

第四篇：

## Telehealth Occupation-Based Coaching for Rural Parents of Children With Type 1 Diabetes: A Randomized Controlled Trial

### 研究目的彙整

本研究的主要目的是檢測一項為期 12 週的「遠距職能導向教練模式」（Telehealth Occupation-Based Coaching, OBC）介入措施對於農村家庭的初步成效。

具體研究目標可細分為以下兩個層面：

#### 1. 家長與家庭生活品質層面 (Aim 1)

評估遠距 OBC 介入是否能有效改善以下變項：

- **家庭參與度**：提升家庭在具意義的日常活動中的參與程度（透過 GAS 達標量表衡量）。
- **家長自我效能與勝任感**：包括家長對育兒能力的信心（PSoC）、獨立執行與制定行動計畫的能力（EICRS），以及在治療過程中的參與及問題解決能力（Caregiver Talk）。
- **家庭生活品質**：提升家庭在生理、心理、社交及環境等面向的整體生活滿意度（WHOQOL-BREF）。

#### 2. 兒童健康成效層面 (Aim 2)

評估遠距 OBC 介入是否能改善兒童的臨床生理指標：

- **糖化血色素 (HbA1c)**：反映過去 2 至 3 個月的平均血糖數值。
  - **血糖達標時間百分比 (TIR)**：測量兒童血糖維持在目標範圍（70 – 180 mg/dL）內的時間佔比。
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**背景脈絡補充**：由於農村地區的 T1D 發病率高於城市，且家長常面臨專科醫療資源匱乏及複雜管理流程帶來的巨大心理壓力，本研究旨在探討職能治療如何透過遠距科技填補此醫療服務缺口。

## 研究結果彙整

本研究針對「遠距職能導向教練模式」（OBC）的初步成效，得出以下結果：

### 1. 家庭參與度（GAS 達標量表）

- **結果摘要**：介入組（IG）在達成家庭中心參與目標方面，表現顯著優於對照組（CG），且效應量（Effect Size）極大。
- **原文引用**：

"Families in the intervention group were more likely to achieve family-centered participation goals ( $p=.006$ ) than those in the controlled group." "the mean postintervention GAS score in the IG ( $M=60.63, SD=3.77$ ) was significantly higher than that in the CG ( $M=51.88, SD=6.75$ ),  $t(14)=3.20, p=.006$ "

### 2. 家長自我效能與參與能力

- **家長談話比例 (Caregiver Talk) :**

- **結果摘要：**家長在治療期間的參與度（談話比例）隨時間顯著增加。

- **原文引用：**

"Caregiver talk increased significantly over the 12-wk period ( $p=.034$ )" "The word count for caregiver talk increased significantly from 67.2% at the beginning phase and 67.9% at the middle phase to 72.4% at the end phase ( $p=.034$ )."

- **獨立能力評級 (EICRS) :**

- **結果摘要：**家長在制定與執行行動計畫的獨立能力上有顯著進步。

- **原文引用：**

"the average rating on the EICRS also improved significantly ( $p<.001$ )."

"The average rating on the EICRS... increased from the average rating close to B at the beginning and middle phases to a rating close to A at the end phase ( $p<.001$ )"

- **育兒勝任感 (PSoC) :**

- **結果摘要：**介入組分數雖有提升，但在統計上與對照組相比並無顯著差異。

- **原文引用：**

"no significant differences were found between or within groups (Table 4)."

### 3. 兒童健康成效 (HbA1c 與 TIR)

- **結果摘要：**兒童的血糖指標（糖化血色素與達標時間比）在介入前後或組間均無顯著變化。

- **原文引用：**

"There were no statistically significant changes in glycemic levels" "TIR and HbA1c did not differ significantly before and after telehealth OBC sessions between or within groups."

### 4. 家庭生活品質 (WHOQOL-BREF)

- **結果摘要：**各個生活品質範疇的分數雖有變動，但皆未達到統計顯著差異。

- **原文引用：**

"There were no statistically significant changes in... family quality of life." "No statistically significant differences in the changes of four domain scores between groups were observed."

## 結論彙整

本研究的初步結論顯示，**職能導向教練模式 (OBC)**在提升農村 T1D 家庭的日常參與及家長自我效能方面具有高度潛力，儘管在生理臨床指標上尚未見顯著差異。

### 1. OBC 在健康管理常規上的有效性

職能治療介入比單純的內分泌常規護理更能協助家庭建立有效的健康管理流程。研究證實此模式對於改善家庭參與具意義的活動有顯著幫助。

- 原文引用：

"OBC may be more efficacious in helping families to improve health management routines after a child's diagnosis with T1D than usual endocrinology care alone." "Preliminary evidence suggests that telehealth OBC sessions have the potential to improve family-centered, participation-level goals for rural families with a child with T1D."

## 2. 提升家長參與度與獨立解決問題能力

研究結論指出，介入過程顯著增強了家長在管理孩子健康時的獨立性與口頭參與度，這反映出家長在問題解決技能上的進步。

- 原文引用：

"OBC is a promising intervention framework that demonstrates preliminary evidence to support improving family participation and enhancing parents' overall health management self-efficacy for their child living with T1D." "dovetailed with increasing autonomy with formulating and executing joint plans... there is an indication that the OBC may yield observable changes in the caregiver capacity."

