Research Institution 科研機構

香港教育大學
The Education University of Hong Kong

特殊需要與融合教育研究所
Institute of Special Needs and Inclusive Education

Organizers 主辦機構

童樂行動 HEALTHY KIDDO

BRAINX

Brain Empowerment: Empowering Minds, Strengthening Families

腦友童行－ADHD學童神經認知發展與家庭福祉支援計劃

Research Data Release: Summary of Intervention Effectiveness Report

干預成效科研數據發佈 報告摘要

SEPTEMBER
2025

Content

Special Acknowledgments

Drs Richard Charles & Esther Yewpick Lee Charitable Foundation
利銘澤黃瑤璧慈善基金

Brain Empowerment: Empowering Minds, Strengthening Families project is sponsored by Drs. Richard Charles and Esther Yewpick Lee Charitable Foundation.

Drs Richard Charles and Esther Yewpick Lee Charitable Foundation supports charitable work for the advancement of education and general welfare, targeting the low-income, ethnic minorities, students with special education needs, and disabled or distressed patients with chronic medical conditions mainly in Hong Kong/China.

Project Introduction

Brain Empowerment: Empowering Minds, Strengthening Families is a year-long charitable initiative (September 2024 – June 2025) jointly organized by Healthy Kiddo and BrainX.

The program provides evidence-based support for primary school students (Primary 3–6) with Attention Deficit/Hyperactivity Disorder (ADHD) from low-income families, together with their parents. Using a comprehensive approach that integrates neurocognitive technology and non-pharmacological interventions, it strengthens children's attention, learning, emotional regulation, and executive functioning while improving family relationships.

The initiative responds to the heavier academic and daily pressures ADHD families face, particularly low-income households with fewer resources. With ADHD diagnoses rising in Hong Kong[1] and public healthcare wait times often exceeding 18 months, timely and accessible support is critical.

By delivering integrated, effective assistance, the project reduces stress and challenges for families and enhances their overall quality of life.

Foster the holistic development of children with ADHD in both learning and daily life

Enhance their attention, executive functioning, inhibitory control, emotional regulation, and social skills.

Strengthen family harmony and alleviate children's anxiety and depressive symptoms

Improve the overall well-being of both children and parents, fostering healthier family relationships and supporting children's integration into school and the community.

Drive cross-disciplinary innovation

Combining technology, pedagogy, and parent training to provide non-pharmacological solutions for families of children with ADHD. Validate these interventions through educational research, laying the groundwork for broader implementation in the future.

[1] Legislative Council Secretariat Research Office (December 30, 2022). "Special Educational Needs." Data Perspective ISSH36/2022 Data. Retrieved from https://www.legco.gov.hk/research-publications/chinese/2022issh36-special-educational-needs-20221230-c.pdf

Organizing Institutions

Healthy Kiddo

Healthy Kiddo is a charitable organization founded by a multidisciplinary team of psychiatrists, clinical and educational psychologists, and nurses. Combining their expertise, the organization partners with therapists and institutions to deliver caregiver workshops, child assessments, and group activities, creating a positive community impact.

Dedicated to fostering a healthy and supportive environment for all children, Healthy Kiddo believes a strong and joyful childhood is the foundation of future success. Its comprehensive services promote children's holistic development and lay a solid psychological and emotional base for growth.

BrainX

BrainX is an evidence-based training center specializing in neurocognitive training. By integrating neuroscience, pedagogy, medical tools, and psychology, it supports the development of children's attention and executive functioning. Its team of experts and educators ensures professional and effective services.

With a strengths-based curriculum, BrainX helps children build confidence and realize their potential. Through training centers, in-school services, and charitable programs for low-income families, it provides neurocognitive training to children across Hong Kong. In recent years, it has also partnered with technology, education, and social service sectors to expand the use of educational technology and resources.

OneSEN

OneSEN is a family-centered social enterprise offering tailored support for families of children with Special Educational Needs (SEN). Services focus on child-centered play therapy to build emotional and social skills, and parent-focused programs including workshops, professional training, and "Parent ME TIME" art sessions. These ease caregiving pressure, strengthen parenting skills, and foster family bonds through a supportive network.

Beyond family support, OneSEN promotes social inclusion. It empowers caregivers to re-enter the workforce through training and introduces inclusive education into schools via awareness seminars and teacher training, fostering respectful, bully-free learning environments.

Re:Mind

Re:Mind, an initiative of The Brain Health Association of Hong Kong, promotes brain health knowledge to the public. It aims to advance brain health literacy and foster a neurodiverse, inclusive society.

Using multiple communication platforms, it shares accessible brain health information and raises awareness of neurodiversity. Partnering with industry stakeholders and social service groups, it also provides professional support to disadvantaged communities.

Project Overview

Eligibility Criteria

- Children must be enrolled in Primary 3 to Primary 6 (2024-25 academic year) and diagnosed with Attention-Deficit/Hyperactivity Disorder
- Participating families must be recipients of Comprehensive Social Security Assistance (CSSA) and/or the Working Family Allowance (WFA) and/or the Student Financial Assistance Scheme.

Challenges faced by children

- Difficulty in learning due to lack of attention
- Hyperactivity and impulsivity leading to behavioral issues
- Poor emotional regulation affecting social interactions
- Low self-awareness and self-acceptance impacting confidence and self-image
- Experiencing stigmatization at school and in society, hindering social integration
- Emerging anxiety, depression, and oppositional behaviors

Desired Outcomes

- Improve attention and executive functioning
- Enhance academic performance
- Strengthen emotional regulation skills
- Reduce negative emotions
- Foster positive social interactions
- Boost self-confidence and self-image, decrease oppositional and behavioral problems

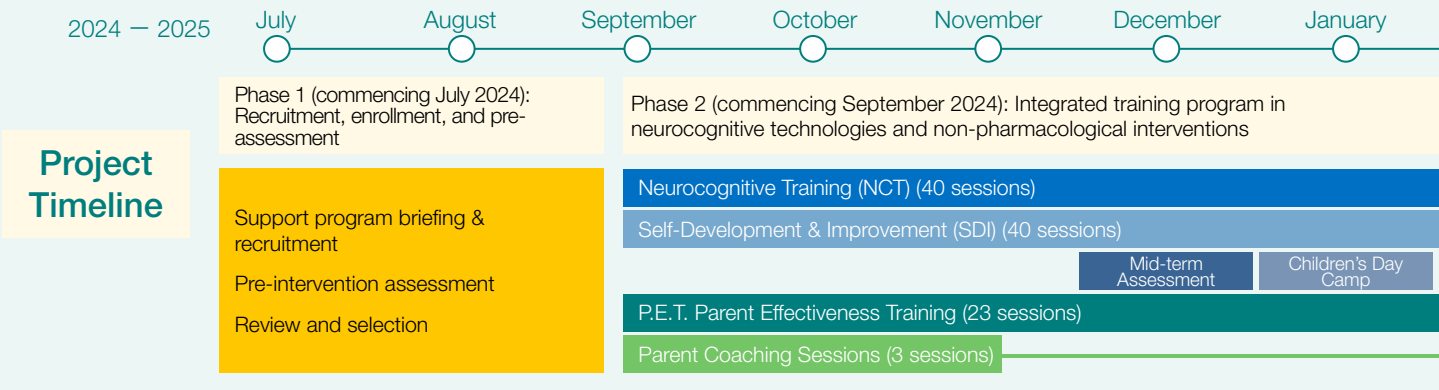
Challenges faces by Parents

- Parents from low-income families often have lower educational backgrounds and lack effective parenting skills
- Children's learning, behavioral, and emotional difficulties cause significant stress for parents
- Deteriorating parent-child relationships leading to low family harmony

Desired Outcomes

- Improve parenting skills
- Enhance stress management and emotional regulation abilities
- Improve parent-child interactions and relationships
- Gain deeper understanding of their child's needs and challenges

Project Timeline



Interventions and Activities

Child Interventions

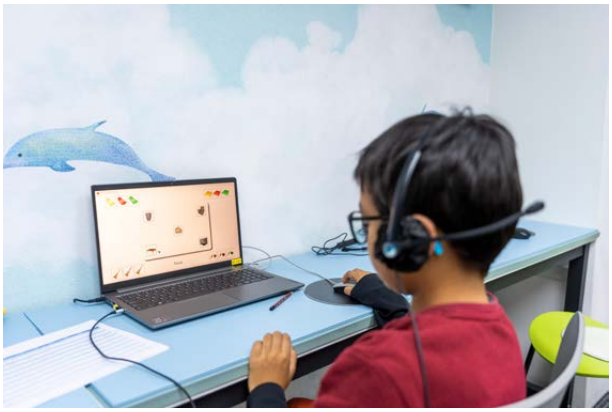
1 Neurocognitive Training

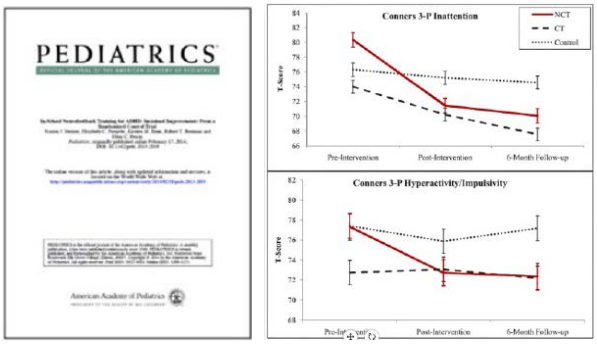
(1 session of 45 minutes per week, 40 weeks total)

Neurocognitive Training (NCT) integrates EMG/EEG technology with interactive learning. Using a wearable sensor, it monitors brainwave activity in real time, detecting and visualizing attention levels. Training is gamified—when children focus, tasks progress smoothly; when focus drops, the system signals them to refocus.

