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# 賽馬會耆智園和「流金頌」研究發佈： 《腦活力》認知訓練有助低學歷長者健腦， 提升思考解難和記憶力

## JCCPA & CADENZA Study Reveals: *CogniFitness* benefits Brain Health of Elders with Lower Education

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# 背景 Background



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# 豐富的退休生活... Life after retirement...



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# 豐富的退休生活

## Life after retirement



- 現今的退休生活多姿多彩，跳舞、打麻雀、耍太極.....均需要健康的腦力。

Healthy brain is needed in order to enjoy the abundance of post-retirement life.

- 正所謂「活到老、學到老」，許多長者年輕時無機會讀書，退休後是學習新事物的好時機。

In the past, seniors don't get much chance to school. Now it's a good opportunity for them to learn something new.



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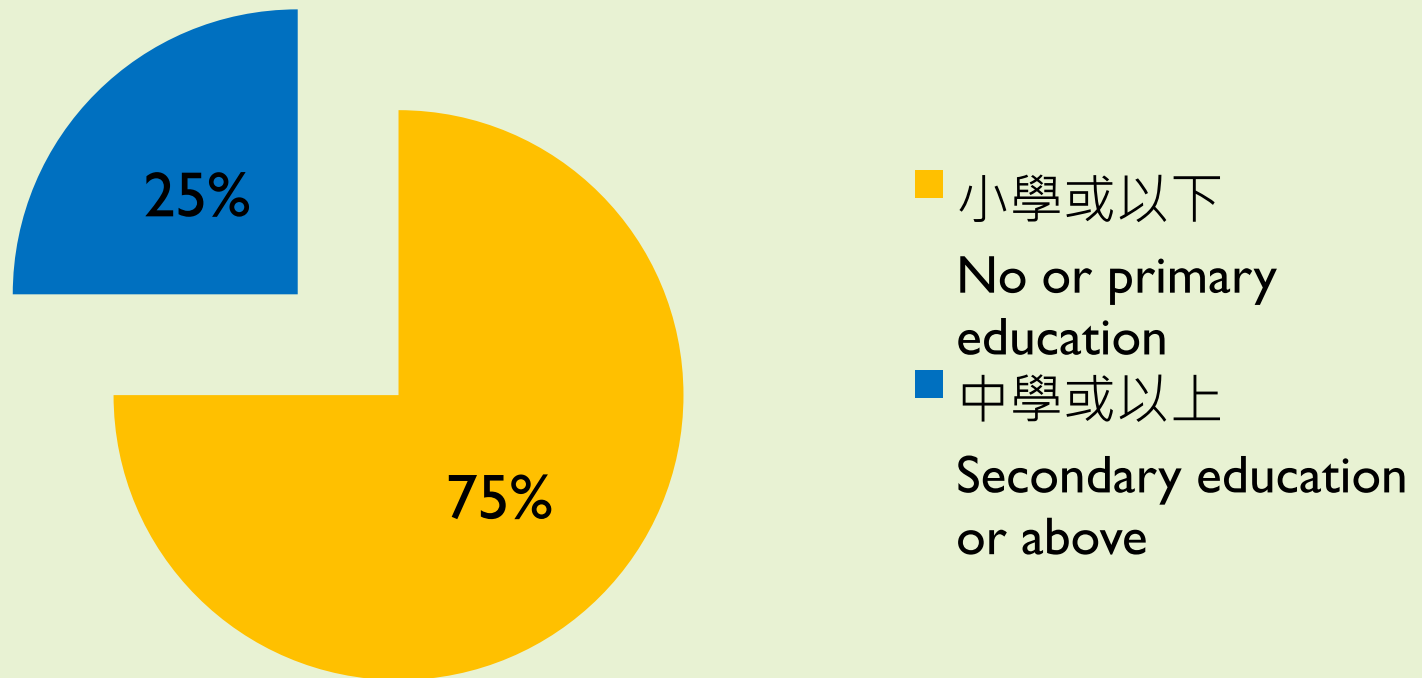
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# 2006年中期人口普查

## 2006 Population By-census

- 資料顯示，全港65歲或以上的長者人口約有85萬，當中約64萬（佔75%）只有小學或以下教育程度。

Around 640,000 older people aged 65 or above attained only primary education or below, accounting for 75% of the entire older population (850,000) in Hong Kong.