## 3. 生理指標未顯著改善的原因

對於臨床健康成效（如 HbA1c）未達顯著差異的現象，結論歸因於參與研究的兒童在基準期（Baseline）時的血糖控制已在目標範圍內，因此改善空間有限。

- 原文引用：

"Most child health outcomes were in target range at the start of the study; therefore, it was not expected to see significant improvements." "It was not surprising that no significant changes were seen related to child health outcomes, because the children who were enrolled in the study had an average HbA1c of 7.5% and 60% TIR at baseline."

#### 4. 職能治療在糖尿病照護中的新角色

本研究強調職能治療是糖尿病照護領域中尚未被充分利用的資源，且非常適合透過遠距醫療提供服務。

- 原文引用：

"Occupational therapy is an untapped resource in the provision of care for children with Type 1 diabetes (T1D)." "As a field, occupational therapy is well suited to the provision of services through telehealth, such as the OBC model investigated here."

## 研究限制彙整

### 1. 樣本量小與試點研究性質

本研究屬於試點研究（Pilot Study），樣本規模較小（共 16 對受試者），因此結果的普遍性受限，需謹慎解讀。

- 原文引用：

"The study limitations include a lack of generalizability that is due to the small sample size..." "Because of the nature of pilot studies, these results should be interpreted with caution."

## 2. 介入執行者的專業資歷

介入措施是由職能治療系博士生提供，而非具備執照的職能治療師，這可能是研究的限制之一。

- 原文引用：

"...utilization of student interventionists instead of licensed occupational therapists..."

## 3. 測量工具的特性

研究中使用的部分評估指標（如家長談話分析與獨立能力評級量表 EICRS）尚未建立成熟的心理計量特性（Psychometric properties）。此外，由於家長談話分析僅計算字數比例，無法完整擷取談話內容的品質與關聯性。

- 原文引用：

"...employment of outcome measures (i.e., parent talk and EICRS) that do not have established psychometric properties." "...caregiver talk does not descriptively capture the content and quality of the conversations carried out by the client."

## 4. 初始臨床指標已達標（天花板效應）

參與研究的兒童在基準期（Baseline）時，其血糖指標（HbA1c 與 TIR）多數已在目標範圍內，這使得研究難以展現介入後的顯著生理改善。

- 原文引用：

"Another limitation was the fact that blood glucose levels were within target ranges at the beginning of the study for all participants, which made it difficult to determine improvement in HbA1c or TIR."

## 5. 回憶偏誤與自我報告限制

部分生活品質與自我效能量表採用問卷形式，家長在填寫時可能存在回憶偏誤。

- 原文引用：

"Recall bias is a potential limitation that is due to the survey format for the WHOQOL-BREF and PSoC."

## 學術意義與價值

本研究在學術上的主要貢獻在於證明了\*\*職能導向教練模式（OBC）\*\*應用於第 1 型糖尿病（T1D）家長群體的初步成效，並填補了農村醫療服務的研究缺口。

- **填補研究空白：**這是首個將 OBC 應用於育有 T1D 兒童之照顧者的研究，並證實了其在提升家長自我效能與家庭參與上的潛力。

原文引用："...it [OBC] has never been applied to caregivers with a child with T1D."

- **驗證遠距模式的可行性：**本研究提供初步證據，支持透過遠距醫療（Telehealth）提供職能治療介入，能有效跨越地理限制，為醫療資源匱乏的農村地區提供服務。

原文引用："This innovative, novel study evaluated the findings from a pilot randomized controlled trial utilizing OBC through telehealth to address a critical gap in health care needs experienced by rural families..."

- **職能治療角色的定位：**強調了職能治療在糖尿病照護團隊中被忽視的潛力，並提出跨學科整合的學術依據。



原文引用："Occupational therapy is an untapped resource in the provision of care for children with Type 1 diabetes (T1D)."

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## 臨床應用意義與價值

在臨床實務方面，本研究為職能治療師提供了具體的介入架構，並指出了未來推動服務的方向。

- **提升家庭參與及管理常規**：研究結果支持職能治療師能透過教練模式，協助家庭建立更穩固的健康管理常規，進而提升生活參與度。

原文引用："OBC may be more efficacious in helping families to improve health management routines after a child's diagnosis with T1D than usual endocrinology care alone."

- **推動多元化的介入形式**：職能治療師應開發並測試除了傳統面對面治療以外的創新模式（如遠距醫療），以解決農村地區面臨的專科醫療缺口。

原文引用："...it is important that occupational therapists develop and test innovative intervention frameworks with formats that are alternatives to traditional in-person care."

- **臨床倡議與角色擴張**：職能治療從業人員應積極爭取加入糖尿病內分泌與初級照護團隊，並推動相關保險政策的改革，以納入遠距職能治療服務。

原文引用："Occupational therapy practitioners should increase advocacy for their role in T1D treatment and inclusion on endocrinology and primary care teams." 原文引用："...practitioners need to advocate for continued policy changes for the inclusion of occupational therapy telehealth services."