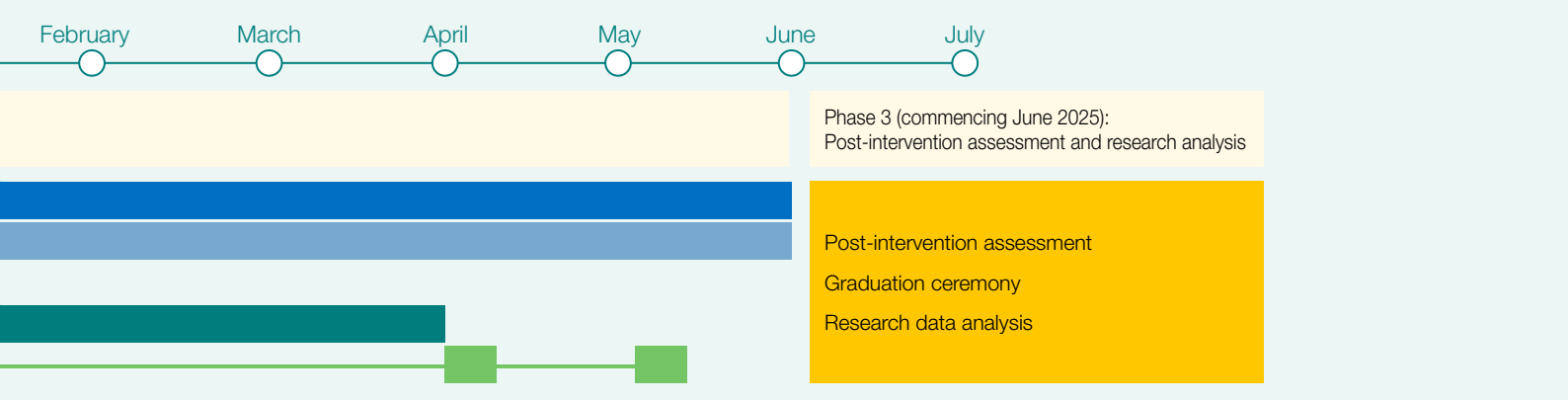
This real-time feedback helps children recognize and adjust their attention, strengthening neural networks for focus and self-control. Over time, it enhances executive functions such as sustained attention, inhibitory control, and working memory.

The model has been scientifically validated by Tufts University School of Medicine (2014) and The Education University of Hong Kong (2022). Results show that after 40 sessions, children improved significantly in attention, emotional regulation, and executive functions. By integrating real-time monitoring, positive reinforcement, and progressively challenging tasks, the training not only equips children with skills in focus and self-control but also enables them to apply these abilities in their daily lives and learning environments, leading to sustained and stable improvements.





Steiner, N. J., Frenette, E. C., Rene, K. M., Brennan, R. T., & Perrin, E. C. (2014). In-school neurofeedback training for ADHD: Sustained improvements from a randomized control trial. Pediatrics, 133(3), 483–492.



2 Self Development and Improvement

(1 session of 45 minutes per week, 40 weeks total)

The Self-Development and Improvement (SDI) Program, designed by local principal Ms. Chiu Ngar-Si, consists of 40 sessions based on a strength-based approach to build students' self-management skills and intrinsic motivation. Beginning with self-awareness and self-acceptance, it guides children to identify and use their strengths while fostering a positive approach to learning and goal-setting.

The program develops skills in emotional regulation, stress and conflict management, planning, prioritization, communication, and relationships. Using tools such as emotion thermometers, diaphragmatic breathing, and questioning techniques—together with games and worksheets—children practice applying these strategies in real-life contexts, building resilience and adaptive coping ability.

Running alongside Neurocognitive Training (NCT), SDI helps children apply NCT's gains in attention, emotional regulation, and executive functioning to daily life. This dual approach enables children not only to master focus and self-control but also to grow in confidence, motivation, and success across academics, relationships, and family life.

3 Day Camp

Objectives Evaluate progress, celebrate achievements, set new goals, and strengthen intrinsic motivation.

4 Graduation Ceremony

Objectives Celebrate progress, reinforce a sense of achievement, and define future goals.

Parent Interventions

1 P.E.T. Parent Training Course

(3 levels, 23 sessions total)

Parent Effectiveness Training (P.E.T.), created by Nobel Peace Prize nominee Dr. Thomas Gordon, is a globally recognized program designed to improve parent-child communication and strengthen family relationships. Its philosophy emphasizes mutual trust and cooperation built on respect, understanding, and effective communication—an approach especially crucial for families with ADHD children, who often struggle with emotional regulation, attention, and inhibitory control. Without strong communication, misunderstandings, conflicts, and loss of trust can easily occur.

Our version of P.E.T., tailored for low-income ADHD families, expands the original framework with topics such as the Iceberg Theory and strategies for addressing common ADHD behaviors, giving parents deeper insight into their children's needs. The 23-session program includes parental coaching, support for children's social and emotional development, and support

groups for parents to share experiences and build networks.

Parents learn to listen empathetically, guide children in problem-solving, and resolve conflicts with win-win strategy. Practical tools cover managing impulsivity, supporting emotional self-regulation, and fostering focus and cooperation at home. Equally important, the program helps parents shift from "managing behavior" to "understanding and guiding," reducing negative cycles, increasing patience and empathy, and creating positive, inclusive interactions. This strengthens trust and nurtures children's confidence and self-esteem while improving ADHD-related behavior and emotional management.

2 Parent Coaching Sessions

(3 sessions total)

The aim is to help parents clearly recognize and understand their child's progress in Neurocognitive Training (NCT), and to further enhance training outcomes through timely affirmation and positive encouragement. We also incorporate real-life examples into the lessons, enabling parents to learn how to provide ongoing support beyond the classroom, reinforcing children's intrinsic motivation and helping them achieve more significant and lasting improvements.

Research Background

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This study evaluates the effectiveness of the **"Brain Empowerment: Empowering Minds, Strengthening Families"** program, which integrates neurocognitive technology with non-pharmacological interventions to improve ADHD symptoms in children and enhance parenting skills. A range of professional, clinically validated tools are employed, including MOXO d-CPT for attention, the Conners 4 Parent questionnaire, DASS-21 for parental emotional well-being, the Child-Parent Relationship Scale (C-PRS), the Coping Inventory for Stressful Situations (CISS), the Parenting Sense of Competence Scale (PSOC), as well as parent and child questionnaires, to assess the program's impact from multiple perspectives.

The research examines, through empirical data, the program's ability to reduce core ADHD symptoms, improve emotional regulation, and serve as a complementary approach to conventional treatments. It also analyzes its influence on strengthening family harmony, alleviating parental stress, and reducing the risk of anxiety and depression in children.

Professor Sin Kuen Fung, Executive Director of the Institute of Special Needs and Inclusive Education at The Education University of Hong Kong, serves as the Research Director of this research project, leading the team in its overall planning, implementation, and supervision.

Professor Sin Kuen Fung
Research Director

Mr. Ko Fung Chin
Doctoral Researcher

Mr. Ho Ka Wa
Project Manager

Expected Impact

The program uses child support as a starting point to address broader family and social issues

- **Improve children's attention and executive functioning**
- **Enhance overall behavior and academic performance**
- **Strengthen children's self-confidence and self-image**
- **Reduce children's anxiety and depression indices**
- **Improve parent-child relationships and overall family harmony**

Research Design

To better evaluate the impact of the "Brain Empowerment: Empowering Minds, Strengthening Families" support program — which integrates neurocognitive technology and non-pharmacological interventions—on enhancing children's attention, learning ability, and executive functioning, as well as on parent-child relationships, family dynamics, and children's emotional well-being, this study has established two research groups (Group A and Group B) to enable an objective comparison of outcomes.

Group A - Student and Parent Intervention (Participating Families = 32)

Child Component

- Neurocognitive Training
- Self-Development & Improvement
- Children's Day Camp
- Graduation Ceremony