# 認知功能衰退 Cognitive Decline



- 隨著年齡增長，長者常會抱怨自己反應遲鈍，記憶力下降，或難以集中注意力等。As age advances, people tend to complain about their cognitive deficit, such as poor reasoning, memory, and concentration.
- 研究顯示，相比高學歷人士，教育程度較低的長者較易出現認知功能衰退。Less-educated elderly have higher risk of cognitive decline.
- 認知功能障礙使長者易產生挫敗感、影響其生活質素、甚或發展成腦退化症。Cognitive impairment may further lead to their sense of frustration, a lower life satisfaction, and dementia.



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# 長者也返學!

## Seniors Back to School!



- 長者認知功能的衰退真的無法逆轉嗎?

有研究顯示，為長者提供健腦訓練不但能減慢認知功能衰退，甚至能有效提升長者的認知功能。

Is cognitive decline irreversible in older people? Probably not. Studies show that cognitive training is good for elderly brain health.

- 有見及此，賽馬會耆智園和「流金頌」共同為長者設計了《腦活力》認知訓練課程。

Against this background, JCCPA and CADENZA jointly designed the *CogniFitness* training program.



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# 研究目的 Objectives



- 評估《腦活力》認知訓練課程成效  
To evaluate the effectiveness of *CogniFitness* training
- 了解認知訓練對長者腦部健康的即時和長期影響  
To understand the immediate and prolonged effects of such training on elders' overall brain health



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# 研究方法 Method

- 本港首個以隨機對照形式評估認知課程成效的研究  
The first randomized controlled trial to study the effectiveness of cognitive training in Hong Kong
- 招募對象：65歲或以上、在港居住、和曾抱怨記憶變差的長者  
Inclusion criteria: 65 or above, Chinese community dwellers, with subject memory complaints
- 研究於2008年中展開  
The study began in mid-2008



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## 健腦組 Intervention group

- 111人
- 《腦活力》認知訓練  
*CogniFitness*

## 對照組 Control group

- 112人
- 普通的健康教育課  
Health talks

- 每星期1節，共12星期; 12 weekly sessions
- 由註冊職業治療師授課; led by an occupational therapist
- 課程前、課程後和完成課程9個月後接受測試

Pre-, post-test & 9-month follow-up

- 測試包括癡呆症衡量表中文版 (Chinese Dementia Rating Scale, CDRS)，評估5種認知功能的變化 to test changes in 5 cognitive domains:
  1. 思考與解難 (概念化) Reasoning
  2. 記憶 Memory
  3. 專注力 Attention
  4. 主動 / 持續性 Initiation/perseveration
  5. 構圖能力 Construction

# 《腦活力》 *CogniFitness*



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# 《腦活力》 *CogniFitness*



## 《腦活力》 內容大綱 **Course Outline**

1. 思考與解難 Reasoning  
例如：定立目標、規劃工作  
E.g. goal setting, activity scheduling
2. 記憶訓練 Memory training  
例如：分類、聯想、視覺、部位記憶法  
E.g. categorization, association, visualization, method of loci
3. 集中力訓練 Attention (專注和處理速度)  
例如：找不同、相消法、取代法  
E.g. search for difference, cancellation, substitution

