

第二十七篇：

## Effects of an Occupation-Based Intervention on Hand and Upper Extremity Function, Daily Activities, and Quality of Life in People With Burn Injuries: A Randomized Controlled Trial

以下依據\*\*論文摘要與內文明確陳述之研究目的（Objective / Aim）\*\*進行彙整說明：

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### 一、研究目的（Research Objective）

本研究之主要研究目的為：

探討「以職能為本（occupation-based）」的介入方式——特別是 Cognitive Orientation to daily Occupational Performance (CO-OP) 介入方案——對於「手部與上肢燒傷患者」在多個層面之復健成效影響，並與傳統復健治療進行比較。

具體而言，本研究欲系統性檢驗職能為本介入是否能改善以下四大核心結果變項：

1. 手部與上肢功能（hand and upper extremity function）
  2. 日常生活活動表現能力（daily activities）
  3. 職能表現與滿意度（occupational performance and satisfaction）
  4. 生活品質（quality of life）
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### 二、研究目的之原文依據（英文原文）

#### （一）摘要中明確陳述的研究目的（Objective）

“To investigate the effects of occupation-based intervention on hand and upper extremity function, daily activities, and quality of life in people with burn injuries.”

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## （二）內文方法前段再次重申之研究目的

在前言結尾處，作者再次明確說明研究目標為：

“In this study we aimed to investigate the effects of an occupation-based intervention on hand and upper extremity function, daily activities, and quality of life in people with hand burn injuries.”

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## 三、研究目的之精緻化解讀（學術層次說明）

從職能治療研究角度來看，本研究的**核心問題意識**可進一步具體化為：

- 傳統燒傷復健多聚焦於**身體功能與構成要素**（impairments / components）
- 然而，是否加入以「**有意義職能活動**」與「**認知策略學習**」為核心的 CO-OP 介入，能在**功能、活動與參與層次**（function – activity – participation）產生額外或不同的復健成效？

因此，本研究本質上是一項：

比較「**傳統復健**」與「**傳統復健+CO-OP 職能為本介入**」在燒傷患者多面向功能恢復效果之隨機對照試驗（RCT）。

以下依據**前述研究目的**，彙整本研究在摘要與 Results／Discussion 中所呈現的研究結果（Research Results），並逐條引用原文英文說明（依變項分類）：

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## 一、整體研究結果總述（Overall Findings）

（一）兩組在多數結果變項上皆有顯著「**時間效果**」（time effect）

“The results showed that there were notable changes in all the study variables except edema in both groups.”

“The time effect was significant for all outcome measures, with the exception of edema.”

□ 說明：

不論是控制組（傳統復健）或介入組（傳統復健+CO-OP），在治療前至第2、6、14 週追蹤期間，幾乎所有功能與活動指標皆隨時間顯著改善（唯獨水腫除外）。

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## （二）兩組之間「組間差異（group effect）」多數不顯著

“However, these changes ( $p \leq .05$ ) were not statistically significant between the two groups.”

□ 說明：

雖然兩組均有進步，但 CO-OP 介入組並未在多數變項上顯著優於單純傳統復健組。

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## 二、依研究目的分類之具體研究結果

### （一）職能表現與滿意度（Occupational Performance & Satisfaction）

- 評估工具：COPM – Function、COPM – Satisfaction

“The time effect was significant for occupational performance and satisfaction (i.e., the COPM Function subscale and Satisfaction subscale) in both the control and intervention groups.”

“No statistically significant difference was found between the control and intervention groups regarding scores on the COPM – F and COPM – S at pretreatment and the Wk 2, 6, and 14 evaluations.”

□ 解讀：

兩組皆能改善「主觀職能表現與滿意度」，但 CO-OP 並未在統計上顯著優於傳統復健。

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## （二）手部與上肢功能（Hand and Upper Extremity Function）

- 評估工具：
  - Michigan Hand Outcomes Questionnaire (MHQ)
  - Quick – DASH
  - ROM、握力（power grasp）

“Significant improvements were observed in hand performance (MHQ), disability (Quick – DASH), range of motion, and power grasp in both groups.”