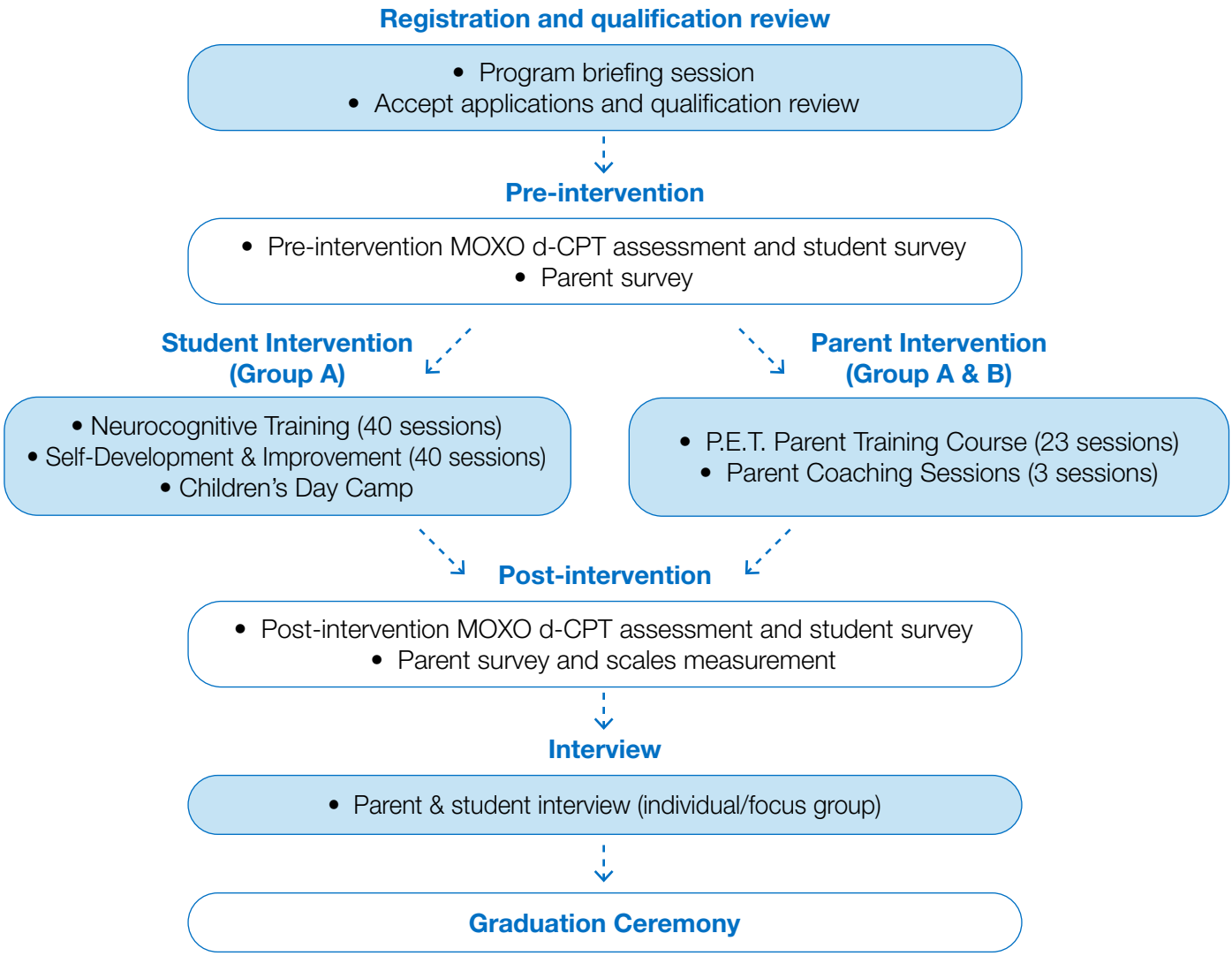
Parent Component

- P.E.T. Parent Training Course
- Parent Coaching Sessions
- Graduation Ceremony

Group B - Parent-Only Intervention (Participating Families = 24)

Parent Component

- P.E.T. Parent Training Course
- Parent Coaching Sessions



Measurement Tools

MOXO d-CPT

MOXO d-CPT is an educational technology introduced by Esperanza Life, founded by John Tsang Chun-wah. It has been adopted by hospitals, universities, and educational institutions worldwide, with physicians in 39 countries using it as an auxiliary assessment tool for Attention Deficit/Hyperactivity Disorder (ADHD). To date, it has accumulated over one million assessment records globally.

Adopted by institutions including:

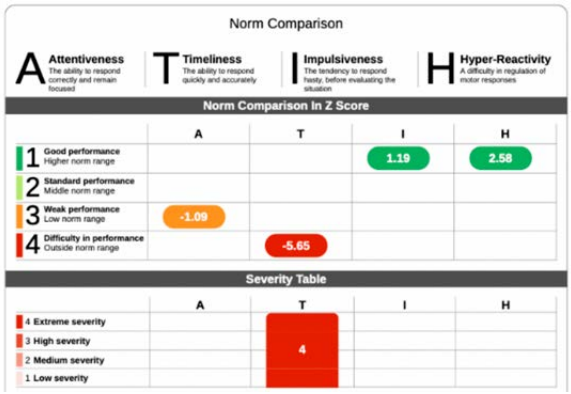
UNSW THE UNIVERSITY OF NEW SOUTH WALES

Stanford University

UNIVERSIDAD COMPLUTENSE MADRID

Developmental PAEDIATRICS YOUR SPECIALIST TEAM

Report screenshot:



Other Assessment Tools

Child Assessment

Conners 4 Parent Rating Scale

Post-intervention questionnaire

Qualitative interviews

Parent Assessment

Parenting Sense of Competence Scale, PSOC

Depression Anxiety Stress Scale, DASS-21

Child-Parent Relationship Scale, C-PRS

Coping Inventory for Stressful Situations, CISS

Post-intervention questionnaire

Qualitative interviews

Results Summary - MOXO d-CPT

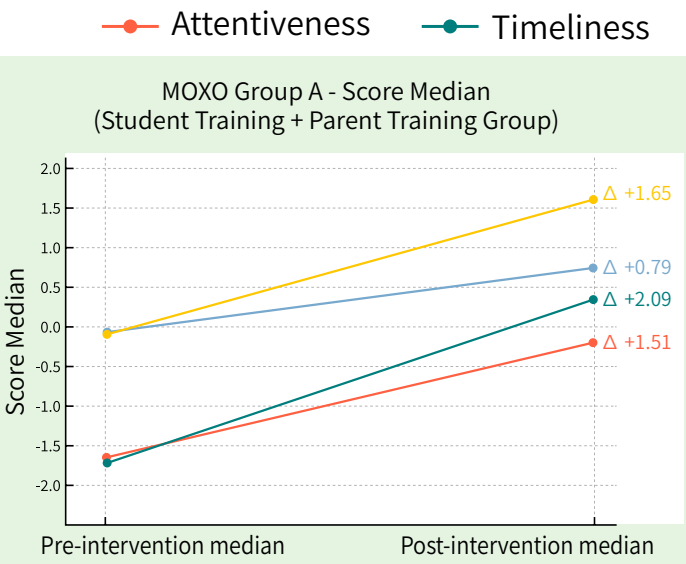


Figure 1 (Group A) :

Very highly significant improvements in all Attentiveness, Timeliness, Impulsiveness and Hyper-reactivity.

P-values < 0.001

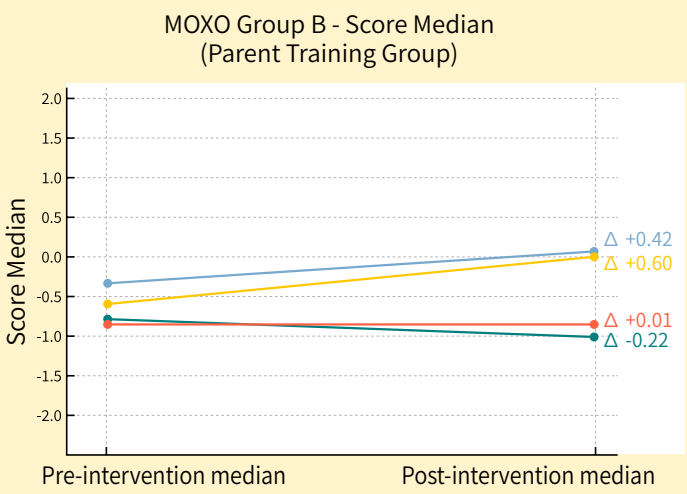


Figure 2 (Group B) :

No significant improvement in all Attentiveness, Timeliness, Impulsiveness and Hyper-reactivity.

P-values were 0.972, 0.972, 0.219, and 0.086, respectively

Training Effectiveness

In Group A, comparisons between pre- and post-tests showed median changes in the four domains of attentiveness, timeliness, impulsiveness, and hyper-reactivity, all p-values reached $p < 0.001$, indicating a very high level of significance and demonstrating that the training produced stable and clinically meaningful improvements.

In Group B, pre- and post-test comparisons showed no statistically significant improvements.

Training Progress Outcomes

For Group A, the first half of training (sessions 1–20) showed only slight increases in median scores, without significant improvements. However, during the second half (sessions 21–40), significant improvements were observed, particularly in the domains of timeliness, impulsiveness, and hyper-reactivity.

Demographics and Comorbidity Distribution

Analysis indicated that age, gender, ADHD subtype, and comorbidity status (including autism spectrum disorder, dyslexia, intellectual disability, language disorder, etc.) had no significant effect on training outcomes.

Condition	Group A	Group B
ADHD	9	7
ADHD + ASD	12	13
ADHD + Other comorbidities	10	4

Student Outcomes – Conners 4 Parent Rating Scale

Domain	Group A p-value	Group A Effect Size	Group A Significance	Group B p-value	Group B Effect Size	Group B Significance
CONTENT SCALES						
Inattention/Executive Dysfunction	<0.001	r= -0.92	✅✅✅	0.239	r= -0.55	-
Hyperactivity	<0.001	r= -0.92	✅✅✅	0.412	r= -0.46	-
Impulsivity	<0.001	r= -0.83	✅✅✅	0.239	r= -0.58	-
Emotional Dysregulation	<0.001	r= -0.89	✅✅✅	0.412	r= -0.48	-
Depressed Mood	0.006	r= -0.66	✅✅	1	r= -0.22	-
Anxious Thoughts	0.011	r= -0.62	✅	0.567	r= -0.39	-
IMPAIRMENT & FUNCTIONAL OUTCOME SCALES						
Schoolwork	<0.001	r= -0.93	✅✅✅	0.281	r= -0.55	-
Peer Interactions	0.003	r= -0.74	✅✅	1	r= -0.28	-
Family Life	<0.001	r= -0.90	✅✅✅	0.989	r= -0.04	-
DSM SYMPTOM SCALES						
ADHD Inattentive Symptoms	<0.001	r= -0.94	✅✅✅	0.345	r= -0.49	-
ADHD Hyperactive/Impulsive Symtoms	<0.001	r= -0.91	✅✅✅	0.341	r= -0.53	-
Total ADHD Symptoms	<0.001	r= -0.93	✅✅✅	0.341	r= -0.51	-
Oppositional Defiant Disorder Symptoms	<0.001	r= -0.95	✅✅✅	0.412	r= -0.48	-
Conduct Disorder Symptoms	0.011	r= -0.56	✅	1	r= -0.008	-
CONNERS 4 – ADHD INDEX						
ADHD Index	<0.001	r= -0.98	✅✅✅	0.988	r= -0.009	-

Parent Outcomes – Parent Questionnaire Scales

Domain	Group A p-value	Group A Significance	Group B p-value	Group B Significance
DASS-21 Score Analysis Summary (DASS-21)				
Depression	<0.001	✅✅✅	0.023	✅
Anxiety	<0.001	✅✅✅	0.028	✅
Stress	<0.001	✅✅✅	0.007	✅✅
C-PRS-SF Score Analysis Summary (C-PRS)				
Conflict	0.033	✅	0.171	-
Closeness	0.171	-	0.145	-
CISS Score Analysis Summary (CISS)				
Emotion-Oriented Coping	<0.001	✅✅✅	<0.001	✅✅✅
PSOC Score Analysis Summary (PSOC)				
Efficacy	0.063	-	0.08	-
Satisfaction	<0.001	✅✅✅	0.031	✅