註：最後3節乃複習課 *Last 3 lessons are for revision*



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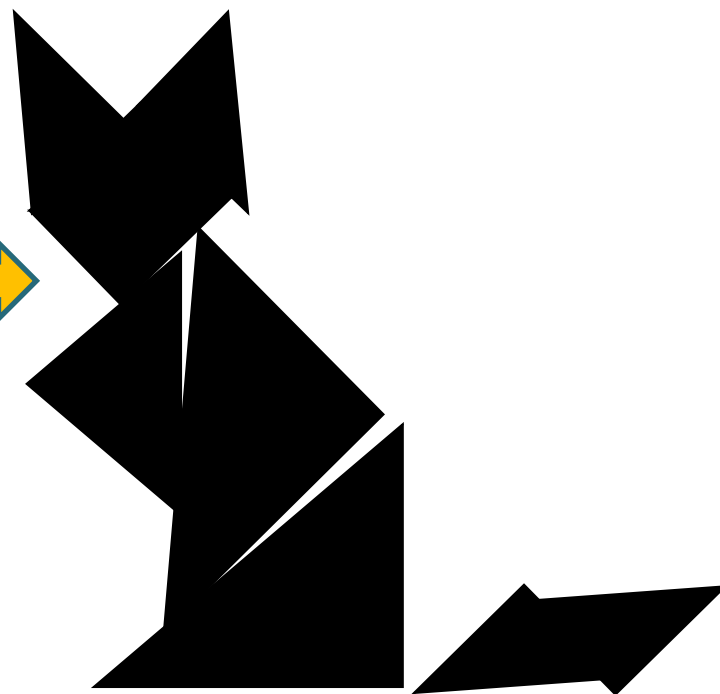
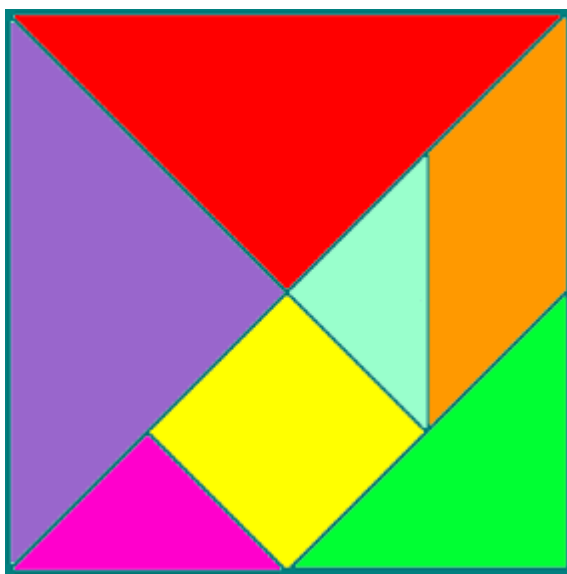
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# 《腦活力》 *CogniFitness*

七巧板:訓練思考與解難  
Tangram for reasoning



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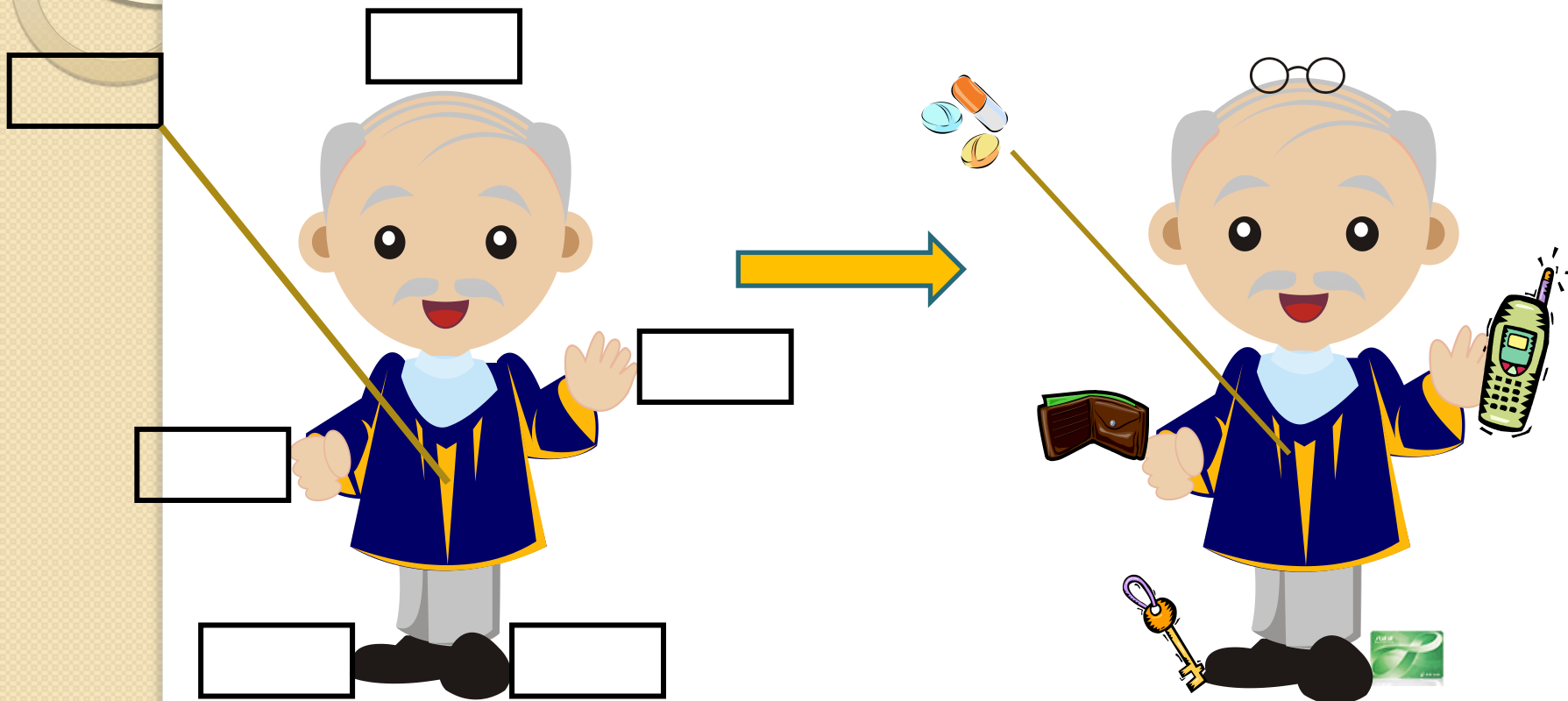


