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CREST 童步復康及培訓服務  
CHILD REHABILITATION AND EDUCATION SERVICE TEAM

## 自閉兒的感覺統合治療

By Stephen Chan (陳子文)  
一級職業治療師

## 自閉兒的感覺統合障礙已被確立

專家：如： Temple Grandin  
坊間：自閉兒書籍  
醫學：DSM V (B.4)

4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g., apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

## 自閉兒的感覺統合障礙已被確立

專家：如： Temple Grandin  
坊間：自閉兒書籍  
醫學：DSM V (B.4)  
研究：

Research Article | March 2007

### Sensory Processing in Children With and Without Autism: A Comparative Study Using the Short Sensory Profile

Scott D. Tomchek, Winnie Dunn

Author Affiliations  
American Journal of Occupational Therapy, March/April 2007, Vol. 61, 190-200. doi:10.5014/ajot.61.2.190

autism

Home OnlineFirst All Issues Subscribe RSS Email Alert

Impact Factor: 3.028 | Ranking: Psychology, Developmental 15 out of 60 | 5-Year Im Ranking: Psychology, Developmental 12 out of 60

The pattern of sensory processing abnormalities in autism

Jane K. Kern

## 自閉兒的感覺統合障礙已被確立

專家：如： Temple Grandin  
坊間：自閉兒書籍  
醫學：DSM V (B.4)  
研究：

Autism and Sensory Processing Disorders: Shared White Matter Disruption in Sensory Pathways but Divergent Connectivity in Social-Emotional Pathways

Yi-Shin Chang, Julia P. Owen, Shikant S. Desai, Susanna S. Hill, Anne B. Amett, Julia Harris, Elysa J. Marco, Pratik Mukherjee

Published: July 30, 2014 • DOI: 10.1523/JNEUROSCI.0103-14.2014

*"Both the SPD and ASD cohorts demonstrate decreased connectivity relative to controls in parieto-occipital tracts involved in sensory perception and multisensory integration."*

## 治療自閉兒的感覺統合障礙

1. 感覺統合治療
2. 其他感覺為本的治疗

## 只有艾以施感覺統合治療才是 感覺統合治療/訓練

- 因為感覺統合源自：
  - 艾以施博士 (A. JEAN AYRES)
  - 職業治療師






## 艾以施感覺統合治療

- 結構元素 (STRUCTURAL ELEMENTS)
- 過程元素 (PROCESS ELEMENTS)

PARHAM, L. D., COHN, E. S., SPITZER, S., KOOMAR, J. A., MILLER, L. J., BURKE, J. P., ET AL (2007)  
FIDELITY IN SENSORY INTEGRATION INTERVENTION RESEARCH.  
AMERICAN JOURNAL OF OCCUPATIONAL THERAPY, 61, 216-227

## 感覺統合治療/ 訓練 不是

- 運動
- 大量重覆練習指定的動作
- 一切有關感官的活動
- 任何要牽涉五官七感的遊戲
- 軍訓/ 強迫地操練

"IT IS BELIEVED TO BE  
EITHER OMNIPOTENT (萬能)  
OR NO GOOD AT ALL, AND  
KNOWLEDGE SIMPLY DOES  
NOT DEVELOP THAT WAY."



## SENSORY INTEGRATION AND PRAXIS TEST S.I.P.T.

### 感覺統合及動作計劃測驗



## 感覺統合訓練的基礎理論

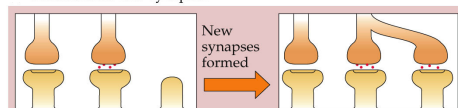
- 神經可塑性 (NEURAL PLASTICITY)
- 適應性反應 (ADAPTIVE RESPONSE)
- 內在的動力 (INNER DRIVE)
- 有層次地組織 (HIERARCHICALLY ORGANIZED)
- 發展性的 (DEVELOPMENTAL SEQUENCE)

Bundy, Lane and Murray, 2002

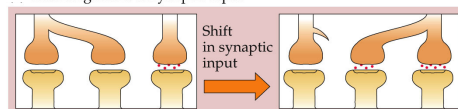
## 感覺統合訓練的基礎理論

- 神經可塑性 (NEURAL PLASTICITY)