Legend: ✅✅✅ $p < 0.05$ Very Highly Significant ✅✅ $p < 0.01$ Highly Significant ✅ $p < 0.001$ Significant - $p > 0.05$ Not Significant

Student Outcomes – Parent Post-Assessment Questionnaire (percentage indicating improvement)

Domain	Group A Parent survey	Group B Parent survey
Attention (School and Home)	89% ⬆	60% ⬆
School Performance	83% ⬆	69% ⬆
Behaviour	86% ⬆	63% ⬆
Emotional Management	87% ⬆	58% ⬆
Organization	74% ⬆	58% ⬆
Time Management	74% ⬆	56% ⬆
Task Persistence	74% ⬆	59% ⬆
Self-Reflection	67% ⬆	51% ⬆
Overall Average Ratio Increased	79.4% ⬆	59.5% ⬆

Parent Outcomes – P.E.T. Questionnaire (percentage of parents endorsing the program's effectiveness)

Domain	Group A Parent survey	Group B Parent survey
Understanding Children's Behaviors and Emotions	77% ⬆	76% ⬆
Application in Daily Discipline	87% ⬆	76% ⬆
Self-Awareness and Emotional Regulation	93% ⬆	80% ⬆
Empathy and Seeing from the Child's Perspective	87% ⬆	68% ⬆
Parent - Child Interaction Observation	93% ⬆	100% ⬆
Understanding Children's Inner Needs	90% ⬆	100% ⬆
Improvement of the Parent–Child Relationship	90% ⬆	92% ⬆
ADHD Discipline Strategies and Home - School Cooperation	92% ⬆	88% ⬆

Social Impact

The **“Brain Empowerment: Empowering Minds, Strengthening Families”** program transforms the lives of participating families while addressing urgent needs in Hong Kong’s education and public health systems. A large proportion of students are affected by Attention Deficit/Hyperactivity Disorder (ADHD), and research shows these children face a much higher risk of anxiety and depression in adolescence. By delivering early, evidence-based interventions, the program helps mitigate these risks and reduces the long-term social and healthcare challenges of youth mental health.

This project begins by supporting low-income families with children diagnosed with ADHD, gradually creating change at multiple levels and ultimately contributing to building a more inclusive society.

01 Individual Level

- Helps children overcome learning and emotional challenges.
- Strengthens parents’ confidence and resilience in caregiving.

02 Family Level

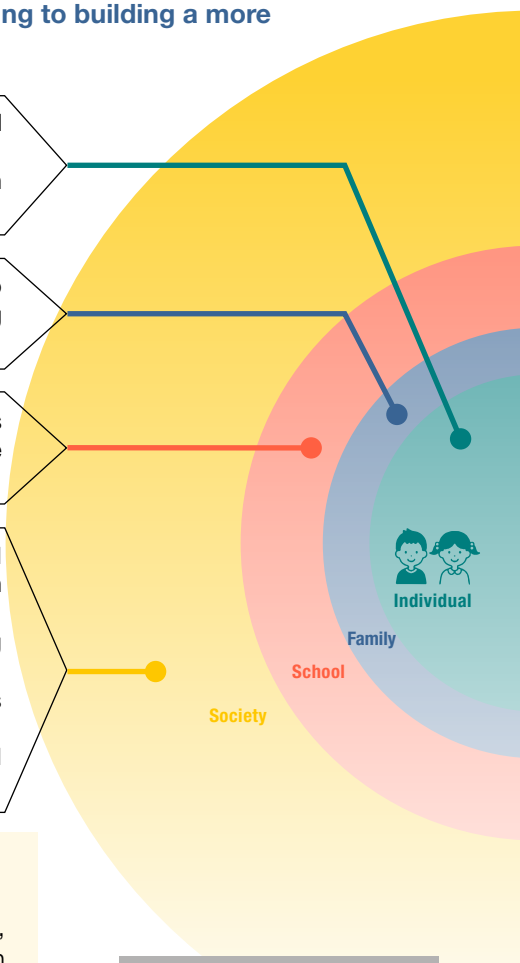
- Alleviates stress within the family related to emotional and behavioral management, enhancing family functioning and harmony.

03 School Level

- Provides evidence-based ADHD support solutions to assist the development of more comprehensive inclusive education in schools.

04 Societal Level

- Addresses the increased risks of anxiety and depression among children and adolescents with ADHD.
- Offers timely support, reducing the burden of long waiting times for diagnosis.
- Eases the financial strain on low-income families with ADHD children.
- Raises public awareness of Special Educational Needs (SEN) and promotes an inclusive society.



Human Ecology Theory
(Urie Bronfenbrenner)

Alleviating Family and Social Issues

Addressing the rising stress and emotional challenges faced by children, this project takes a root-level approach to provide effective support for both children and families.

Extensive reviews and large-scale studies show that individuals with ADHD are at a significantly higher risk of suicidal behaviours. This project offers a timely, actionable solution to this critical and persistent issue.

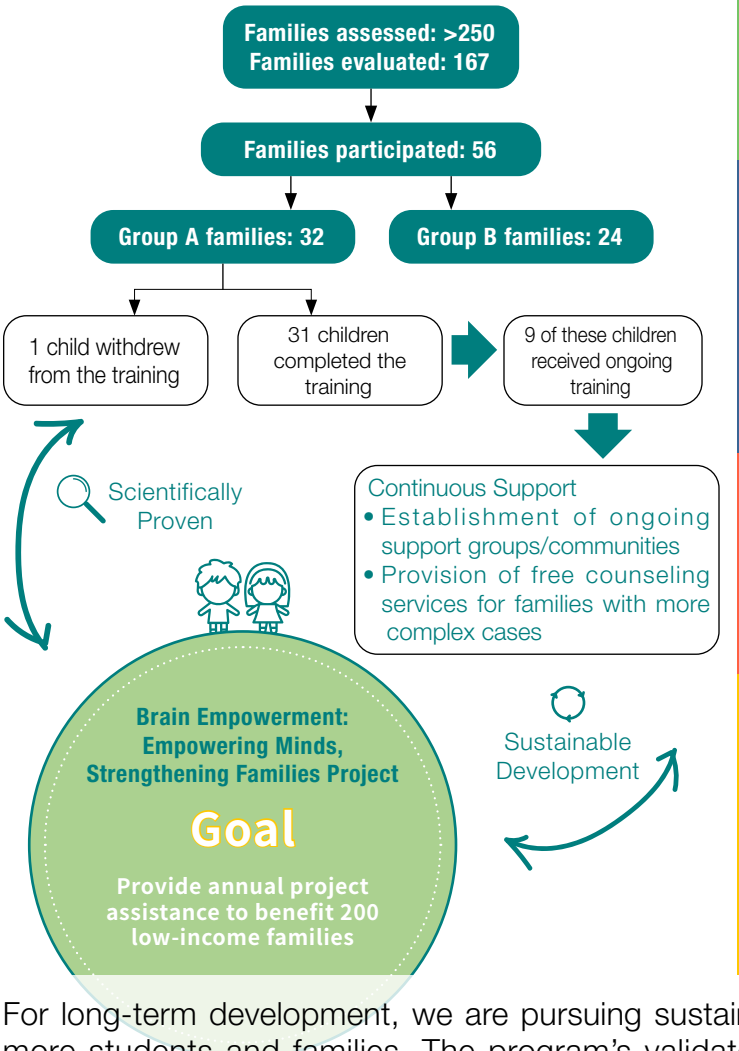
At the educational level, the program provides a sustainable, evidence-based support model that equips schools with practical tools to help teachers support students with Special Educational Needs (SEN), strengthening the system’s capacity for inclusive education. At the societal level, it lessens financial strain on low-income families, reduces pressure on the public healthcare system caused by long waiting time and limited resources, and promotes public awareness and acceptance of neurodiversity—laying the foundation for a more inclusive and supportive society.

Project Sustainability

The sustainability of the **"Brain Empowerment: Empowering Minds, Strengthening Families"** program operates on two levels: continued support and long-term development.

For continued support, we provide additional Neurocognitive Training (NCT) and Self-Development and Improvement (SDI) sessions to first-cohort students who need more than the standard 40 sessions to achieve optimal results. We also offer free counseling to families with complex challenges and have set up parent support groups and networks to ensure ongoing guidance and emotional support, extending the program's impact beyond its formal conclusion.

First Intake of the Brain Empowerment: Empowering Minds, Strengthening Families Project



Sustainable Development

Financial Sustainability

A **hybrid model** combining charitable funds, government subsidies, corporate CSR, and school partnerships.

Community and Stakeholder Engagement

Integrating into school SEN support systems, collaborating with healthcare, education, and social services, and raising public awareness of ADHD and SEN to foster inclusion.

Capacity Building

Training educators in NCT, SDI, and P.E.T., and applying a **"train-the-trainers"** approach to build a sustainable, expanding workforce.

Evidence and Policy Integration

Using validated outcomes to advocate for policy adoption, building a long-term database, and promoting this model as a supplementary ADHD support solution in education and healthcare systems.

For long-term development, we are pursuing sustained funding to expand the program to more students and families. The program's validated research outcomes provide strong evidence for resource and policy support. Our goal is for its effective components to evolve into readily available tools for schools, enabling teachers to better address ADHD-related classroom challenges. By deepening collaboration with education, healthcare, social service sectors, and policymakers, the program seeks to influence policy, integrate cross-sector resources, and enhance overall support for ADHD families. This integrated approach—linking research, education, and policy—will continue to improve the well-being of children and families while contributing to a more inclusive and mentally healthy Hong Kong.

The future of "Brain Empowerment" is about creating a lasting ecosystem that unites research, education, family support, and policy—delivering sustained help for ADHD children and families, and advancing a more inclusive Hong Kong.

Special Thanks 鳴謝

We extend our heartfelt gratitude to all the families who joined us on this year-long journey. The growth and progress of each child has been inspiring and a source of pride for our research team.

We are especially thankful to the parents and caregivers whose dedication and support provided the foundation for their children's achievements. Your encouragement helped the children reach meaningful milestones.