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# 《腦活力》 *CogniFitness*

## 部位記憶法 Method of Loci



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## 參加者背景資料 **Participants' Background**

|                             | 整體<br>Total<br>(223人) | 健腦組<br>Intervention Group<br>(111人) | 對照組<br>Control Group<br>(112人) |
|-----------------------------|-----------------------|-------------------------------------|--------------------------------|
| 年齡 Age                      | 75.4                  | 75.4                                | 75.4                           |
| 性別, Sex N(%)                |                       |                                     |                                |
| 男 Male                      | 33 (15%)              | 14 (13%)                            | 19 (17%)                       |
| 女 Female                    | 190 (85%)             | 97 (87%)                            | 93 (83%)                       |
| 教育程度, N(%)                  |                       |                                     |                                |
| 小學或以下<br>No/primary         | 176 (79%)             | 90 (81%)                            | 86 (77%)                       |
| 中學或以上<br>Secondary/above    | 47 (21%)              | 21 (19%)                            | 26 (23%)                       |
| 婚姻狀況 Marital Status, N(%)   |                       |                                     |                                |
| 單身 Single                   | 6 (3%)                | 3 (3%)                              | 3 (3%)                         |
| 已婚 Married                  | 93 (42%)              | 46 (41%)                            | 47 (42%)                       |
| 離婚 Divorce                  | 15 (7%)               | 8 (7%)                              | 7 (6%)                         |
| 喪偶 Widow                    | 109 (49%)             | 54 (49%)                            | 55 (49%)                       |
| 居住狀況 Living condition, N(%) |                       |                                     |                                |
| 獨居 Live alone               | 58 (26%)              | 29 (26%)                            | 29 (26%)                       |
| 非獨居 Live with others        | 165 (74%)             | 82 (74%)                            | 83 (74%)                       |
| 簡短記憶投訴問卷 CMSS (/5)          | 4.1                   | 4.2                                 | 4                              |
| 癡呆症衡量表 CDRS (max 144)       | 120                   | 118.9                               | 121.1                          |



# 研究結果 Findings



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# 《腦活力》有助改善低學歷長者的 整體認知功能 Less-educated Elders Benefited More from *CogniFitness* Training



完成《腦活力》訓練後，較低學歷長者（教育程度屬小學或以下）的CDRS分數在短期和長期測試中都有顯著增加。然而，對照組的CDRS分數則無明顯增加。

The immediate and long-term training gain from *CogniFitness* in global cognitive functioning for the less-educated elders in the intervention group were significantly higher than their counterparts in the control group. The control group did not show such significant improvement.



