation in children with ADHD, focusing on deficits in emotional inhibition and emotional self-regulation, and evidence of impaired executive function. To conclude, the article proposes a conceptual model of the construct of emotional dysregulation in ADHD and describes the importance of recognizing that emotional dysregulation is a common feature in children with ADHD.

文章出處：

van Stralen, J. (2016). Emotional dysregulation in children with attention-deficit/hyperactivity disorder. *ADHD Attention Deficit and Hyperactivity Disorders*, 8(4), 175-187. doi:10.1007/s12402-016-0199-0.

見背面

5. 請以中文回答下列問題：

- (1) 此研究之目的為何？(3分)
- (2) 此研究之動機(rational)為何？(5分)
- (3) 此研究之結果為何？(5分)

DEVELOPMENTAL MEDICINE & CHILD NEUROLOGY

SYSTEMATIC REVIEW

The effectiveness of taping on children with cerebral palsy: a systematic review

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PUBLICATION DATA

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AIM Taping is popular in a variety of paediatric clinical settings. The purpose of this study was to investigate the effectiveness of taping on the rehabilitation of children with cerebral palsy (CP).

METHOD We used MEDLINE, Embase, PubMed, CINAHL, and the Cochrane Central Register of Controlled Trials as the electronic databases for the review. We reviewed all relevant studies published up to May 2015. We also analysed pertinent secondary references. We used Sackett's Levels of Evidence and the guidelines for critical review of McMaster University to criticize the reviewed articles.

RESULTS Nine papers met the inclusion criteria. Five of these were randomized controlled trials, three were case series, and one was a single case study. Four papers were high quality according to the methodological critical forms of this review, and two of these found that taping was effective in increasing activity in children with CP.

INTERPRETATION Although benefits of taping were found in the population, and functional gains according to the International Classification of Functioning, Disability and Health were obtained, the evidence was not conclusive. Randomized controlled trials with larger sample sizes and with more specific taping procedures are required to strengthen the evidence for the effectiveness of taping on children with CP.

Cerebral palsy (CP) is simply defined as a non-progressive lesion of the immature brain. Children with CP may present with a variety of motor impairments including altered muscle tone, loss of strength, and balance and coordination problems.¹ Orthopaedic surgery, constraint-induced movement therapy, occupational therapy, and traditional therapy are some of the various treatments that are generally used in the course of CP treatment.² In addition, studies have emphasized the possible benefits of several recent methods such as taping, which is frequently used in paediatric rehabilitation clinics. Taping is an increasingly popular adjunct to therapy because it is easy to apply and inexpensive, and it can be easily removed or changed according to therapy objectives. Investigators have stated the goals of taping in children with CP as being to correct postural misalignment, enhance the stability of joints, activate weak muscles, support weak structures, manage spasticity, and stimulate the sensory system.³⁻⁷ Although there are more applications of taping in musculoskeletal practice, the evidence in the literature is inadequate.^{3,4} Some of the goals mentioned have been proved: for example, in the meta-analysis by Chang et al.,⁶ taping for patellofemoral pain syndrome moderately affected the activity of muscles and reduced pain.

Athletic and Kinesio tapes are the two main types of tape that are in common use in clinics. Both can be used on patients with orthopedic, lymphatic, and neurological issues. Athletic tape is an example of a rigid/inelastic tape and limits the joints more than Kinesio tape, a type of flexible/elastic tape. Investigators have used them for similar aims such as management of spasticity, facilitation of muscle function, or stabilization of the joints. In particular, Kinesio taping is a new technique in the management of problems related to tonus, hypotonus, or hypertonus, which are common problems in CP.^{4,5} In addition, there is evidence to show that rigid tape is more effective than elastic tape in limiting joint movement.^{4,5}

The popularity of using taping in paediatric rehabilitation clinics has gradually increased.⁷ The purpose of this paper was to systematically review the literature to determine the effectiveness of taping used in the population of children with CP.

METHOD

Search strategy

The inclusion criteria were as follows: (1) studies including children under 18 years of age with CP; (2) studies with all research designs including case reports; (3) fully published

出處：Güçhan, Z., & Mutlu, A. (2016). The effectiveness of taping on children with cerebral palsy: a systematic review. *Developmental Medicine and Child Neurology*, 59(1), 26-30. doi: 10.1111/dmcn.13213

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6. 請閱讀以下論文摘要，並以中文，扼要陳述此研究之目的及結論。(10%)

Objectives—Late-life disability in Activities of Daily Living (ADL) is theorized to be driven by underlying cognitive and/or physical impairment, interacting with psychological and environmental factors. While we expect that cognitive deficits would explain associations between ADL disability and dementia risk, the current study examined ADL as a predictor of future dementia after controlling for global cognitive status.