Formation of new synapses



Rearrangement of synaptic input



Biological Psychology 6e, Figure 17.16 (Part 2)

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## 感覺統合訓練的基礎理論

### • 適應性反應 (ADAPTIVE RESPONSE)

- 適應甚麼？
- 如何適應？

Bundy, Lane and Murray, 2002

## 感覺統合訓練的基礎理論

### • 內在的動力 (INNER DRIVE)

• VS 外界壓力

Bundy, Lane and Murray, 2002

## 感覺統合訓練的基礎理論

### • 適應性反應 (ADAPTIVE RESPONSE)

### • 內在的動力 (INNER DRIVE)

#### → 腦部自我調整

(Self-organizing tendency of the brain)

#### → 神經可塑性 (Neural Plasticity)

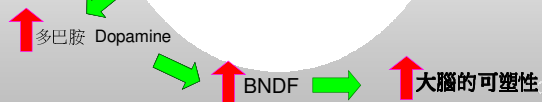
Bundy, Lane and Murray, 2002

## 艾以施博士的理論重點：

玩耍及遊戲 及 恰到好處的挑戰

玩耍及遊戲 + 恰到好處的挑戰

內在動力 Motivation + 成功 Success = 獎賞 Reward



## 艾以施感覺統合治療

### • 結構性元素 (STRUCTURAL ELEMENTS)

- \* 治療師專業背景
- \* 治療用具及設施

Structural Elements	%
Professional background of interveners	94
Type of therapeutic equipment	69
Clinical experience of interveners	35
Room setup	26
Supervision of interveners	21
Postprofessional sensory integration training of interveners	18
SIPT or SCST Certification	18
Formal education of interveners	15

PARHAM, L. D., COHN, E. S., SPITZER, S., KOOMAR, J. A., MILLER, L. J., BURKE, J. P., ET AL (2007)

FIDELITY IN SENSORY INTEGRATION INTERVENTION RESEARCH.

AMERICAN JOURNAL OF OCCUPATIONAL THERAPY, 61, 216-227

## 艾以施感覺統合治療

結構性的條件：

1. 治療師實力
2. 職業治療評估
3. 環境及器材
4. 服務流程

Info from: Ayres SI Fidelity Measure (SIRC, 2010)

## 結構性元素

### 1. 治療師專業背景

## 治療師專業背景

### 註冊治療師 (OT/ PT/ ST) 相關培訓時數 及 督導要求

#### 1. 註冊職業治療師

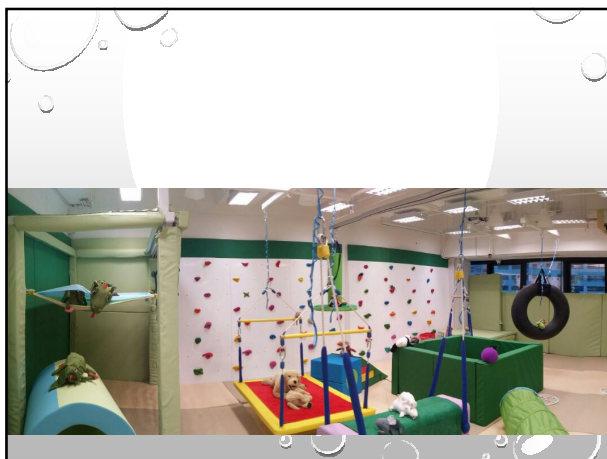
([HTTP://WWW.SMP-COUNCIL.ORG.HK/OT/ENGLISH/INDEX\\_REG.HTM](http://www.smp-council.org.hk/ot/english/index_reg.htm))

或

#### 2. SENSORY INTEGRATION & PRAXIS TEST (S. I. P. T.) 認證了的 註冊治療師 (OT/ PT/ ST)

## 結構性元素

### 2. 治療用具及設施



## 4. 服務流程

### 目標：

- 團隊共同訂定治療目標（成員應包括家人，孩子及其關鍵的身邊人）

### 教育

- 講解及探討感統治療對孩子在各項有意義活動可能的影響。
- 講解及探討孩子的感覺統合及動作計劃能力對孩子日常生活，學習及玩耍的影響。

Info from: Ayres SI Fidelity Measure (SIRC, 2010)