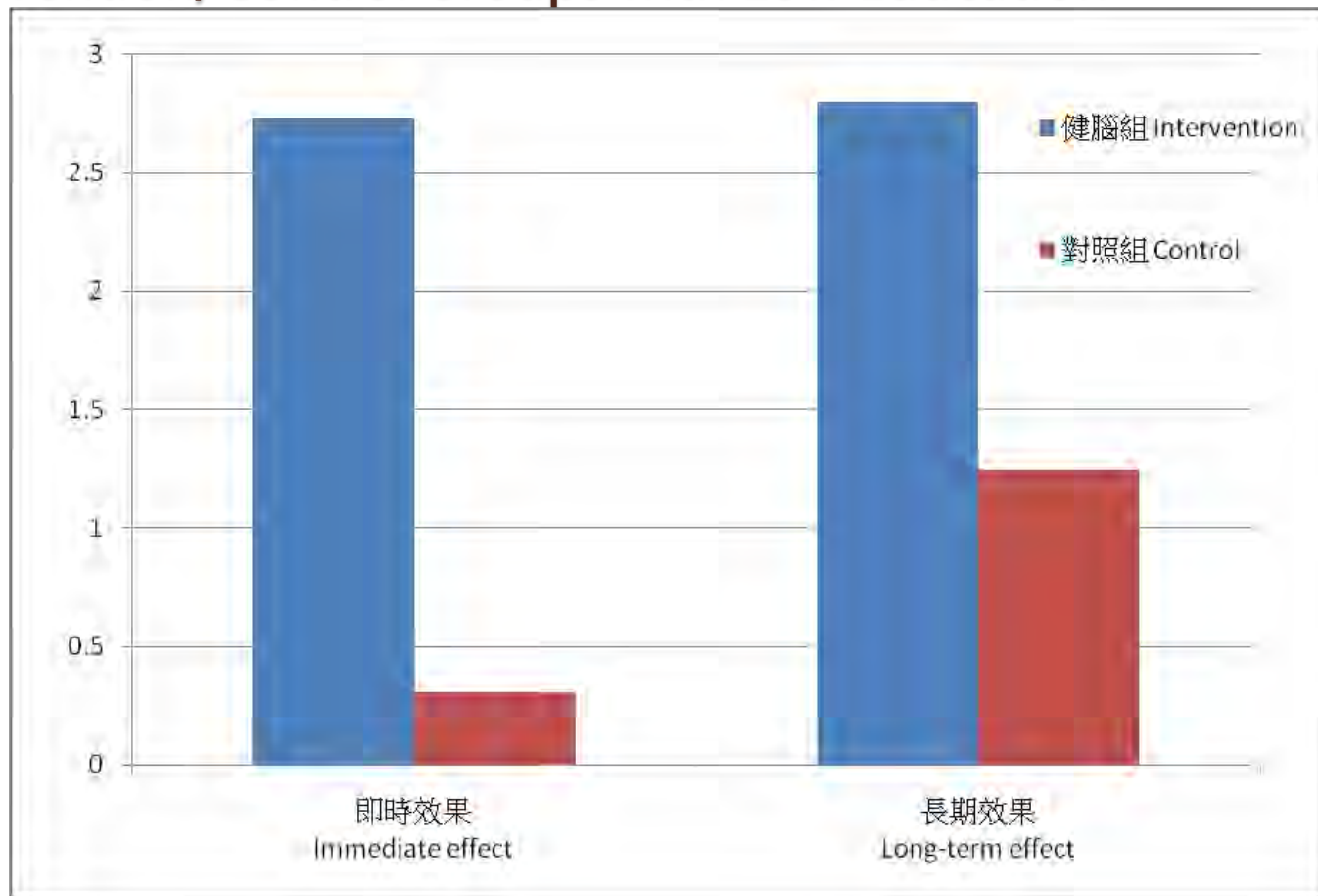
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# 教育程度較低的長者在兩組中的即時及長期（9個月） CDRS轉變 Immediate and Long-term Training Gains in CDRS by Intervention/Control Groups with Low Education