“No statistically significant improvement in edema was observed in the intervention or control group.”

□ 解讀：

- 手部功能、失能程度、關節活動度與握力皆顯著進步
  - \*\*水腫（edema）\*\*為唯一未顯著改善之變項
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## （三）腕關節活動度之「時間 × 組別交互作用」（Time × Group Interaction）

“A significant Time × Group interaction was found only for wrist flexion and extension.”

“Greater wrist flexion and extension were found in the intervention group compared with the control group at the Wk 6 and 14 evaluations.”

□ 解讀（重要發現）：

這是全研究中唯一顯示 CO-OP 介入組明顯優於控制組的客觀功能結果，顯示 CO-OP 對腕關節活動度恢復具有額外效益。

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#### （四）日常生活活動能力（Activities of Daily Living）

- 評估工具：Modified Barthel Index（MBI）

“The ability to perform daily activities (MBI) improved significantly over time in both groups.”

“There was no significant difference between the control and intervention groups regarding MBI scores.”

□ 解讀：

兩組在 ADL 表現上皆快速接近滿分，可能出現天花板效應（ceiling effect）。

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#### （五）生活品質（Quality of Life）

- 評估工具：WHOQOL – BREF

“Quality of life (WHOQOL – BREF) improved significantly in both the control and intervention groups after receiving 18 sessions of continuous treatment.”

“No significant Time × Group interaction was found for quality of life.”

□ 解讀：

職能為本與傳統復健皆能改善燒傷患者生活品質，但 CO-OP 未展現顯著額外優勢。

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### 三、作者對結果的關鍵詮釋（Result Interpretation）

“The principal finding is that the CO-OP protocol, in addition to traditional rehabilitation, can be an effective approach that is associated with improvements in occupational performance and satisfaction, hand performance, disability, pain, range of motion, power grasp, the ability to perform daily activities, and quality of life.”

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□ 小結一句話（Result Take-home Message）

CO-OP 作為職能為本介入，整體成效「不劣於」傳統復健，並在腕關節活動度恢復上展現特定優勢。

以下依據前述研究目的（1）與研究結果（2），彙整本論文在摘要、Discussion 與 Conclusion 中所提出的結論（Conclusions），並逐條引用原文英文，同時輔以職能治療觀點之學術解讀。

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## 一、主要研究結論一

職能為本介入（CO-OP）與傳統復健「同樣有效」

“According to the results, the occupation-based interventions are as effective as traditional therapeutic interventions for the improvement of hand and upper extremity function, ability to perform daily activities, and quality of life in people with burn injuries.”

□ 結論意涵說明：

- CO-OP 並未顯著優於傳統復健
  - 但在多數功能、活動與生活品質指標上，療效「不劣於（non-inferior）」傳統治療
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## 二、主要研究結論二

CO-OP 可作為有效的職能治療復健策略

“The CO-OP protocol, as an occupation-based intervention, can improve hand performance, ability to perform daily activities, and quality of life in people with burn injuries.”

□ 結論意涵說明：

- 作者明確將CO-OP 定位為「有效的職能為本介入模式」
  - 尤其符合職能治療「以有意義活動促進功能恢復」的核心精神
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### 三、主要研究結論三

在腕關節活動度上，CO-OP 具有特定優勢

“A significant Time × Group interaction was found only for wrist flexion and extension, indicating that wrist flexion and extension were increased in both the control and intervention groups, with the largest overall increase in the intervention group.”

□ 結論意涵說明：

- 這是本研究中唯一顯示介入組優於控制組的客觀功能指標
- 暗示：

結合認知策略與實際職能活動，可能對「複雜關節控制」更具促進效果

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### 四、主要研究結論四

CO-OP 可能促進「較早」達成職能表現改善（但未量化）

“The participants in the intervention group achieved improved occupational performance and satisfaction earlier than the control group.”