## 艾以施感覺統合治療

過程的條件： Info from: Ayres SI Fidelity Measure (SIRC, 2010)

- 1 活動的安全性
- 2 不同感覺(觸覺, 前庭, 本體)活動的機會
- 3 以感覺策略協助其警醒度維持在最佳狀態
- 4 協商選擇活動

## 艾以施感覺統合治療

過程的條件： Info from: Ayres SI Fidelity Measure (SIRC, 2010)

5 透過遊戲支持內在動機

6 恰到好處的挑戰

7 確保成功的經驗

## 艾以施感覺統合治療

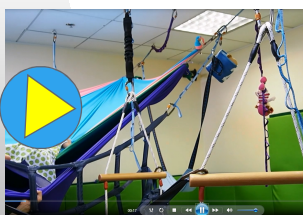
過程的條件： Info from: Ayres SI Fidelity Measure (SIRC, 2010)

8 給予組織能力及動作計劃的挑戰

9 給予口肌，眼球控制，兩側協調，姿勢控制

10 與孩子同一陣線，同一層次，一起達成共同目標

## 艾以施感覺統合治療



## 艾以施感覺統合治療



## 艾以施感覺統合治療



## 不是感覺統合訓練



## 不是感覺統合訓練



## Sensory Integration Courses @ HONG KONG

By Dr. Zoe Mailloux

DATE: 21<sup>st</sup> to 22<sup>nd</sup> (half-day) May, 2016

Course 2: 1 1/2 Days Course

Sharpening Your Skills in Ayres Sensory Integration®:  
Applying the ASI Fidelity Measure to Enhance Intervention and Outcomes

The Fidelity Measure of Ayres Sensory Integration® (ASI) intervention is a reliable and valid tool that summarizes the essential structural and process elements of therapeutic practice using sensory integration theory and methods. During this workshop, participants will learn the essential elements of ASI as delineated in the Fidelity Measure and learn to use this tool to improve research and practice.

More details and registration info is coming up! Stay Tuned at [www.facebook.com/crest.hk](http://www.facebook.com/crest.hk)  
For any enquiries, you may also email to [info@crest.hk](mailto:info@crest.hk).



## 其他治療策略 - 其他感覺為本的治療

1. IRLIN® SYNDROME TREATMENT
2. 感統聽樂治療 (TL, ILS)
3. FORBRAIN
4. DREAMPAD
5. SNUG VEST
6. WILBARGER PROTOCOL
7. ALERT PROGRAM
- ...ETC



Review

## A systematic review of sensory processing interventions for children with autism spectrum disorders

Jane Case-Smith, Lindy L Weaver and Mary A Fristad

Autism  
1-16  
© The Author(s) 2014  
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[sagepub.co.uk/journalsPermissions.nav](http://sagepub.co.uk/journalsPermissions.nav)  
DOI: 10.1177/1362281814531778  
[aut.sagepub.com](http://aut.sagepub.com)  
SAGE

Two of the five SIT studies were randomized controlled trials (RCTs); one RCT compared SIT to usual care, one compared SIT to a fine motor activity protocol.

Schaaf RC, Benevides R, Mailloux Z, et al. (2013) An intervention for sensory difficulties in children with autism: A randomized trial.  
*Journal of Autism and Developmental Disorders*. Epub ahead of print 10 November 2013.

Pfeiffer B, Koenig K, Kinnealey M, et al. (2011) Effectiveness of sensory integration interventions in children with autism spectrum disorders: a pilot study.  
*The American Journal of Occupational Therapy* 65: 76-85.

Four studies (Pfeiffer et al., 2011; Schaaf et al., 2012; Schaaf et al., 2013; Watling and Dietz, 2007) documented high using the published fidelity measure described earlier (Parham et al., 2007).