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# 《腦活力》有效提升長者的思考與解難和記憶力 *CogniFitness Improved Elders' Reasoning and Memory Abilities*

相比對照組，教育程度較低的長者在接受認知訓練後，於思考與解難（概念化）和記憶力兩方面的進步尤其突出，而這兩個範疇亦與《腦活力》的訓練重點吻合。

Out of the 5 cognitive domains in CDRS, the intervention group with lower education level, compared to their counterparts, performed much better in reasoning (conceptualization) and memory domains. These 2 domains were proximal to the training foci of the *CogniFitness* training.

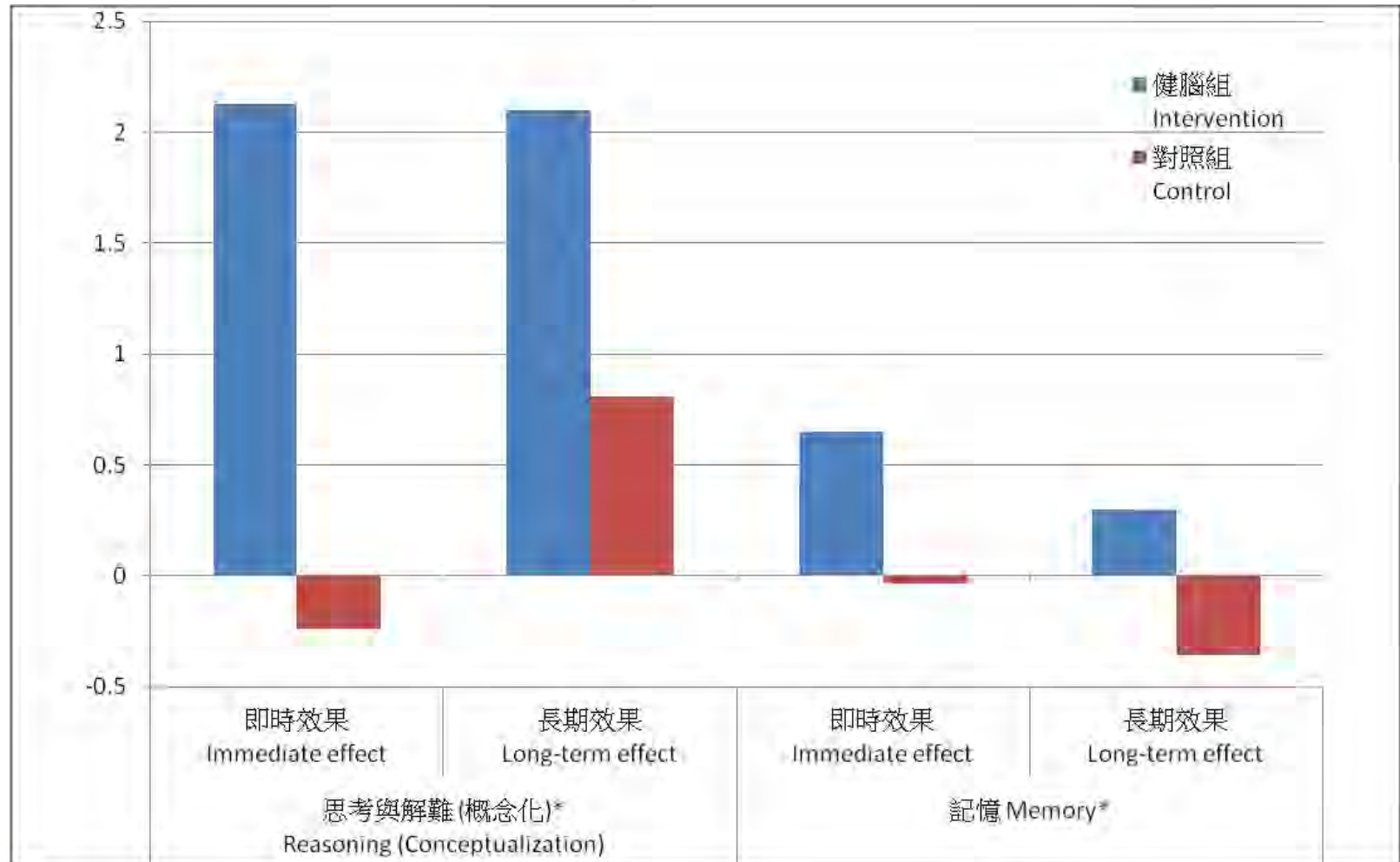


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# 兩組教育程度較低的長者在思考與解難和記憶 方面的即時及長期轉變 Immediate and Long-term Training Gains in Reasoning and Memory of Intervention/Control Groups with Low Education



\*代表在統計學上該轉變是顯著的 means statistical significance is reached



# 《腦活力》有效提升長者的思考與解難和記憶力 *CogniFitness Improved Elders' Reasoning and Memory Abilities*



思考與解難和記憶能力是長者自理和過獨立生活的關鍵。較強的思考與解難能力能讓長者獨自訂立目標和安排日常活動。另外，良好的記憶力能幫助他們記住別人名字或約會的時間地點，處理生活繁瑣事，例如交電費、做家務和買餸。