This journey is not an end but the beginning of new possibilities. We look forward to seeing these children continue to grow and achieve in the years ahead.

Most importantly, the trust and collaboration of families made this project possible. Together, we have advanced our understanding of child development and created shared purpose that will continue to guide our work.

我們衷心感謝所有參與本計劃的家庭，在這一年旅程中的堅持與投入。每位孩子的成長與進步，都令研究團隊深感鼓舞與自豪。

特別感謝家長和照顧者的付出與支持，為孩子的成就奠下了堅實基礎。你們的鼓勵，幫助孩子跨越挑戰並達成重要的里程碑。

這段旅程不是結束，而是新可能的開始。我們期待見證孩子們未來的持續成長與突破。

最重要的是，正因家庭的信任與合作，這個計劃才得以實現。我們不僅深化了對兒童發展的理解，也建立了共同的使命，將持續啟發我們的工作。

目錄

特別鳴謝

Drs Richard Charles & Esther Yewpick Lee Charitable Foundation
利 銘 澤 黃 瑤 璧 慈 善 基 金

全力資助
腦友童行 — ADHD 學童
神經認知發展與家庭福祉支援計劃

有關利銘澤黃瑤璧慈善基金

利銘澤黃瑤璧慈善基金支持慈善工作，致力推動教育發展及促進社會福祉，主要服務對象為香港/中國地區的低收入人士、少數族裔、有特殊教育需要的學生，以及殘疾人士和困苦的長期病患者。

項目介紹

腦友童行 — ADHD 學童
神經認知發展與家庭福祉支援計劃

腦友童行 — ADHD 學童神經認知發展與家庭福祉支援計劃是一個為期一年 (2024 年 9 月至 2025 年 6 月)，由 童樂行動 與 博思腦部培訓中心 共同推展的慈善項目。

此項目專為小三至小六專注力不足 / 過度活躍 (ADHD) 學童及其家長 (低收入家庭) 提供實證為本的支援。項目通過腦神經認知技術及非藥物干預的綜合培訓方案，致力提升學童的專注力、學習能力、情緒管控和執行功能，並改善家長與學童的家庭關係。

本計劃的起步源於我們深刻意識到 ADHD 學童家庭普遍承受比一般家庭更大的生活與學業壓力，尤其低收入家庭因資源不足而面對更沉重的挑戰。近年本港確診 ADHD 學童數字持續上升 [1]，但公共醫療資源有限，傳統治療輪候時間往往超過一年半，令不少家庭未能及時獲得適切協助。

本計劃透過綜合培訓方案提供有效的支援，減輕參與項目家庭所面對的壓力與困難，令整體生活素質提升。

促進 ADHD 學童在學習與生活上的全面發展

提升學童的專注力、執行功能、抑制控制能力、情緒管控及社交能力。

促進家庭和諧、舒緩學童的焦慮與抑鬱情緒

提升學童與家長的個人福祉及家庭和諧度，促進孩子更好地融入校園與社區。

跨領域融合創新

結合科技、教學和家長培訓為 ADHD 學童家庭提供藥物以外的解決方案，並以教育科研驗證成效為日後普及化定下基石。

[1] 立法會秘書處 資料研究組（2022 年 12 月 30 日）。〈特殊教育需要〉。數據透視 ISSH36/2022 數據。取自 https://www.legco.gov.hk/research-publications/chinese/2022issh36-special-educational-needs-20221230-c.pdf

主辦機構

童樂行動

童樂行動是一家由多領域專業人士共同組建的慈善機構，團隊包括精神科醫生、臨床心理學家、教育心理學家及護士等專業人士。機構透過整合專業知識與經驗，與治療師及相關機構合作，提供照顧者講座、兒童評估及小組活動等服務，為社會帶來正面影響。童樂行動致力為所有兒童營造健康、快樂且充滿支持的成長環境，相信良好的童年是未來成功與幸福的基石。機構透過全面支援服務，促進兒童全面發展，為他們奠定穩固的心理與精神基礎。

博思腦部培訓中心

博思腦部培訓中心是一所實證為本的腦部培訓中心，專注於腦神經認知訓練，致力結合腦神經科學技術、學與教、醫療工具及心理學，支援學童專注力與執行功能的發展。團隊成員包括腦神經科學專家、醫療顧問、教育顧問及具豐富經驗的教育工作者，以確保服務的專業水平與實效。中心的課程以「強項為本」為軸心，協助學童在發展過程中建立自信，並發揮個人潛能。

透過培訓中心、入校服務及針對低收入家庭的慈善項目，博思腦部訓練中心為本地不同背景的學童提供腦神經認知訓練。博思腦部培訓中心近年亦與科技界、教育界及社會服務界別合作，推動教育科技與相關資源的應用，以促進學童的持續發展。

OneSEN

OneSEN是一家以「家庭為本」為核心的社會企業，致力為特殊學習需要（SEN）家庭提供持續而適切的支援服務。服務涵蓋兩大層面：針對孩子的「兒童為本」遊戲治療，以及為家長而設的親子工作坊、專業管教技巧課程與「家長 ME TIME」心靈藝術小組。服務旨在協助家長舒緩照顧壓力、提升教養技巧，並透過互助網絡強化家庭親密關係。此外，OneSEN積極推動社會共融，透過開展婦女就業培訓，賦予照顧者重返職場的自信與技能；同時亦將共融講座、老師培訓等活動帶入校園，與師生共同打造一個杜絕欺凌、充滿愛與尊重的學習環境。

Re:Mind

Re:Mind是香港腦健康關注協會向大眾推廣腦健康資訊的傳訊項目，致力讓大眾了解不同範疇的腦健康科學知識，實現全民腦健康科普和建立神經多樣性共融社會。機構透過不同傳播媒介普及腦健康科學知識，並提升社會對神經多樣性的關注，同時透過與業界持份者及社福機構合作，致力提供適切專業的援助給社會上的弱勢社群。

項目概覽

參與條件

- 學童須就讀小三至小六（2024-25 學年）並確診專注力不足 / 過度活躍症
- 參與家庭須領取綜合社會保障援助及 / 或在職家庭津貼及 / 或學生資助

學童困境

- 專注力不足導致學習困難
- 多動及衝動特徵導致容易出現行為問題
- 缺乏情緒管控能力，影響社交
- 自我認知與自我接納感不足，影響自信心與自我形象
- 在學校及社會中遭標籤化，影響社交
- 逐漸出現焦慮、抑鬱及對抗性行為

期望成果

- 提升專注力及執行功能
- 改善學習表現
- 強化情緒管控能力
- 降低負面情緒
- 促進良好人際互動
- 加強自信心與自我形象
- 減少對抗性與行為問題

家長困境

- 低收入家庭家長普遍教育程度較低，缺乏教養技巧
- SEN 子女的學習、行為、情緒問題為家長帶來極大的困擾
- 親子關係每況愈下，家庭和諧度低

期望成果

- 增進教養技巧
- 提升壓力管理與情緒調節能力
- 改善親子互動與關係
- 更深入理解兒童狀態與困境

項目時間表

項目內容

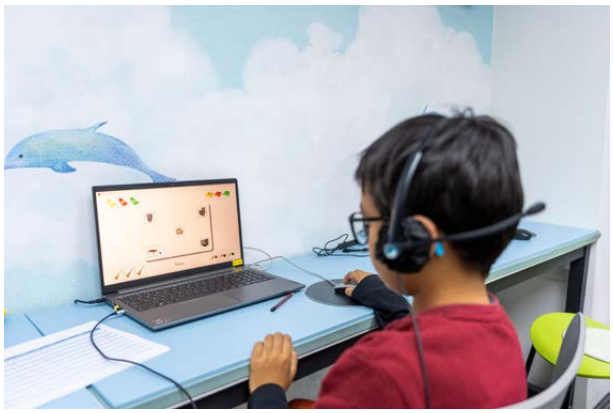
學童干預

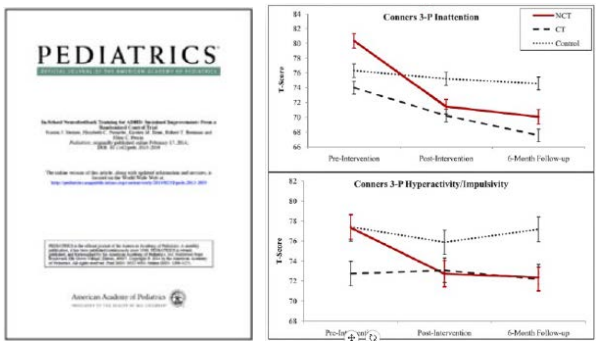
1 腦神經認知訓練
(每週 1 節 45 分鐘課程，共 40 週)

腦神經認知訓練 (NCT) 是一種結合腦電波科技與互動式學習的專業訓練方式，透過可穿戴式感應裝置即時監測學童的腦電波活動，精準探測並視覺化其專注力狀態。訓練過程以遊戲化方式進行，當學童保持專注時，遊戲或學習任務會順利推進；當專注力下降時，系統會即時反映狀態變化，提醒學童重新集中注意力。

這種「即時呈現與引導」的機制幫助學童學會主動覺察並調整自己的專注狀態，逐步強化大腦中負責專注與自我控制的神經網絡。隨著訓練持續進行，學童的專注力維持時間、抑制衝動能力及工作記憶等執行功能均會顯著提升。

此訓練模式曾先後經 美國塔夫茨醫學院 Tufts School of Medicine(2014) 及 香港教育大學 (2022) 科研實證，結果顯示，學童在完成 40 節訓練後，其專注力表現、情緒管控能力及多項執行功能均有顯著提升。由於訓練過程結合了即時監測、正向回饋及循序漸進的挑戰設計，學童在訓練中不單掌握專注與自我管控的技巧，亦能將所學應用至日常生活及學習環境中，達致持續而穩定的改善效果。





Steiner, N. J., Frenette, E. C., Rene, K. M., Brennan, R. T., & Perrin, E. C. (2014). In-school neurofeedback training for ADHD: Sustained improvements from a randomized control trial. Pediatrics, 133(3), 483–492.