## 艾以施感覺統合治療

RCT results suggest that SIT is associated with **positive effects** as measured by the child's performance on **Goal Attainment Scaling (GAS)** (Pfeiffer et al., 2011; Schaaf et al., 2013), **decreased autistic mannerisms** (Pfeiffer et al., 2011), and **improved (i.e. less caregiver assistance required) self-care and social function** (Schaaf et al., 2013).

**PROVEN  
TO WORK!**

艾以施感覺統合治療 已具研究實證

## Sensory Integration Courses @ HONG KONG

By Dr. Zoe Mailloux

DATE: 19<sup>th</sup> to 20<sup>th</sup> May, 2016

Course 1: 2-days Course

Promoting Participation for Children with Autism:

A Clinician's Guide for Implementing Ayres Sensory Integration®

This workshop is designed to help practitioners and researchers understand a systematic, evidence-based application of Ayres Sensory Integration® (ASI) for children with ASD. Participants will learn about the Data Driven Decision Making approach and be introduced to a clinical guidebook for using ASI when assessing and providing therapy for children with ASD.

More details and registration info is coming up! Stay Tuned at [www.facebook.com/crest.hk](http://www.facebook.com/crest.hk)  
For any enquiries, you may also email to [info@crest.hk](mailto:info@crest.hk).

## 但為何具爭議？

## 但為何具爭議？

一個例子：

Article

**The Effectiveness of the Snug Vest on Stereotypic Behaviors in Children Diagnosed With an Autism Spectrum Disorder**

Nicholas Watkins<sup>1</sup> and Elizabeth Sparling<sup>2</sup>

Behavior Modification  
2014, Vol. 38(3) 412-427  
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[sagepub.com/journalsPermissions.nav](http://sagepub.com/journalsPermissions.nav)  
DOI: 10.1177/0145445514530128  
[bmo.sagepub.com](http://bmo.sagepub.com)  
SAGE



### Abstract

Various reviews of the effects of sensory integration therapy (SIT) have concluded that such interventions fail to reduce stereotypy. However, a new, and as yet untested, SIT iteration, an inflatable wearable vest known as the Snug Vest purports to decrease such repetitive behavior. In the current study, three children who emitted different forms of stereotypy participated in an alternating treatments design in which each participant wore a fully inflated vest and either a fully deflated vest or no vest. The results of the study show that the Snug Vest failed to reduce any participants' stereotypy.

1. Snug Vest is NOT Sensory Integration Therapy
2. Snug Vest is through deep pressure to reduce Anxiety induced repetitive behavior

### Author Biographies

**Nicholas Watkins** is a board certified behavior analyst and faculty in the Department of Disability and Community Studies at Douglas College. His primary areas of research interests are the assessment and treatment of stereotypy.

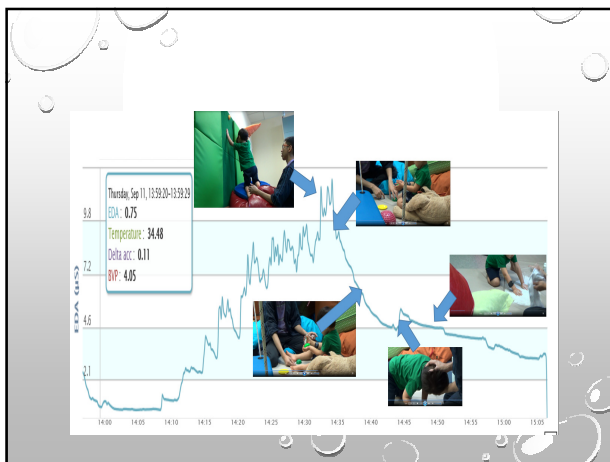
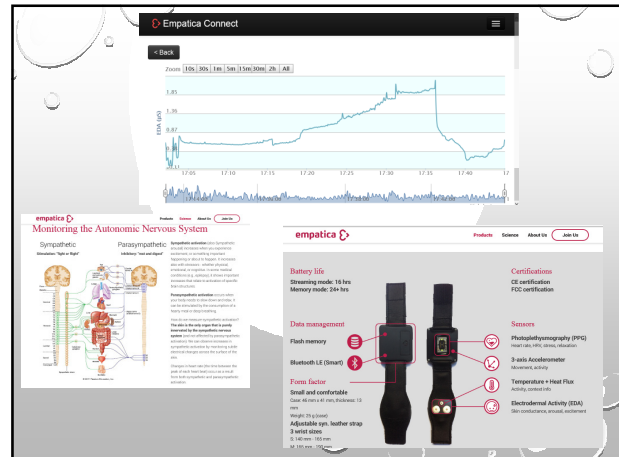
**Elizabeth Sparling** is a board certified behavior analyst and the clinical director of Pivot Point Family Growth Centre Inc. Her area of expertise is the early intervention for children diagnosed with an autism spectrum disorder.