Reasoning and memory are essential for elders to live independently. Reasoning allows elders to identify goals and schedule daily activities by themselves and good memory empowers them to remember appointments, recall people's names, help with house chores, and enjoy social life.



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# 建議 Recommendation



一年一次的認知訓練應盡早被納入社區和住宿照顧服務的常規範疇內，以非藥物的方法幫助抵禦腦退化症。

To prevent cognitive decline and dementia in older people, cognitive training such as *CogniFitness* should be incorporated as part of routine programmes in both community and residential care settings and it should be held at least once per year.



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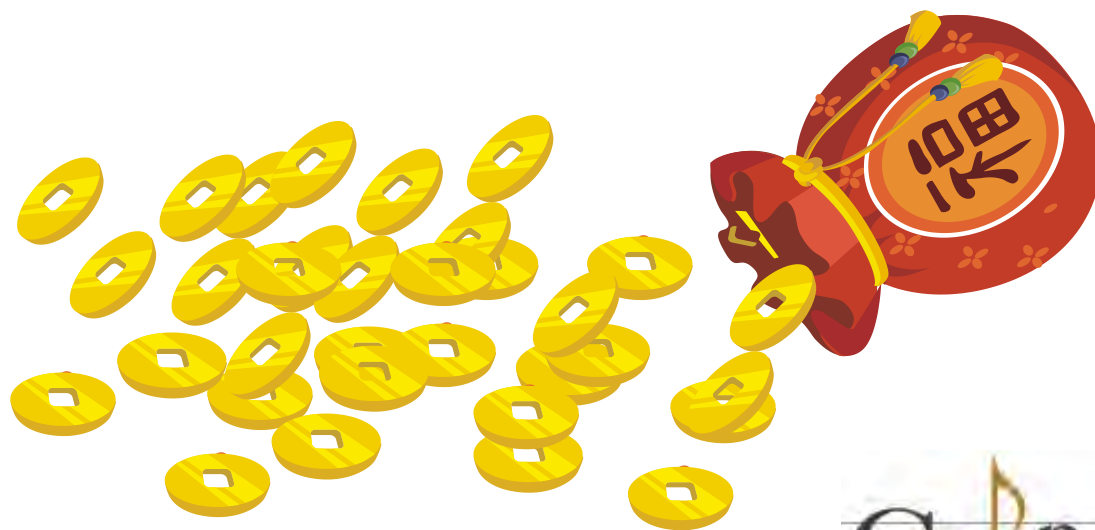
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# 建議 Recommendation

- 訓練教材可考慮涵蓋更多的認知領域，其難易程度則應根據學員的教育背景進行相應調整，因材施教，令更多長者受益

To benefit a broader older audience, the content of cognitive training should be customized according to target trainees' education levels, and to cover more cognitive areas



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