2 月　3 月　4 月　5 月　6 月　7 月

第 3 階段 (2025 年 6 月開展)
後測評估及科研分析

後測評估

畢業典禮

科研數據分析

2 自我成長課程
(每週 1 節 45 分鐘課程，共 40 週)

自我成長課程 (SDI) 由本地資深校長趙雅詩女士設計，共 40 節課，以「強項為本」為理念，重點發展學童的自我管理及內在動機。課程以自我認知與接納為起點，進一步引導孩子認識並運用自己的優勢，建立正面學習態度與掌握目標設定的技巧。

課程涵蓋情緒管理、壓力調節、衝突處理、規劃及優先次序管理、溝通與人際技巧等多元範疇，並透過情緒溫度計、腹式呼吸法、提問技巧等實用工具，配合遊戲及工作紙，讓孩子在真實情境中練習與應用所學，逐步培養堅韌及靈活的應對能力。

SDI 與腦神經認知訓練 (NCT) 同步進行，前者幫助孩子將從 NCT 中獲得的專注力與執行功能進一步運用於日常生活，轉化為可持續的行為與心態改變。透過此雙軌配合，孩子不僅能掌握專注與情緒調控技巧，亦能建立自信、增強內在動機，並在學習、社交及家庭互動上取得全面進步。

3 童行日營

活動目標

- 檢視成效
- 慶祝進步
- 目標設定
- 加強內在動機

4 畢業典禮

活動目標

- 見證進步
- 加強成就感
- 明確未來目標

家長干預

1 P.E.T. 家長教養課程 (3 個級別，共 23 節課程)

家長教養課程 (Parent Effectiveness Training, P.E.T.) 由諾貝爾和平獎提名 Dr. Thomas Gordon 創立，至今已在全球多國廣泛應用，被譽為改善親子溝通、強化家庭關係的經典課程。P.E.T. 的核心理念是透過尊重、理解與有效溝通，建立一個互相信任和合作的親子關係。這對 ADHD 學童家庭特別重要，因為 ADHD 孩子在情緒管理、專注力及衝動控制方面往往面對更大挑戰，若缺乏良好的溝通，容易引發誤解、衝突，甚至影響親子之間的信任與連結。

本計劃的 P.E.T. 版本是專為低收入 ADHD 家庭度身訂造，在原有課程基礎上加入針對 ADHD 學童的專題，包括冰山理論及 ADHD 常見行為問題的成因與應對策略，讓家長更深入地理解孩子行為背後的需要與困難。課程共 23 節，涵蓋父母教養訓練、兒童社交與情緒發展支援，並配合導修課建立家長支援小組，方便交流經驗。

在課程中，家長學會如何真誠傾聽孩子的感受與想法、如何協助孩子成為問題的解

決者，以及如何運用雙贏的方法處理親子衝突。同時，課程會為家長提供多種實用工具和方法，例如應對孩子衝動行為的技巧、引導孩子自我調節情緒的策略，以及提升專注力和合作性的互動方式，幫助家長在日常生活中更有效地支援孩子。

此外，P.E.T. 亦著重協助家長調整心態，從單純「管理行為」轉變為「理解與引導」，以減少負面情緒循環，提升耐性與同理心。當家長能以正面及包容的態度與孩子互動時，不僅能改善 ADHD 孩子的行為與情緒管理，更能維持穩固的信任關係，讓孩子感到被理解和接納，進一步促進自信心與自我形象的建立。

2 家長指導課程 (Parent Coaching Session) (共 3 節課程)

旨在協助家長更清晰地辨識和理解孩子在腦神經認知訓練 (NCT) 中的進步，並透過適時的肯定與正向鼓勵，進一步優化學童的訓練效果。我們亦在課堂中加入日常生活例子，讓家長學會如何在課堂以外的情境中，持續為孩子提供支援，強化其內在動機，從而讓孩子在訓練中獲得更顯著和持久的成效。

科研背景

香港教育大學 The Education University of Hong Kong

特殊需要與融合教育研究所 Institute of Special Needs and Inclusive Education

此科研旨在全面檢視「腦友童行」計劃中，結合腦神經認知技術與非藥物干預的綜合方案，對於改善學童的 ADHD 症狀及提升家長教養能力之成效。研究採用多項專業及醫療級評估工具，包括：專注力表現評估 MOXO d-CPT、Conners 4 父母評量量表、家長情緒自評量表 (DASS-21)、親子關係量表 (C-PRS)、處理壓力處境量表 (CISS)，以及家長與學童問卷，從多角度評估方案對學童和家長的影響。

本研究透過實證數據，檢視此方案在減輕 ADHD 核心症狀及改善情緒管控能力方面的效果，並探討其作為傳統治療輔助方案的可行性。同時，研究亦分析此方案在促進家庭和諧、減輕家庭壓力，以及降低學童焦慮或抑鬱風險上的影響。

香港教育大學特殊需要與融合教育研究所執行所長冼權鋒教授擔任本科研項目的科研總監，帶領研究團隊全程規劃、執行及監督。

冼權鋒教授
科研總監

高鳳展先生
博士研究生

何嘉華先生
項目經理

預期影響

項目以學童支援方案為起點，緩解一系列的家庭問題及社會問題。

- **提升學童專注力及執行功能**
- **優化學童整體行為 / 學業表現**
- **鞏固學童自信心及自我形象**
- **降低學童焦慮憂鬱指數**
- **改善親子關係及家庭和諧度**

研究設計

為更清晰掌握「腦友童行」支援計劃中包括腦神經認知技術及非藥物干預的綜合培訓方案對提升學童的專注力、學習能力和執行功能，以及對親子關係、家庭關係及學童情緒的影響，是次科研設置了兩個研究組別（A 組及 B 組），以進行客觀比較判斷成效。

A 組 - 學童及家長干預 (參與家庭 = 32)

學童部份

- 腦神經認知訓練
- 自我成長課程
- 童行日營
- 畢業典禮

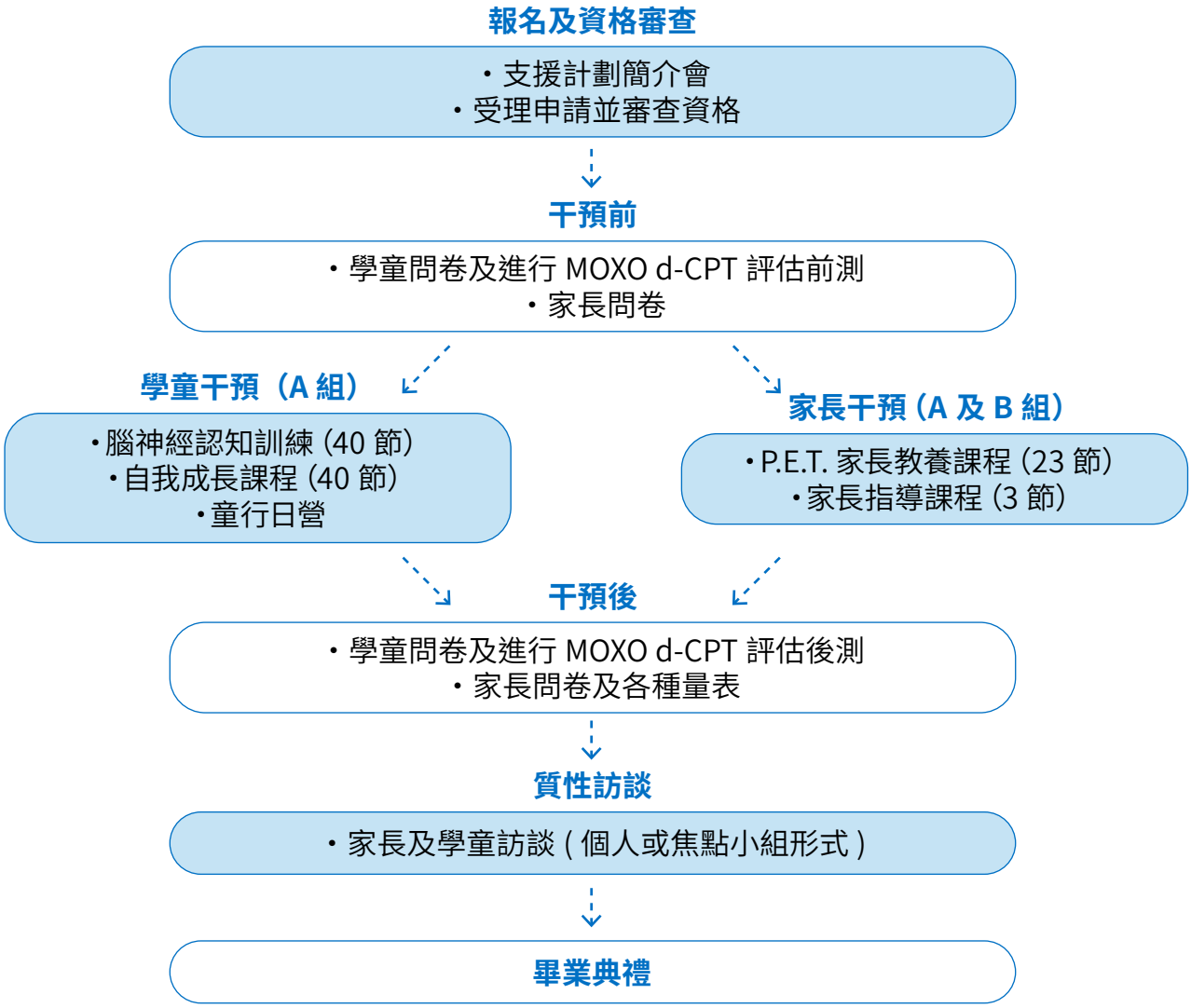
家長部份

- P.E.T. 家長教養課程
- 家長指導課程
- 畢業典禮

B 組 - 只有家長干預 (參與家庭 = 24)