△ 作者補充說明：

“This topic was observed only experimentally by the researchers and, because of a lack of evaluations at short intervals, was not documented.”

□ 結論意涵說明：

- CO-OP 可能有助於提早恢復職能表現與滿意度
- 但因研究設計限制，尚未形成統計證據

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## 五、整體結論（Conclusion 段落原文）

“Our study shows that occupation-based interventions that use the CO-OP approach as well as traditional interventions could improve occupational performance and satisfaction, hand performance, disability, pain, range of motion, power grasp, the ability to perform daily activities, and quality of life in people with burn injuries.”

“Therefore, these interventions can be used in rehabilitation clinics to improve outcomes in people with burn injuries to the hands and upper extremities.”

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## 六、職能治療學術觀點總結（一句話版）

本研究結論支持：在手與上肢燒傷復健中，「以職能為本、結合認知策略的 CO-OP 介入」，是一種與傳統復健同樣有效、且在特定關節功能上具潛在優勢的臨床可行方案。

以下依據論文 Limitations and Future Directions 與相關段落，系統性彙整本研究之研究限制（Research Limitations），並逐條引用原文英文，同時補充職能治療研究觀點的解讀。

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### 一、研究限制一：缺乏「短時間密集評估」，無法量化早期成效

“A lack of evaluations at short intervals led to a failure to record early positive results in any of the outcomes in terms of the CO-OP treatment protocol in the intervention group after the interventions started.”



□ 限制說明：

- 雖然研究者**臨床觀察**到 CO-OP 介入組可能較早改善職能表現
- 但因未設計「更密集的中期測量時間點」，**無法形成統計證據**

□ OT 研究解讀：

對於「學習取向、策略導向」的介入（如 CO-OP），**早期改變**往往是其**核心優勢**，此限制可能低估其實際效果。

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## 二、研究限制二：樣本數小，可能造成統計力不足 (low statistical power)

“Because many participants did not complete their therapeutic sessions after returning home, and because of problems caused by the coronavirus disease 2019 pandemic, there was a total of 20 participants (10 in each group).”

“The small sample size in both groups can be considered the main reason for potential bias in the results.”

□ 限制說明：

- 最終僅N = 20
- 可能導致：
  - 無法偵測中小效應量
  - 組間差異「存在但未達顯著」

□ OT 研究解讀：

這是解釋「多數變項只有 time effect、沒有 group effect」的重要方法學原因。

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## 三、研究限制三：兩組在初期接受「相同治療」，稀 釋組間差異

“Considering that both groups received similar treatments for six sessions at first, which can be one of the main reasons for the lack of significant differences regarding the outcomes between the two study groups…”

□ 限制說明：

- 介入組與控制組在前 2 週皆接受傳統復健
- 可能導致：
  - 早期功能改善已發生
  - CO-OP 的「額外效果」被稀釋

□ OT 研究解讀：

從實驗設計角度看，這是\*\*「介入對照不夠純粹」\*\*的典型限制，但作者亦指出此安排具倫理必要性。

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## 四、研究限制四：治療依從性（adherence）與外在情境干擾

“Many participants did not complete their therapeutic sessions after returning home.”

“Because of problems caused by the coronavirus disease 2019 pandemic…”

□ 限制說明：

- 居家後治療中斷
- COVID-19 對追蹤與介入連續性造成影響

□ OT 研究解讀：

這對於強調「持續策略練習與泛化」的 CO-OP 介入而言，是重要干擾變項。

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## 五、作者對未來研究的建議（延伸自限制）

“We suggest that future studies use a larger sample size.”

“We recommend that subsequent studies use different treatment methods in the initial treatment sessions in both control and intervention groups.”