Methods—The population-based Cache County Memory Study (CCMS; N=3547) assessed individuals in four triennial waves (average age 74.9, years of education 13.36; 57.9% were women). Cox proportional hazards regression models assessed whether baseline ADL disability (presence of 2+ Instrumental ADL and/or 1+ Personal ADL) predicted incident dementia after controlling for *APOE* status, gender, age, baseline cognitive ability (Modified Mini-mental State Exam, adjusted for education level), and baseline depressive symptoms (Diagnostic Interview Schedule).

Results—Over the course of study, 571 cases of incident dementia were identified through in-depth cognitive assessment, ending in expert consensus diagnosis. Results from Cox models suggest that ADL disability is a statistically significant predictor of incident dementia (adjusted Hazard Ratio=1.83, $p<.001$), even after controlling for covariate.

Conclusions—Findings suggest that ADL disability offers unique contributions in risk for incident dementia, even after controlling for global cognitive status. We discuss how physical impairment and executive function may play important roles in this relationship, and how ADL is useful, not just a diagnostic tool at, or after dementia onset, but as a risk factor for future dementia, even in individuals not impaired on global cognitive tests.

文章出處：

Fauth EB, Schwartz S, Tschanz, JT, ØstbyeTruls, Corcoran C, and Norton MC. Baseline Disability in Activities of Daily Living Predicts Dementia Risk Even After Controlling for Baseline Global Cognitive Ability and Depressive Symptoms. *Int J Geriatr Psychiatry*. 2013 June ; 28(6): 597–606. doi:10.1002/gps.3865.

見背面

7. 請用中文寫出以下答案：

- (1) 樣本選取標準為何？(5分)
- (2) 樣本接受哪些測驗施測？(5分)
- (3) 簡述本文重要的研究結果。(5分)

Objective: To identify predictors and the optimal time point for the early prediction of the presence and severity of spasticity in the upper limb 12 months poststroke.

Methods: In total, 117 patients in the Gothenburg area who had experienced a stroke for the first time and with documented arm paresis day 3 poststroke were consecutively included. Assessments were made at admission and at 3 and 10 days, 4 weeks, and 12 months poststroke. Upper limb spasticity in elbow flexion/extension and wrist flexion/extension was assessed with the modified Ashworth Scale (MAS). Any spasticity was regarded as MAS \$1, and severe spasticity was regarded as MAS \$2 in any of the muscles. Sensorimotor function, sensation, pain, and joint range of motion in the upper limb were assessed with the Fugl-Meyer assessment scale, and, together with

demographic and diagnostic information, were included in both univariate and multivariate logistic regression analysis models. Seventy-six patients were included in the logistic regression analysis.

Results: Sensorimotor function was the most important predictor both for any and severe spasticity 12 months poststroke. In addition, spasticity 4 weeks poststroke was a significant predictor for severe spasticity. The best prediction model for any spasticity was observed 10 days poststroke (85% sensitivity, 90% specificity). The best prediction model for severe spasticity was observed 4 weeks poststroke (91% sensitivity, 92% specificity).

文章出處：

Opheim, A., Danielsson, A., Alt Murphy, M., Persson, HC., & Sunnerhagen, KS. (2015). Early prediction of long-term upper limb spasticity after stroke. *Neurology*, 85(10), 873-880. doi: 10.1212/WNL.0000000000001908.

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8. 請閱讀摘要後回答下列問題：

- (1) 請問此論文可能的關鍵字(keywords)為何？(2分)
- (2) 請為此論文訂一個適合的題目。(8分)

Abstract

After stroke, weight-bearing asymmetry (WBA) towards the non-paretic side is associated with postural instability. It remains unknown whether WBA is a cause or consequence of postural instability, as both phenomena depend on stroke severity. We investigated the effect of WBA on the ability to recover from balance perturbations in people with stroke. Fourteen people in the chronic phase of stroke underwent multidirectional translational perturbations at three levels of initial WBA (0, 10 and 20% of body weight unloading of the paretic leg). We iteratively determined the highest perturbation intensity that could be sustained with a feet-in-place response (i.e. stepping threshold) for each WBA condition and in four perturbation directions (forward, backward, towards paretic and towards non-paretic side). For perturbations above the stepping threshold we determined the choice of stepping leg. WBA increased the stepping threshold for perturbations towards the paretic side, whereas it decreased the stepping threshold for perturbations towards the non-paretic side ($p < 0.05$). No effects of WBA were found on forward or backward stepping thresholds. Yet, the frequency of stepping with the paretic leg in the anteroposterior directions increased with greater WBA. Similarly, greater initial WBA resulted in a larger number of side steps towards the paretic side. In conclusion, the results suggest that people with stroke can benefit from some paretic leg unloading when perturbed towards the paretic side. It remains to be investigated, however, to what extent these benefits outweigh the potentially detrimental effects of WBA that were observed when recovering from perturbations in the other directions.

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試題隨卷繳回