家長部份

- P.E.T. 家長教養課程
- 家長指導課程



測量工具

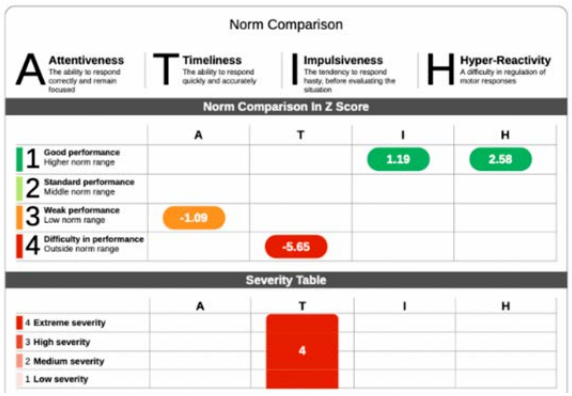
MOXO d-CPT

MOXO d-CPT 是由曾俊華先生成立的 著片叔叔共創社 (Esperanza Life) 所引入的教育科技。於全球獲多國醫院、大學及教育機構選用，其中 39 個國家的醫生更應用作專注力不足 / 過度活躍症 (ADHD) 的確診輔助工具。全球累積超過 100 萬份評估數據。

應用機構包括：

UNSW THE UNIVERSITY OF NEW SOUTH WALES
Stanford University
UNIVERSIDAD COMPLUTENSE MADRID
Developmental PAEDIATRICS YOUR SPECIALIST TEAM

報告截圖：



其他評估工具

兒童評估

Conners 4 父母評量量表	Conners 4 Parent Rating Scale
後測問卷	
質性訪談	

家長評估

子女管教效能量感表	Parenting Sense of Competence Scale, PSOC
情緒自評量表	Depression Anxiety Stress Scale, DASS-21
親子關係量表	Child-Parent Relationship Scale, C-PRS
處理壓力處境量表	Coping Inventory for Stressful Situations, CISS
後測問卷	
質性訪談	

結果摘要 — MOXO d-CPT

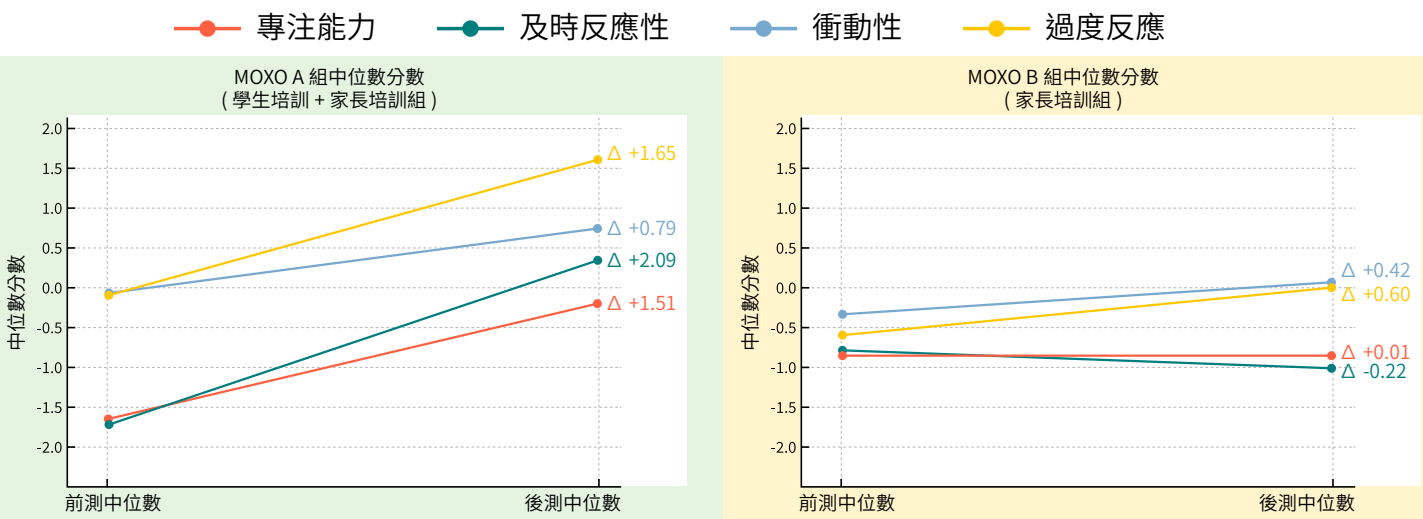


圖 1（A 組）：
專注能力、及時反應性、衝動性、過度反應全部均有極高顯著改善
p 值均 < 0.001

圖 2（B 組）：
專注能力、及時反應性、衝動性、過度反應全部均未達顯著改善
p 值分別為 0.972、0.972、0.219、0.086

訓練有效性

A 組的前後測試比較中，在「專注力」、「及時反應性」、「衝動性」及「過度反應」四個範疇的中位數變化，其 p 值均達到 $p < 0.001$，屬於極高顯著水平，顯示訓練能帶來穩定且具臨床意義的改善。

B 組的前後測試比較中，p 值均未達顯著改善水平。

訓練歷程效益

A 組在訓練前半段 (第 1–20 課) 僅出現小幅中位數增幅，尚未達顯著改善；而在後半段 (第 21–40 課) 則出現顯著改善，尤其在「及時反應性」、「衝動性」及「過度反應」三個範疇。

人口統計資料及共症分布影響

分析結果顯示，年齡、性別、ADHD 分型及共症狀況 (自閉症譜系障礙、讀寫障礙、智力障礙、語言障礙等) 均未對訓練成效造成顯著影響。

症狀	A 組	B 組
專注力不足及過度活躍	9	7
專注力不足及過度活躍 + 自閉症譜系障礙	12	13
專注力不足及過度活躍 + 其他共症	10	4

學童成效 — Conners 4 父母評量量表

範疇	A 組 p-value	A 組 效果量	A 組 顯著度	B 組 p-value	B 組 效果量	B 組 顯著度
內容量表 (Content Scales)						
專注力不足 / 執行功能缺損 (Inattention/Executive Dysfunction)	<0.001	r= -0.92	✅✅✅	0.239	r= -0.55	-
過度活躍 (Hyperactivity)	<0.001	r= -0.92	✅✅✅	0.412	r= -0.46	-
衝動 (Impulsivity)	<0.001	r= -0.83	✅✅✅	0.239	r= -0.58	-
情緒調節困難 (Emotional Dysregulation)	<0.001	r= -0.89	✅✅✅	0.412	r= -0.48	-
憂鬱情緒 (Depressed Mood)	0.006	r= -0.66	✅✅	1	r= -0.22	-
焦慮想法 (Anxious Thoughts)	0.011	r= -0.62	✅	0.567	r= -0.39	-
缺失及功能產出量表 (Impairment & Functional Outcome Scales)						
課業表現 (Schoolwork)	<0.001	r= -0.93	✅✅✅	0.281	r= -0.55	-
同儕社交 (Peer Interactions)	0.003	r= -0.74	✅✅	1	r= -0.28	-
家庭和諧 (Family Life)	<0.001	r= -0.90	✅✅✅	0.989	r= -0.04	-
DSM 症狀量表 (DSM Symptom Scales)						
ADHD 專注力不足症狀 (ADHD Inattentive Symptoms	<0.001	r= -0.94	✅✅✅	0.345	r= -0.49	-
ADHD 過度活躍 / 衝動症狀 (ADHD Hyperactive/ Impulsive Symptoms)	<0.001	r= -0.91	✅✅✅	0.341	r= -0.53	-
ADHD 症狀總分 (Total ADHD Symptoms)	<0.001	r= -0.93	✅✅✅	0.341	r= -0.51	-
對立反抗行為 (Oppositional Defiant Disorder Symptoms)	<0.001	r= -0.95	✅✅✅	0.412	r= -0.48	-
品行問題 (Conduct Disorder Symptoms)	0.011	r= -0.56	✅	1	r= -0.008	-
Conners 4–ADHD 指數 (Conners 4–ADHD Index)						
ADHD 指數 (ADHD Index)	<0.001	r= -0.98	✅✅✅	0.988	r= -0.009	-

家長成效 — 家長量表問卷

範疇	A 組 p-value	A 組 顯著度	B 組 p-value	B 組 顯著度
家長情緒自評量表 (DASS-21)				
憂鬱情緒 (Depression)	<0.001	✅✅✅	0.023	✅
焦慮情緒 (Anxiety)	<0.001	✅✅✅	0.028	✅
壓力感 (Stress)	<0.001	✅✅✅	0.007	✅✅
親子關係量表 (C-PRS)				
衝突情況 (Conflict)	0.033	✅	0.171	-
親密度 (Closeness)	0.171	-	0.145	-
處理壓力處境量表 (CISS)				
情緒導向應對 (Emotion-Oriented Coping)	<0.001	✅✅✅	<0.001	✅✅✅
子女管教效能量感表 (PSOC)				
成效 (Efficacy)	0.063	-	0.08	-
滿意度 (Satisfaction)	<0.001	✅✅✅	0.031	✅

圖例： ✅✅✅ $p < 0.05$ 非常高度顯著　✅✅ $p < 0.01$ 高度顯著　✅ $p < 0.001$ 顯著　- $p > 0.05$ 不顯著

學童成效 – 家長後測問卷 (在問卷中反饋表示覺得有進步的百份率)

範疇	A 組 家長問卷	B 組 家長問卷
專注 (學校 + 家裡)	89% ⬆	60% ⬆
學校成績及表現	83% ⬆	69% ⬆
行為	86% ⬆	63% ⬆
情緒管理	87% ⬆	58% ⬆
工作組織	74% ⬆	58% ⬆
時間管理	74% ⬆	56% ⬆
堅持完成任務	74% ⬆	59% ⬆
自我檢視	67% ⬆	51% ⬆
總平均比例上升	79.4% ⬆	59.5% ⬆

家長成效 – 家長教養課程問卷 (認同課程對家長教養的功效)