## FROM TEMPLE GRANDIN

[https://www.salon.com/2013/05/18/temple\\_grandin\\_on\\_dsm\\_5\\_sounds\\_like\\_diagnosis\\_by\\_committee/](https://www.salon.com/2013/05/18/temple_grandin_on_dsm_5_sounds_like_diagnosis_by_committee/)

- "SO RESEARCHERS SAY, "WELL, LOOK — THESE DEVICES WORK ON ONLY 15 OR 20 PERCENT OF THE AUTISTIC POPULATION!" SO WHAT? THAT RESULT DOESN'T MEAN THAT COLORED GLASSES DON'T WORK FOR AUTISM; IT MEANS THAT COLORED GLASSES DO WORK FOR AUTISTICS WITH CERTAIN SPECIFIC VISUAL PROBLEMS. THEY WORK ON A SUBGROUP OF THE AUTISTIC POPULATION."

CREST



## ABCDE AND 5S OF ORAL SEEKING / REPETITIVE BEHAVIOR

口腔刺激 / 重複行為 背後的 ABCDE



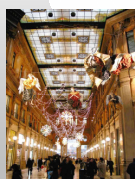
- SEEK FOR **A**ROUSING AND **S**TIMULATING (醒)
  - CHEW, TOUCH, LICK, KISS
- SEEK FOR **B**UILDING UP ORAL MOTOR **S**KILLS (建立/ 發展)
  - CHEW, SUCK
- SEEK FOR **C**ALMING AND **S**OOTHING (冷靜/ 放鬆)
  - SUCKING, CHEWING
- SEEK FOR **D**ISCOVERING AND **S**TUDYING (探索)
  - TOUCH, LICK, KISS
- SEEK FOR THE **E**YE MOVEMENT AND **S**EEING BETTER (眼球控制)
  - CHEW, SUCK

By Stephen CHAN @ CREST www.crest.hk

## 視覺過敏反應 - IRLÉN SYNDROME



- 艾蘭綜合症/ IRLÉN SYNDROME
- 光敏感



## 環境因素：使不適加劇的 S :

- **S**HINE – 閱讀環境由「強光」照著
- **S**IZE – 文字字體小
- **S**PACE – 字距，行距窄
- **S**URFACE
  - 光面紙(粉紙)
  - 紙張經過過膠
  - 白底光面紙黑字

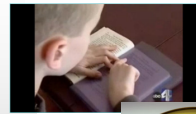




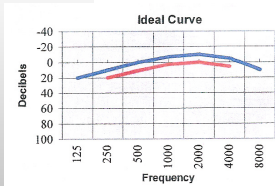
## 治療方法：顏色膠片



**irlen.**  
A Piece of the Puzzle



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# FORBRAIN®



## 音樂 MUSIC

**THE DREAMPAD™**



## 重量背心 WEIGHTED VEST



Weight: 5% to 10%, 1lbs to 3lbs

Time: 5mins to 2hours

More study show effectiveness: on-task behavior, and attention

Less study show effectiveness: self-injurious behavior



認識韋百加感覺防禦療法 (WILBARGER PROTOCOL)

感覺調節

減低感覺防禦

- 正確刷
- 正確技巧
  - 力度
  - 速度
  - 步驟
- 訓練密度

醒晨計劃 (ALERT PROGRAM)

- 教導孩子自我察覺、監察及調節警覺程度

**THANK YOU !**

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 Tel: 3628 3443  
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