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## 六、研究限制整體總結（論文評論可用）

本研究的主要限制包括：樣本數小、評估時間點不足、初期介入重疊，以及外在疫情干擾，這些因素可能導致 CO-OP 介入之真實效果未能完全呈現。

以下依據論文Discussion、Implications for Occupational Therapy Practice、Conclusion等段落，彙整本研究的「學術意義／價值」與「臨床應用／實務意義」，並逐條引用原文英文，同時補充職能治療專業觀點，方便直接用於作業、論文評論或簡報。

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### 一、學術意義（Academic Significance）

#### （一）填補燒傷復健中「職能為本介入」的研究缺口

“Our study is the first to focus on the effect of the CO-OP on people with burn injuries.”

□ 學術價值說明：

- 以往 CO-OP 研究多集中於兒童發展協調障礙、腦中風等族群
  - 本研究首度將 CO-OP 系統性應用於手與上肢燒傷族群，擴展其理論與實證適用範圍
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#### （二）支持「以職能為本」不僅關注功能，更關注生活參與

“Most previous studies have mainly focused on functional components and less on functional areas, such as returning to normal life and the ability to perform their daily activities.”

□ 學術價值說明：

- 本研究回應職能治療長期關切的問題：

功能改善 ≠ 生活回歸

- 將研究焦點提升至活動（activity）與參與（participation）層次
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### （三）為「CO-OP 理論機制」提供燒傷族群的實證支持

“The CO-OP protocol is a new intervention approach based on the fact that cognition plays an important role in the acquisition of occupational skills and the growth of occupational adequacy.”

□ 學術價值說明：

- 本研究支持 CO-OP 的核心假設：  
透過認知策略（goal – plan – do – check）→ 促進職能技能學習與泛化
  - 證實此機制亦適用於「後天創傷（燒傷）」族群
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## 二、臨床應用與實務意義（Clinical / Practice Implications）

### （一）CO-OP 可作為燒傷復健中的可行臨床選項

“The CO-OP protocol, as an occupation-based intervention, can improve hand performance, the ability to perform daily activities, and quality of life in patients with burn injuries to the hand and upper extremity.”

□ 臨床意義說明：

- CO-OP不是僅限於神經或兒童族群的介入

- 可實際導入燒傷復健臨床場域
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## （二）強調「以個案重視的職能」作為治療核心

“Interventions that use the occupations required by the client are useful for ameliorating the effects of disabilities.”

□ 臨床意義說明：

- 支持 OT 核心理念：

從個案想做、需要做的活動出發，而非只訓練關節或肌力

- 有助於提升動機、治療投入度與臨床意義感
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## （三）有助於改善心理與生活層面的長期問題

“These challenges lead to an inability to perform required activities, limitations in regard to returning to their occupations, the emergence of psychological problems, and a resulting decreased quality of life.”

□ 臨床意義說明：

- 燒傷復健不僅是「動得了」
  - CO-OP 提供一種兼顧心理、角色與生活重建的治療視角
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## （四）可與傳統復健並行，而非取代

“Occupation-based interventions that use the CO-OP approach as well as traditional interventions could improve occupational performance and satisfaction, hand performance, disability, pain, range of motion, power grasp, the ability to perform daily activities, and quality of life.”

□ 臨床意義說明：

- CO-OP 並非要取代 ROM、肌力、疤痕處理

- 而是在身體功能恢復基礎上，加強職能表現與生活回歸
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### 三、作者給職能治療實務的明確建議

“Therefore, these interventions can be used in rehabilitation clinics to improve outcomes in people with burn injuries to the hands and upper extremities.”

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### 四、整體學術與臨床價值總結（一段話版）

本研究在學術上拓展了 CO-OP 介入的適用族群，並在臨床上支持將「以個案有意義職能為核心的介入模式」納入燒傷復健，作為與傳統治療並行、促進生活回歸與生活品質的重要策略。