範疇	A 組 家長問卷	B 組 家長問卷
理解孩子行為與情緒	77% ⬆	76% ⬆
日常管教應用	87% ⬆	76% ⬆
自身情緒覺察與調整	93% ⬆	80% ⬆
同理心與孩子角度	87% ⬆	68% ⬆
親子互動覺察	93% ⬆	100% ⬆
讀懂孩子內在需要	90% ⬆	100% ⬆
親子關係改善與接納	90% ⬆	92% ⬆
ADHD 管教策略與家校合作	92% ⬆	88% ⬆

社會影響

「腦友童行」計劃不僅改善了參與家庭的生活，更回應了香港社會在融合教育及公共健康上的迫切需求。香港有相當比例的學童受專注力不足 / 過度活躍症 (ADHD) 影響，而研究顯示，這些學童在進入青少年期時，出現焦慮與抑鬱的風險顯著高於一般學生。本計劃透過早期及實證為本的介入，有效降低心理健康風險，減少青少年精神健康問題對社會的衝擊。

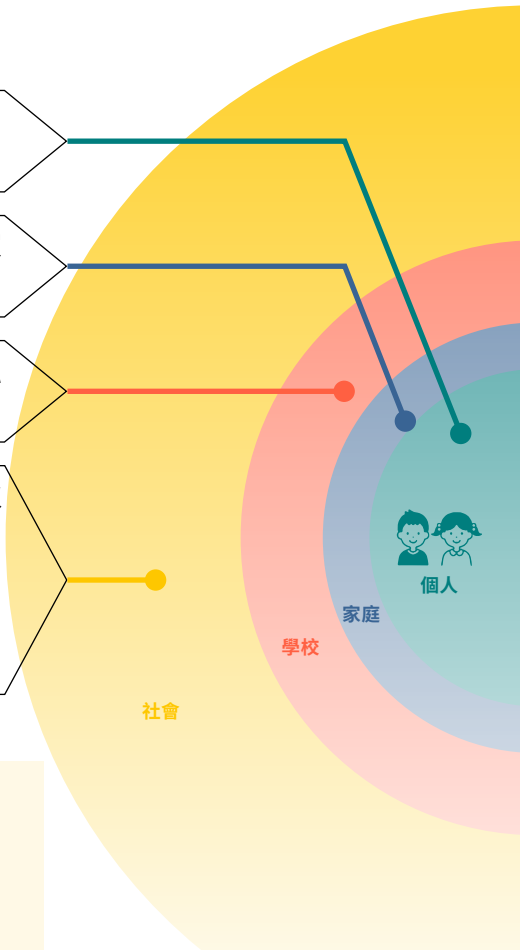
項目從支援低收入家庭的 ADHD 學童出發，層層推進，最終達至建構更具包容性的社會。

01 **個人層面**
- 協助學童突破學習與情緒挑戰
- 強化家長的教養信心與抗壓能力

02 **家庭層面**
- 紓緩家庭在情緒與管教上的壓力，提升家庭功能及和諧度

03 **學校層面**
- 提供科研驗證的 ADHD 輔助方案，支援融合教育更全面發展

04 **社會層面**
- 回應 ADHA 學童及青少年焦慮抑鬱所導致的輕生風險
- 提供及時支援，減輕輪候診斷的時間壓力
- 減輕低收入 ADHD 學童家庭的經濟負擔
- 提升大眾對 SEN 的認識，推動共融社會



生態系統理論
Human Ecology Theory
(Urie Bronfenbrenner)

緩解家庭問題及社會問題

針對學童焦慮及抑鬱個案急劇上升的現況，透過實證為本的介入透案，為學童及其家庭有效舒緩其面對的心理困擾。

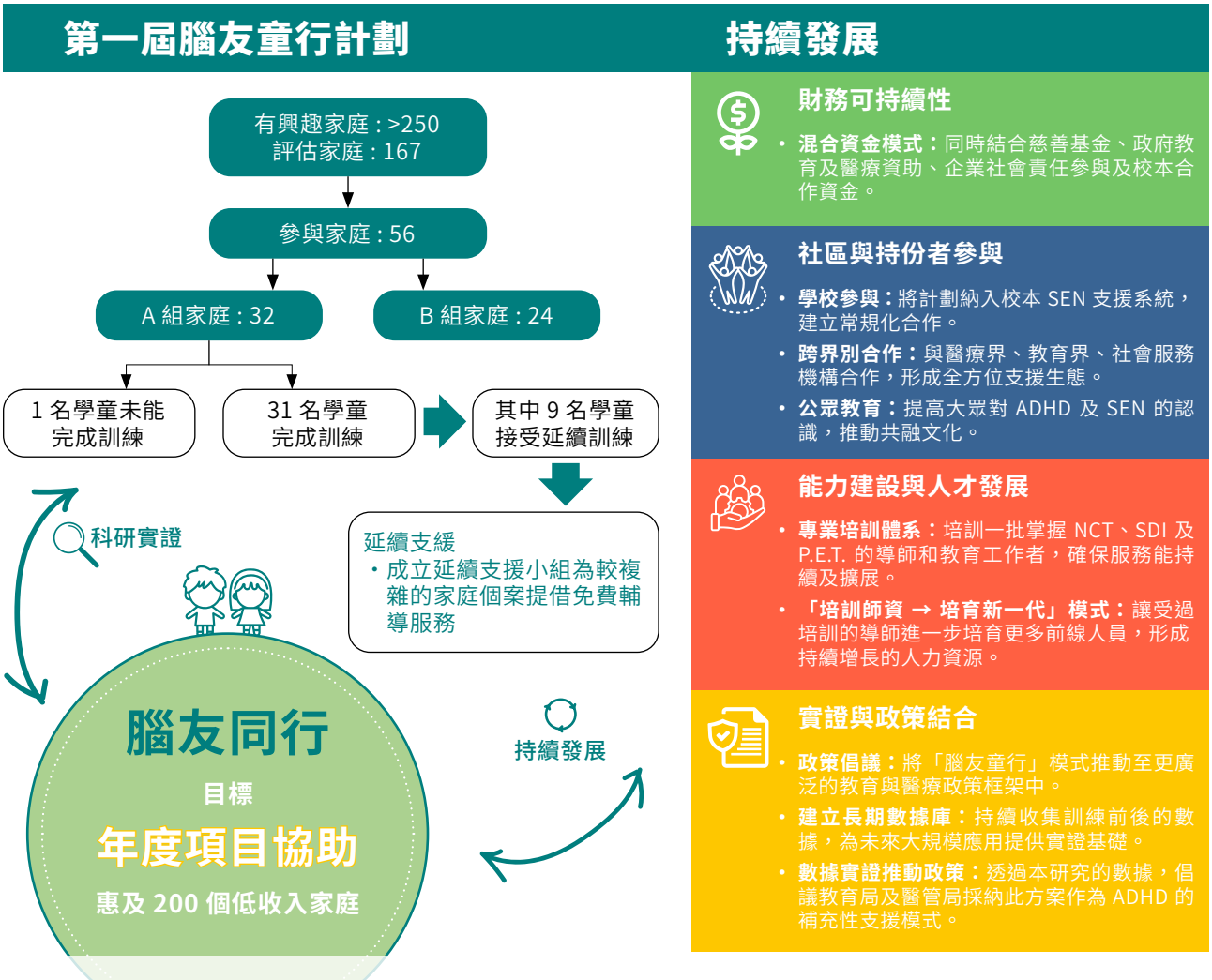
多項研究指出，ADHD 患者的自殺相關風險明顯較高。本項目提供一套可行的方案正視這個刻不容援的問題。

在教育層面，計劃為學校提供可持續及科學化的支援模式，協助教師更有效地照顧有特殊教育需要 (SEN) 的學生，並推動融合教育的全面落實，從而提升整個教育體系的應對能力。社會層面上，計劃不僅減輕低收入家庭的經濟壓力，亦有助紓緩公共醫療系統因長期輪候及資源不足所面對的負擔，同時提升大眾對神經多樣性的認識，促進接納與共融。這是一項以家庭為起點，延伸至學校與社會，並持續帶來積極改變的行動。

項目持續性

「腦友童行」計劃的可持續發展包括延續支援與長遠發展兩大層面。

在延續支援方面，我們為第一屆中完成標準 40 節課後仍需更多訓練的學童，額外安排腦神經認知訓練 (NCT) 及自我成長課程 (SDI)，以鞏固並深化訓練成果。同時，我們為面對更大挑戰的家庭提供免費輔導服務，並成立家長支援小組，讓參與者能與導師及同路人保持聯繫，持續獲得實用建議及情感支援，使計劃的效益得以延伸。



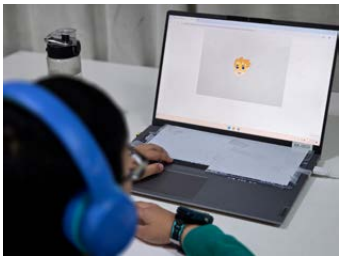
在長遠發展方面，我們正積極爭取持續資金來源，擴展計劃至更多學童與家庭。計劃所累積的科研數據與成功經驗，將成為爭取資源及政策支持的重要依據，並逐步影響教育及醫療政策，促進跨界別的制度優化。我們期望在政策配合下，計劃中成功的元素可納入學校的常規課程，讓 ADHD 學童在日常學習中獲得長期支援，並推動更完善的融合教育體系。

此外，計劃持續深化與教育界、醫療界、社福界及政策制定者的合作，促進資源整合，提升社會對 ADHD 家庭的整體支援水平。這種結合科研、教育與政策的長遠發展模式，將持續改善 ADHD 學童及家庭的福祉，並推動香港在融合教育及精神健康領域邁向更成熟、全面的未來。

「腦友童行」的未來發展不單在於延續一個計劃，而是要建立一個結合科研、教育、家庭與政策的可持續生態系統，讓 ADHD 學童和家庭獲得長遠而全面的支援，並為香港的共融社會發展貢獻力量。

Photos 相片集

Registration and pre-assessment 報名與評估


Start of training program 學童與家長訓練展開



Students training 學童訓練部份



Parents training 家長訓練部份



Post-assessment and graduation ceremony 後測評估、畢業典禮



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